

FUTURE MACHINES



ARE YOU WORRIED OR OPTIMISTIC?

FUTURE MACHINES

I've been collecting articles concerning the future of machines and technology. These writings inspire my artworks. Here is a small selection.

-Kelly Newcomer



All Watched Over by Machines of Loving Grace

*I like to think (and
the sooner the better!)
of a cybernetic meadow
where mammals and computers
live together in mutually
programming harmony
like pure water
touching clear sky.*

*I like to think
(right now, please!)
of a cybernetic forest
filled with pines and electronics
where deer stroll peacefully
past computers
as if they were flowers
with spinning blossoms.*

*I like to think
(it has to be!)
of a cybernetic ecology
where we are free of our labors
and joined back to nature,
returned to our mammal
brothers and sisters,
and all watched over
by machines of loving grace.*

Richard Brautigan 1967



The New Pet Craze: Robovacs

Just as owners of robot pets like Sony's Aibo develop emotional attachments to their mechanical companions, people are acquiring similar feelings for their robot vacuum cleaners.

More than half the owners of iRobot's Roomba name their device, claims the Burlington, Massachusetts, company. Owners often talk to their machines, and many treat them as though they were alive, or semi-sentient, anyway. Some even take them on holiday, unwilling to leave them at home alone. "We have people who actually consider them their companion, even though it's just vacuuming their floor," said iRobot spokeswoman Nancy Dussault. "People get attached to them and think of them as part of their family. It's almost a pet. It makes them feel like they're not alone. It's really interesting how they've taken to their robots."



Remote Possibilities

...today's phones are about having a cyborglike connection to every aspect of your network. It's like having an extra limb. Your phone collects your e-mail from work; it zaps tiny text messages to friends far or near. It captures exquisitely embarrassing pictures from drunken office parties. It feeds your cat. The mobile phone has become, in essence, a remote control for life. "We call it 'the device formerly known as the cellphone,'" says Geoffrey Frost, the chief brand officer for Motorola, which makes cellphones. "Now it's like having E.S.P."

...we'll have a nearly psychic level of knowledge about one another. New forms of play will arise: in Sweden and Finland, teenagers already play BotFighters war games -- one phone attacks another if they get physically close enough, like two Game Boys sensing each other's presence. ... Beyond this "whoa" potential, though, the privacy implications of location-based capabilities are hair-raising, says Roger Entener, a mobile-phone analyst at the Yankee Group. "Your spouse will say she's on a business trip in Kansas City, but you'll notice that her phone is actually down in Chelsea. So you'll go, Hmm, what's happening there?"



Tech Wave 2: The Sensor Revolution

Soon, sensor networks will track everything from weather to inventory

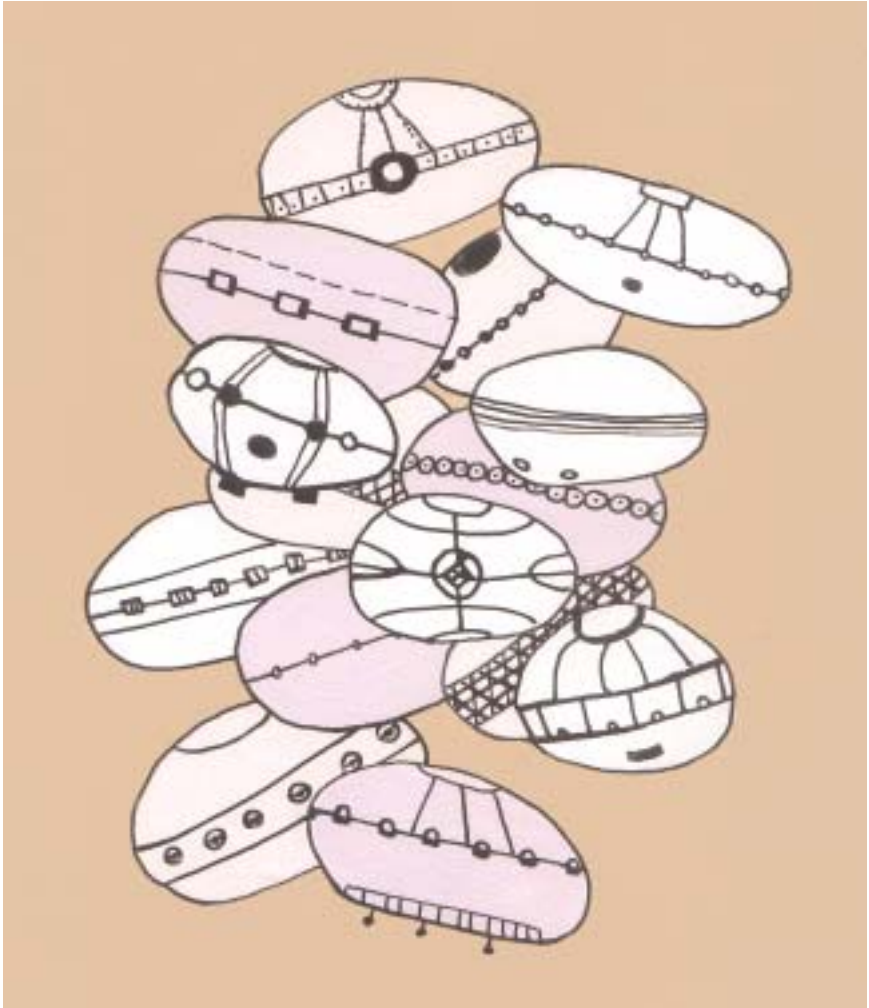
It's a midsummer evening off the foggy coast of Maine. A small, black bird called a storm petrel swoops into an underground nest. Instantly, a tiny computer inside the burrow registers the bird's arrival and sends an alert through a wireless network. Throughout Great Duck Island, 200 similar computers linked together are tracking the weather, winds, and movements of these enigmatic birds, which for mysterious reasons prefer this island to all others. Naturally, the project, sponsored by Intel Corp., interests ornithologists. But it's far more important to the computing world: Duck Island is a laboratory for a new stage of computing known as sensor networks.



Relax, Wage Slaves -- Robots Promise You an Endless Vacation

"Computer technology has been advancing steadily for the last 40 years, doubling speed and memory every 18 months in a process known as Moore's Law. If you simply extrapolate these trends, you find that desktop computers will have capabilities equal to that of the human brain by 2040 or so. As computing power finally reaches parity with the human brain and then begins to exceed it, robots will become more and more human in terms of intelligence, visual recognition and language processing."

"... Robots will start performing every essential task in the 2040 time frame. They will grow, package and transport all of the food we eat. Robots will build all of the housing we live in. Robots will manufacture and sell all consumer products."



Smaller Computer Chips Built Using DNA as Template

“The recipe for a computer chip of the future may read something like this: Take some wires. Add DNA. Stir.

In an advance that might provide a practical method for making molecular-size circuits, the smallest possible, scientists in Israel used strands of DNA, the computer code of life, to create tiny transistors that can literally build themselves.”



Robot: Child of God

Do robots have souls? Probably not--at least not the ones that have so far been built. But what of the future?

The aim of those of us who do research in artificial intelligence (AI) is to construct a machine with humanlike intelligence. We dream of Commander Data, the fictional hero of the Starship Enterprise. What a piece of engineering! How wonderful to build a robot like that. Should that prove feasible, I for one would regard him (or it) as having the attributes of personhood and dignity just like ourselves. He would be a child of God.

From *God for the 21st Century*, Russell Stannard, ed., "Robot: Child of God," by Anne Foerst (Philadelphia: Templeton Foundation Press, 2000).



According to Moore's Law, machines will be 1,000,000 times more powerful than today's personal computer by 2030.

The acceleration of technological progress has been the central feature of this century. I argue in this paper that we are on the edge of change comparable to the rise of human life on Earth. The precise cause of this change is the imminent creation by technology of entities with greater than human intelligence. There are several means by which science may achieve this breakthrough (and this is another reason for having confidence that the event will occur):

- There may be developed computers that are "awake" and superhumanly intelligent. (To date, there has been much controversy as to whether we can create human equivalence in a machine. But if the answer is "yes, we can", then there is little doubt that beings more intelligent can be constructed shortly thereafter.)*
- Large computer networks (and their associated users) may "wake up" as a superhumanly intelligent entity.*
- Computer/human interfaces may become so intimate that users may reasonably be considered superhumanly intelligent.*
- Biological science may provide means to improve natural human intellect.*

Vernor Vinge, *The Coming Technological Singularity: How to Survive in the Post-Human Era*, This article was presented at the VISION-21 Symposium sponsored by NASA Lewis Research Center and the Ohio Aerospace Institute, March 30-31, 1993



The Robot Won't Bite You, Dear

Nicky Curso was happy that the robots didn't rip off his head. Spooked by a recent viewing of the blockbuster movie Terminator 3: Rise of the Machines, 11-year old Curso was leery about attending ArtBots, billed as a talent show for robots, held in New York City this past weekend.

"I thought even good robots could get really angry and bite people or even break people," Curso said. "So I didn't want to be in the same room with any robots."

Fear and loathing of potentially rabid robots and other supposedly sentient technology is exactly what motivated ArtBots' organizers to host the show, which brought together 23 robots whose talents ranged from creating art to inspiring affection from passersby.