

Disruptions: Helper Robots Are Steered, Tentatively, to Care for the Aging

By *NICK BILTON*



Robyn Beck/ Agence France-Presse — Getty Images Paro, a therapeutic robot.

In the opening scene of the movie “[Robot & Frank](#),” which takes place in the near future, Frank, an elderly man who lives alone, is arguing with his son about going to a medical center for Alzheimer’s treatment when the son interrupts him. “I brought you something,” he says to Frank. Then the son pulls a large, white humanoid robot from the trunk of his car.

Frank watches in disbelief. “You have got to be kidding me,” he says as a robot helper, called the VGC-60L, stands in front of him. “I’m not this pathetic!”

But as Frank soon learns, he doesn’t have much of a choice. His new robot helper is there to cook, clean, garden and keep him company. His son, mired in family and work life, is too busy to care for his ailing father.

Just like Frank, as the baby boomer generation grows old and if the number of elderly care workers fails to grow with it, many people might end up being cared for by robots. According to the [Health and Human Services Department](#), there will be 72.1 million Americans over the age of 65 by 2030, which is nearly double the number to-

day. According to the [Bureau of Labor Statistics](#), the country will need 70 percent more home aide jobs by 2020, long before that bubble of retirees. But filling those jobs is proving to be difficult because the salaries are low. In many states, in-home aides make an average of \$20,820 annually.

“There are two trends that are going in opposite directions. One is the increasing number of elderly people, and the other is the decline in the number of people to take care of them,” said [Jim Osborn](#), a roboticist and executive director of the Robotics Institute’s Quality of Life Technology Center at [Carnegie Mellon University](#). “Part of the view we’ve already espoused is that robots will start to fill in those gaps.”

Researchers at the [Georgia Institute of Technology](#) have developed [Cody](#), a robotic nurse the university says is “gentle enough to bathe elderly patients.” There is also [HERB](#), which is short for Home Exploring Robot Butler. Made by researchers at Carnegie Mellon, it is designed to fetch household objects like cups and can even clean a kitchen. [Hector](#), a robot that is being developed by the University of Reading in England, can remind patients to take their medicine, keep track of their eyeglasses and assist in the event of a fall.

The technology is nearly there. But some researchers worry that we are not asking a fundamental question: Should we entrust the care of people in their 70s and older to artificial assistants rather than doing it ourselves?

Sherry Turkle, a professor of science, technology and society at the [Massachusetts Institute of Technology](#) and author of the book “Alone Together: Why We Expect More From Technology and Less From Each Other,” did a series of studies with [Paro](#), a [therapeutic robot](#) that looks like a baby harp seal and is meant to have a calming effect on patients with dementia, Alzheimer’s and in health care facilities. The professor said she was troubled when she saw a 76-year-old woman share stories about her life with the robot.

“I felt like this isn’t amazing; this is sad. We have been reduced to spectators of a conversation that has no meaning,” she said. “Giving old people robots to talk to is a dystopian view that is being classified as utopian.” Professor Turkle said robots did not have a capacity to listen or understand something personal, and tricking patients to think they can is unethical.

That’s the catch. Leaving the questions of ethics aside for a moment, building robots

is not simply about creating smart machines; it is about making something that is not human still appear, somehow, trustworthy.

A recent Georgia Tech study found that older people were intrigued by the idea of robotic assistants in the home, but a robot's appearance played a large role in what they will trust the machines to do. Older people want robots that look human for tasks that involve intelligence, like recommending which medicine they need to take. But they want a more sterile-looking machine for manual labor tasks, like cleaning and cooking, so they do not feel guilty bossing it about.

Wendy A. Rogers, a professor at Georgia Tech and director of the university's [Human Factors and Aging Laboratory](#), said concerns about older people developing relationships with their in-home helper robots were no different than the bond we develop with other inanimate objects.

Dr. Rogers has been experimenting with a large robot called the PR2, made by Willow Garage, a robotics company in Palo Alto, Calif., which can fetch and administer medicine, a seemingly simple act that demands a great deal of trust between man and machine.

"We are social beings, and we do develop social types of relationships with lots of things," she said. "Think about the GPS in your car, you talk to it and it talks to you." Dr. Rogers noted that people developed connections with their Roomba, the vacuum robot, by giving the machines names and [buying costumes](#) for them. "This isn't a bad thing, it's just what we do," she said.

In fact, Mr. Osborn's laboratory at Carnegie Mellon has designed a robot to work with therapists and people with autism. The machine can develop a personality and blinks and giggles as people interact with it. "Those we tested it with love it and hugged it," he said. "You begin to think of it as something that is more than a machine with a computer."

In the movie "Robot & Frank," technologists have raced ahead of society's collective conscience with their robot caregivers. But the movie still leaves its audience with a question: Will it one day be morally acceptable to unload your parents' care to a machine?

As the actor [Frank Langella](#), who plays Frank in the movie, [told NPR last year](#):

“Every one of us is going to go through aging and all sorts of processes, many people suffering from dementia,” he said. “And if you put a machine in there to help, the notion of making it about love and buddy-ness and warmth is kind of scary in a way, because that’s what you should be doing with other human beings.”