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Do humanoid robots deserve to have rights?

By PETER SINGER and AGATA SAGAN

PRINCETON/WARSAW — Last month, Gecko Systems announced that it had been running trials of its “fully autonomous personal companion home care robot,” also known as a “carebot,” designed to help elderly or disabled people to live independently. A woman with short-term memory loss broke into a big smile, the company reported, when the robot asked her, “Would you like a bowl of ice cream?” The woman answered “yes,” and presumably the robot did the rest.

Robots already perform many functions, from making cars to defusing bombs — or, more menacingly, firing missiles. Children and adults play with toy robots, while vacuum-cleaning robots are sucking up dirt in a growing number of homes and — as evidenced by YouTube videos — entertaining cats. There is even a Robot World Cup, though, judging by the standard of the event held in Graz, Austria, last summer, footballers have no need to feel threatened just yet. (Chess, of course, is a different matter.)

Most of the robots being developed for home use are functional in design — Gecko System’s home-care robot looks rather like the Star Wars robot R2-D2. Honda and Sony are designing robots that look more like the same movie’s “android” C-3PO. There are already some robots, though, with soft, flexible bodies, humanlike faces and expressions, and a large repertoire of movement. Hanson Robotics has a demonstration model called Albert, whose face bears a striking resemblance to that of Albert Einstein.

Will we soon get used to having humanoid robots around the home? Noel Sharkey, professor of artificial intelligence and robotics at the University of Sheffield, has predicted that busy parents will start employing robots as baby sitters. What will it do to a child, he asks, to spend a lot of time with a machine that

cannot express genuine empathy, understanding or compassion? One might also ask why we should develop energy-intensive robots to work in one of the few areas — care for children or elderly people — in which people with little education can find employment.

In his book “Love and Sex with Robots,” David Levy goes further, suggesting that we will fall in love with warm, cuddly robots and even have sex with them. (If the robot has multiple sexual partners, just remove the relevant parts, drop them in disinfectant, and, *voilà*, no risk of sexually transmitted diseases!) But what will the presence of a “sexbot” do to the marital home? How will we feel if our spouse starts spending too much time with an inexhaustible robotic lover?

A more ominous question is familiar from novels and movies: Will we have to defend our civilization against intelligent machines of our own creation? Some consider the development of superhuman artificial intelligence inevitable, and expect it to happen no later than 2070. They refer to this moment as “the singularity,” and see it as a world-changing event.

Eliezer Yudkowsky, one of the founders of The Singularity Institute for Artificial Intelligence, believes that singularity will lead to an “intelligence explosion” as super-intelligent machines design even more intelligent machines, with each generation repeating this process. The more cautious Association for the Advancement of Artificial Intelligence has set up a special panel to study what it calls “the potential for loss of human control of computer-based intelligences.”

If that happens, the crucial question for the future of civilization is: Will the super-intelligent computers be friendly? Is it time to start thinking about what steps to take to prevent our own creations from becoming hostile to us?

For the moment, a more realistic concern is not that robots will harm us, but that we will harm them. At present, robots are mere items of property. But what if they become sufficiently complex to have feelings? After all, isn't the human brain just a very complex machine?

If machines can and do become conscious, will we take their feelings into account? The history of our relations with the only nonhuman sentient beings we have encountered so far — animals — gives no ground for confidence that we would recognize sentient robots not just as items of property, but as beings with moral standing and interests that deserve consideration.

The cognitive scientist Steve Torrance has pointed out that powerful new technologies, like cars, computers, and phones, tend to spread rapidly, in an uncontrolled way. The development of a conscious robot that (who?) was not widely perceived as a member of our moral community could therefore lead to mistreatment on a large scale.

The hard question is how we could tell that a robot really was conscious, and not just designed to mimic consciousness. Understanding how the robot had been programmed would provide a clue — did the designers write the code to provide only the appearance of consciousness? If so, we would have no reason to believe that the robot was conscious.

But if the robot was designed to have humanlike capacities that might incidentally give rise to consciousness, we would have a good reason to think that it really was conscious. At that point, the movement for robot rights would begin.

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