CARE ROBOTS AND THE GOOD LIFE

AIMEE VAN WYNSBERGHE

Robots will play an important role in the healthcare services of the future. The technical possibilities seem endless. But how much do we like the idea of being dressed by a robot in the future? And how do we like the idea of being operated on by a surgeon on the other side of the globe? Aimee van Wynsberghe is studying the ethical side of the healthcare robot.

Paro looks just like an ordinary toy seal. With its white fur and soulful eyes, it has proved to be an adorable little creature for elderly people with dementia. It can move, react to voices and even blink his eyes – but it also flawlessly records the presence or absence of its owner. The Japanese robot is not a thing of science fiction, it has already made its appearance in nursing homes in the Netherlands.

The robot has thus already arrived in the healthcare system. In the years to come, it will be appearing more often in many different forms. It is an unavoidable development in light of population ageing and the shortage of healthcare personnel. "In the next years, companies like Honda will be investing eight billion dollars in the development of social robots – robots that have some form of interaction with people. That says a lot. Engineers are working with prototypes here at Twente as well. They are focusing on the technical aspects, and we are providing input on the ethical side of a healthcare robot", explains researcher Aimee van Wynsberghe.

Her study focuses on the question of how healthcare robots can contribute to a good life. "There is obviously no standard definition for a good life", asserts Professor Philip Brey of the UT, Van Wynsberghe's supervisor. "But there are universal elements, such as friendship. Everyone needs friendship."

The question is whether people are capable of making friends with a robot or entrusting a robot with social tasks. Van Wynsberghe: "Paro shows that it's possible. There are robots that take care of children. There are robots that can read emotions on our faces. For example, they can register that I am happy and then react by telling a joke. They can talk, dance – just about anything is possible. The question is whether we want to use technology to fulfil our social-emotional needs. Several factors can affect the answer to this question. In general, older people are less familiar with technology than younger people are. Different generations thus look at it from different angles. In America and Western Europe, we are less enthusiastic about the widespread use of robots, while countries like Japan are much less reserved in this area."

On a technical level, the rise of the healthcare robot is inevitable. In the Netherlands, more and more hospitals and rehabilitation centres are working with them. At the University of Twente, robots with a variety of characteristics are being developed and studied. One performs invasive medical procedures and another helps patients with rehabilitation. Van Wynsberghe is talking with fellow researchers to discover what is already possible and how far it can go in the future: "A surgeon performs an operation from behind a computer. That is better ergonomically and it is safer for the patient. But there's also an ethical side to the story.

The patient is no longer Mr Jansen, who has a wife and two children. He is a person on a monitor. In this regard, it looks as if the surgeon is playing a video game. Are we considering this sufficiently? What about the patient who has to put himself in the hands of a physician who could be controlling the operating robot from the other side of the world? Can he do that? Would he want to?"

This study is intended to provide ethical input for the engineers who are working on the technological development of healthcare robots. One issue involves the robot's appearance. Should it look like a person, with eyes, a nose and a mouth? Brey elaborates, "Some people say that this can raise false expectations. After all, a robot is not a person, and so you wouldn't think it should look like one." But it's not always that simple, adds Van Wynsberghe. "In America, researchers gave a name to the robot vacuum cleaner, which looked nothing like a person. This robot was treated as a pet."

CENTRE FOR ETHICS AND TECHNOLOGY

Van Wynsberghe is one of twenty doctoral students in the 3TU. Centre for Ethics and Technology of the three universities of technology (Twente, Delft and Eindhoven). Representing the University of Twente in the centre is Prof. dr Philip Brey, Professor of the philosophy of technology in the Faculty of Behavioural Sciences. He is supervising Van Wynsberghe in her study of "Natural Interaction in Computer-mediated Environments".