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PEOPLE WITH ALZHEIMER'S DISEASE AND ROBOTS TOWARD A DISCOURSE SHIFT IN SOCIAL ROBOTIC: FROM COMPANION ROBOT TO EXTENSION ROBOT PARADIGM.

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Robotic services and therapies know a strong development and interest for older people and especially for people with dementia like Alzheimer diseases. According to studies, the use of robots shows benefits like reducing stress and foster communication and interactions. In this context robots are pre-determined and used in a second step by users. This service design avoids sharing and collaborating with the end-users and creates a technical determinism. This one confines people in a passive position and generates negative effects. In contrast to this technical determinism this paper goes on to explore the use of mutual shaping of people and robots as a framework for social robot service design. Sharing and collaborating in a service design involve the active people's participation in the process from the beginning. To illustrate this process this paper describes a preliminary work aimed at setting a communication support for Alzheimer's disease using three humanoid robot NAO (SoftBank Robotics). The approach is based on master puppet concept: The subjects program the robots, and use them as an extension for communication. Twenty sessions are organized, alternating ten preparatory sessions and ten robotics programming sessions. During the preparatory sessions, the subject prepares the story: Voice recording, scenery creation, etc. During the robot programming session, the subjects program the motion to be realized to make the robot tell the story. The program is concluded by a public performance. The experiment involves six AD aged to 60-85. As first observations, a dynamic of the group a presence and action of everybody and very positive reactions are observed. The approach allows the subject to shift a passive position to an active one, and therefore helped them remaining human being.

Biography

Dimitri Delacroix is a Phd candidate in semiotics and human-robot interactions. He is collaborating in a pluridisciplinary research with robotic experts and speech therapy specialists using robots with Alzheimer's disease people and children with autistic spectrum. These experiments propose an alternative approach to the robot companion: the robot is used as an extension, for talking and doing things. The robot companion has its own character and personality. This perspective creates some issues. First, The robot programmed to stimulate a character so to present the robot like this it is a lie and create a confusion. Then, this approach put the subject in a reification process limiting the subject's ability to express himself or act by his/her own will on the environment, or to organize its relation to the world. So the research aims to explore the individuation concept (Simondon, 1958) in the robot extension paradigm and to understand meaning mechanisms.

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