

Revealing different (Non-)Conceptions of Personhood for Social Robots. About the Benefit of Social Theory for Social Robotics

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Abstract:

The creation of humanlike apparatuses is an aim mankind is striving for since ancient times. Ever since the utopia of an apparatus - having features like pleasing our wishes, entertaining, serving or assisting – appeared, the desire to develop a humanoid machine has remained and sustained throughout the history of society, as can be observed in cultural manifestations unlike in literature or arts. With the enhancement of technology and electromechanics, the utopia of placing robots in society comes to a stage which goes beyond automation in industrial branches or discovery missions in rough terrains. The field of robotics agitates for an establishment of robots outside of laboratories, on into real world applications and social interaction contexts, thus as integral parts of human society. Robots become embodied social tools with the purpose to communicate with human as social partners, service robots, edutainment devices or information tools. Gradually the field of social robotics evolves and the placement of robots in society raises questions concerning their effects on different established domains in human society. One of the arising questions concerns the robot's status of personhood in relation to human persons in those different domains.

Which features does a social robot need to possess to be acknowledged as social person? By taking a closer look at the different domains social robotics affects on, the diversity of perspectives and the vagueness of definitions on personhood in those concepts surfaces. 1.) *Engineers*: To replicate the mechanics of human organism, engineers apply results of neuroscience or cognitive science and transfer them into mathematical algorithms. In this view a person's features can be objectively measured, technically simulated and rebuilt by anthropomorphic design, behavior and interactive modes. 2.) *Average human users* facing a social robot in different situations apply common sense knowledge, routines and practices towards the robot while testing the extend of the robot's interactive abilities. The acceptance of the robot as person differs particularly and is thus based on contingency. 3.) *Analyzing Human-Robot Interaction interdisciplinary*: In HRI studies the definition of personhood depends on the perspective of the given discipline. HRI situations are analyzed by social neuroscience, social psychology, discourse analysis, ethnological studies etc. Often the definition of personhood is undisclosed or not made explicit. Most common concepts of personhood in HRI studies are anthropocentric or network related concepts which are meant to diminish the contingency of personhood ascriptions to robots by average human users (2). 4.) *Dealing with the technology on a legal institutional level*, the impact and placement of social robots in society is urging statements and considerations of a robot's legal personhood by law and order and by ethical commissions. The degree of personhood of the robot is related here to features adjudicated to human, respectively to issues on human safety, ethics and human rights (human is superior to robot). All of the views above (1-4) differ in their conception of personhood and ought to cause confusion during efforts of a successful integration of robots in our currently given society.

To increase the awareness of differing concepts on sociality and personhood is one of the contributions social sciences/ theory can provide. Revealing the underlying assumptions of sociality and personhood in the different domains social robotics has impact on, proposing a reflexive concept of personhood (vs. anthropomorphic), and offering guidelines for integrative concepts of personhood, are the benefits which reflections from a social theoretical perspective can offer for the aim of successful human-robot interaction and integration.