

Mapping Context, Roles, and Relations for Adjudicating Robot Ethics

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Abstract : Abstract— Should robots have rights or legal protections. Often debates concerning whether robots and AI should be afforded rights focus on conditions of personhood and the possibility of future advanced forms of AI satisfying particular intrinsic cognitive and moral attributes of rights-holding persons. Such discussions raise compelling questions about machine consciousness, autonomy, and value alignment with human interests. Although these are important theoretical concerns, especially from a future design perspective, they provide limited guidance for addressing the moral and legal standing of current and near-term AI that operate well below the cognitive and moral agency of human persons. Robots and AI are already being pressed into service in a wide range of roles, especially in healthcare and biomedical contexts. The design and large-scale implementation of robots in the context of core societal institutions like healthcare systems continues to rapidly develop. For example, we bring them into our homes, hospitals, and other care facilities to assist in care for the sick, disabled, elderly, children, or otherwise vulnerable persons. We enlist surgical robotic systems in precision tasks, albeit still human-in-the-loop technology controlled by surgeons. We also entrust them with social roles involving companionship and even assisting in intimate caregiving tasks (e.g., bathing, feeding, turning, medicine administration, monitoring, transporting). There have been advances to enable severely disabled persons to use robots to feed themselves or pilot robot avatars to work in service industries. As the applications for near-term AI increase and the roles of robots in restructuring our biomedical practices expand, we face pressing questions about the normative implications of human-robot interactions and collaborations in our collective worldmaking, as well as the moral and legal status of robots. This paper argues that robots operating in public and private spaces be afforded some protections as either moral patients or legal agents to establish prohibitions on robot abuse, misuse, and mistreatment. We already implement robots and embed them in our practices and institutions, which generates a host of human-to-machine and machine-to-machine relationships. As we interact with machines, whether in service contexts, medical assistance, or home health companions, these robots are first encountered in relationship to us and our respective roles in the encounter (e.g., surgeon, physical or occupational therapist, recipient of care, patient's family, healthcare professional, stakeholder). This proposal aims to outline a framework for establishing limiting factors and determining the extent of moral or legal protections for robots. In doing so, it advocates for a relational approach that emphasizes the priority of mapping the complex contextually sensitive roles played and the relations in which humans and robots stand to guide policy determinations by relevant institutions and authorities. The relational approach must also be technically informed by the intended uses of the biomedical technologies in question, Design History Files, extensive risk assessments and hazard analyses, as well as use case social impact assessments.

Keywords : biomedical robots, robot ethics, robot laws, human-robot interaction

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