

Dr. Oliver Schürer

TU Wien
Architekturtheorie und Technikphilosophie
Wiedner Hauptstraße 7
1040 Wien
Austria



The Architecture Space-Game

According to the research politics of large industrial nations, humanoid robots will become essential parts of our lifeworld. We are the first generation that is about to live and work with robots shaped like humans. That includes we will have complex machinery in utmost spatial proximity. This will be fact not only in work, but in all the spaces of the everyday that includes spaces of intimacy and privacy. In urgency to govern these emergent robot developments, the European Committee of Legal Affairs published a draft report on “Civil Law Rules on Robotics”, in which privacy, general well-being, and job-loss through automation are the main issues raised. Surprisingly, there is next to nothing in this report on changes in the various spaces we work and life in, by the introduction of robots – may they be public, semi-public, intimate, or private spaces.

But human life unfolds spatially as lived existence, by means of and within a human perception system. The common term "perception" for robots and humans, elegantly veils the fact that the different technological perception systems bare only metaphorical similarity to the human perception system – but their differences produce far reaching consequences. The quantitatively based, abstract data processing of technical perception systems contras with personal meanings which are rooted in experiences around cultural notions in humans. While robots, to be utilitarian, are supposed to learn from there environment and develop social skill, both needs to be obtained in the spaces of the human life world. Hence today, technological development reached a paradox: Robots get developed for intimate and private human spaces, but despite its importance, human aspects of space are fare beyond robots' grasp.

How could one possible disentangle this paradox between the premises of space and perception?

We research in this filed as the transdisciplinary research group H.A.U.S. (Humanoid Robots in Architecture and Urban Spaces), experts from Automation technology, AI research, Architecture, Human Robot Interaction, Performance Art and Philosophy. We conceived an approach, where the different perception systems share a hybrid space model. It is generated in a joint effort by humans and robots by means of a machine learning system. The aim of our project is to generate a model of cultural meaning to include up to now ungraspable aspects. This Cultural Space-Model (CSM) also allows for constant adaption of robots to human space. Derived from the philosophical language-game (Wittgenstein), we developed an interaction method called the Architecture Space-Game (ASG). It is based on verbal and non-verbal interaction between human and robot.

CV

Oliver Schürer, Senior Scientist Dipl.-Ing. Dr.techn., is researcher, curator, editor and author as well as Senior Scientist and Deputy head at the Department for Architecture Theory and Philosophy of Technics, Vienna University of Technology. He did numerous research pro-

jects by interlinking architecture, art, engineering and humanities in various constellations. To drive the discourses around this research interests, he curated and produced several conferences, symposia, series of events and exhibitions. He lectured and published internationally on technology and media in the context of architecture. With his current research approach, he works in the fields of architecture and technology theory with experiments.

In 2014 he founded the transdisciplinary group H.A.U.S., researching “Humanoid robots in Architecture and Urban Spaces.” The group researches the spaces of different life-worlds through research in performance art as well as humanoid robotics.

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