

Doppelgänger

A Dance Performance Research Cycle on Humans and Humanoids

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Intelligent technology is about to change cultural spaces established since generations. Most prominently are AI driven humanoid robots. Supposed to be functional in assistance and care, they enter intimate spaces of humans. What does it mean to live and work in intimate proximity to the replica of a human being? The research project *Doppelgänger* discusses the contemporary issue by developing a dance performance in a two-year cycle. It is the empirical approach to develop an artistic theory to make performance fruitful in research as an “epistemic object” – based on concepts related to Hans-Jörg Rheinberger’s “epistemic thing” (1997: 3) and Michel Serres’ “quasi-object” (2007: 224). The object is animate, less and more, ontologically, than human, with emergent neural properties and intelligence as they are now scrutinized more and more frequently in art exhibitions and performance platforms such as the recent “Hi, Robot!: Das Mensch-Maschine Festival” held at Tanzhaus NRW in early 2019.¹ Our experimental setup gets adjusted and refined with each performance. This epistemic object is derived from a turning point amidst the 18th century, when two cultures without much mutual influence

1 “Hi, ROBOT!” included films, a laboratory, an exhibition of works by Nam June Paik and Hiroshi Ishiguro, among others, and a conference on “Phantomkörper, Epidermische Überlegungen zu Prothesen” (www.hi-robot.de). The Barbican Centre in London opened “AI: More than Human” in May 2019, as a large “festival-style” exhibition on all levels of the building, exploring creative and scientific developments in AI and robotics, probing their potential to revolutionize living matters (life and artificial life). The show brings together artists, scientists and researchers, with interactive modules on an unprecedented scale of AI. Audiences are invited to interact directly with installations from artists including Mario Klingemann, Massive Attack, Es Devlin, teamLab, DeepMind, Neri Oxman, MIT’s swimming SoFi and chatbots, Joy Buolamwini’s work on data sets, Yuri Suzuki’s *Electronium*, and Hiroshi Ishiguro’s *Alter 3* robot. Interestingly, the show opens with a glance at the Golem figure from Judaism and the concept of animism – the attribution of a living soul to everything around us, even inanimate objects – deeply ingrained in Japanese Shinto traditions (<https://www.barbican.org.uk/whats-on/2019/event/ai-more-than-human>).

began to express unprecedented obsession with artful representations of humans by mechanical means.

Inspired by Japanese Bunraku puppet theatre, our project *Doppelgänger* dramatizes and refracts the historical essay *Menschen sind Maschinen der Engel* by Jean Paul (1785). At about the same time when Paul wrote this unusual essay, in Japanese Bunraku they began to perform with partly mechanical puppets, each played by two or three puppeteers – all fully visible on stage. With this dense interrelation, modes of expression are introduced to the performative arts that render Bunraku unique: large dolls of about two-thirds human size which have several puppeteers that together in perfect synchronization are form one dancing presence, and mechanisms that seem to shift the origin of movements into the doll itself. The puppet revolution in Bunraku not only took place at roughly the same time as Europe was concerned with automata, moreover it allowed to cast an unprecedented aesthetics of motion, both, lifelike and of high abstraction.²

Jean Paul's dark satire reflects on the topic of android automata of his time, which were of great public interest. Most prominently he discusses automata invented by the Austrian state official Wolfgang von Kempelen that became important precursors of contemporary robots. Among Kempelen's interventions are two automata – “The Speaking Machine” and “The Turk.” By means of the latter automaton, Kempelen tried to overthrow the French physicist Jean Pelletier. He had presented his experiments in magnetism to the empress at the Viennese court. The empress had asked Kempelen for his opinion about Pelletier's experimental apparatuses. Boldly he described them as simple and claimed that he could show a more complicated apparatus – a chess automaton. The empress granted Kempelen a six-month holiday for the construction of the automaton. “The Turk” puzzled not only his Empress Maria Theresia but the European public. Jean Paul, by means of critical discussion of Kempelen's automata, started to develop what later turned out to be a major contribution not only to literature and the arts but also to science – his famous subject of the “Doppelgänger” (Jean Paul: 1028).³

2 Transcultural obsession with mechanical reproduction of humans, to some extent, motivated the beginnings of posthumanist discourse. In Bunraku, a group of people animated a puppet whereas the stage presence is built up by all, not the puppet alone. In our research project this togetherness is reference for a life with humanoid robots. Bunraku has no theory, and its history is, according to Western expectations, not very well documented. But it follows a different tradition than one based on reflexive text, one based on performing it. I am not a Bunraku practitioner but a scientist in social robotics trying to work with an arts-based research approach to develop a new methodology. I became a Bunraku enthusiast during my research on it.

3 This text is from Paul's early work; one cannot find it in most of his complete editions. I discovered it and a few more on automata, during my constant research on the subject. Additionally, it has never been translated to another language. We tried to translate it into English for our performance and our various audiences responded very positive. I plan to translate all the texts and

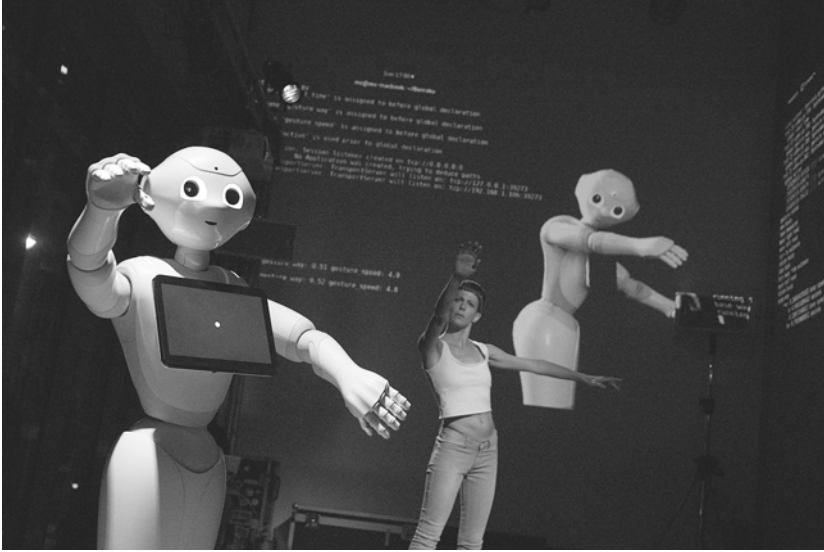


Fig. 1: H.A.U.S. performing *Doppelgänger* with the humanoid robot model pepper, 9/18 in Vienna at LABfactory reloaded/Jot12, dancer Eva-Maria Kraft. Photo: Sascha Osaka.

The performance *Doppelgänger* inverts the relation of puppet and puppeteer from Bunraku. Two humanoid robots are puppeteering one human dancer, Eva-Maria Kraft, carried by live-generated music and the recitative of Jean Paul's text by an actress. The relatedness of puppet and the puppeteers enables the discussion of dense, intimate relations of perception and guidance, of abstracting by observing, and the harmony of a dynamic equilibrium in caring and being cared for. *Doppelgänger* unfolds posthuman potential with both, treating the puppet as mere artefact as well as animated matter. In casting questions – about who is the puppet, who controls whom and who mirrors whom? – our performance seeks to provoke the audience's perception of the intimacy of the natural artificial and the artificially organic. The phenomenon of the puppet forces us to look at the mechanical, at machinery interwoven with life and consciousness. But while the status of the agent is negotiated between puppet and puppeteers, all find themselves increasingly indistinguishable from the posthuman flux between the reciprocal *Doppelgänger* – human and humanoid.

publish them, as they are an almost unknown part of the early roots of the discourse on critical posthumanism.



Fig. 2: H.A.U.S. performing Doppelgänger with the humanoid robot model pepper, 9/18 in Banska Bystica at the Kre:π performance art festival, dancer Eva-Maria Kraft. Photo: Hamzik Castro.

References

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