

Semiotic Design of Human-Machine and Human-Environment Systems

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Abstract: In this tutorial talk, the design issues of the mutual and inseparable relationships between the external environment and the internal of the agent that is an actor, an observer, a cognizer, and an interpreter are discussed. For this purpose, the subject of *semiosis* is introduced, which is any form of activity, conduct, or process that involves signs, including the production of *meaning*. By mingling technologies with semiotics, we jointly approach to the common design issues varying from how human agents make predictions about, and adapt to, their semiotic niche in the world, and to an aspect of the wider systems including designs of architects, embodied robots, product innovation and human-machine and/or human social interactions. Semiotic technology offers us an indispensable tool for the creation of a truly sustainable society and human-oriented technology, and our project enables a paradigm shift from conventional *design for manufacture* to novel *design for nurture*.

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