

## REPRESENTATION AND ACTIVITY

### **Moderator:**

Ronald N. Giere, University of Minnesota

### **Participants:**

Timo Honkela, Helsinki University of Technology

Jonna Kangasojan, University of Helsinki

Tarja Knuutila, University of Helsinki

### **Summary of the topic:**

A crisis of representation has undoubtedly swept over philosophy, social sciences and humanities lately. One of its main targets has been representationalism according to which to know is to have an accurate reproduction of the object of knowledge in the mind (in the form of suitable representations). Instead of mental representation we focus on representation-in-action: we approach representation as goal-directed collective activity that uses material external means. The symposium is interdisciplinary and multiplex due to our different disciplinary backgrounds (philosophy, artificial intelligence and education). The participants' topics to be discussed advance from the more abstract to the more concrete.

The symposium starts with a philosophical criticism of the more or less received notion of representation, which is conceived of as a dyadic relation between external things (real entities and processes) and their mental, abstract or theoretical "pictures". External representations, according to this view, are treated implicitly as transparent replicas of either external objects or internal representations. Their use and usefulness is not questioned or explicated. In contradistinction to this view we propose that to know is to construct and use external, semiotic devices of the phenomena in interest, in which process the object of knowledge merges with its representation.

The next presentation takes these general philosophical themes to the level of cognitive and computational modeling. Attempts to create models of activity, e.g., as societies of artificial agents, bring in the intersubjective or cultural level. If the agents are to communicate meaningfully with each other one needs to assume a Platonian worldview somewhat automatically shared by all the agents, or then the system of a collection of agents has cultural level of meaning negotiations and emergent conceptual systems.

It is typical for the discussions about representation that they worry about the possibility of accurately representing something that already exists. But much of our everyday representing concerns something that is still in the process of its making. Might not this insight give a fresher point of view to representation? The final presentation of the symposium is an empirical analysis of a process, in which a solution for broadband (fiber-to-home) service provision was created during a pilot project in a district called Arabianranta in Helsinki, Finland. The collaboration between the stakeholders is analysed from the point of view of the changing representations of the broadband telecommunications infrastructure. In activity theoretical terms this process could be described as the joint construction of a 'partly shared object of work'.