## Past, Present and Future of Radical Constructivism

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The transformation from an information-based to a knowledge-based society is not only accompanied by an increased need for knowledge discovery and knowledge management, it also reflects a rising interest in the (radical) constructivist worldview. It replaces the concept of absolute and mind-independent information "out there" in favor of asking how knowledge comes about. Radical constructivism and constructivist approaches in general have the potential to provide the fruitful framework for alternative forms of knowledge management which excel traditional approaches that have proven insufficient as solution strategies for complex problems and the demands of the faster moving global economy, science, and culture. I will review the past, present, and future of the constructivist movement championed by cyberneticians such as Heinz von Foerster and Ernst von Glasersfeld among many others.

In a broad sense, the constructivist program can be characterized as follows. (a) Questioning the Cartesian separation between objective world and subjective experience; (b) Including the observer in scientific explanations; (c) Rejecting representationalism; (d) Maintaining an agnostic relationship with reality; (e) Moving the focus from the world that consists of *matter* to the world that consists of *what matters*; (f) Emphasizing the "individual as personal scientist" approach; (g) Focusing on self-referential and organizationally closed systems which strive for control over their inputs rather than their outputs; (h) Preferring process-oriented approaches over a substance-based perspective; (i) Asking for an open and less dogmatic approach to science in order to generate the flexibility that is necessary for today's social and scientific challenges.

The first six points have already been subject to various philosophical argumentations and scientific investigations. Future constructivist research may therefore focus on points g to i. The first of these three remaining points refers to the role of formal self-organizing networks and their capacity to base (radical) constructivism on formal rather than empirical foundations such that knowledge and reasoning can be adequately accounted for in formal networks and their properties. The second point is closely related to the first in the sense that networks are considered process ontologies. This leads to the question whether the material basis of networks plays a subordinate role. The third point links to defining a knowledge society by its ability and willingness to continuously revise knowledge rather than to cling to traditional habits.

Finally, in order to encourage and promote constructivist research I will introduce the new peer-reviewed international journal Constructivist Foundations available at http://www.univie.ac.at/constructivism/journal/ It is concerned with the interdisciplinary study of all forms of constructivist sciences, especially radical constructivism, cybersemiotics, enactive cognitive science, epistemic structuring of experience, second order cybernetics, the theory of autopoietic systems, among others. Its first edition appears simultaneously with the ASC conference.