# Publication Review

## Recent books and articles related to constructivist approaches

**> Upshot •** This section lists publications related to constructivist approaches – constructivism, second-order cybernetics, enactivism, non-dualism, biology of cognition, etc. – that recently have been published elsewhere, and which the reader of the journal might find interesting. The entries are ordered alphabetically and clustered according to their respective primary disciplinary backgrounds. The increasingly extending bibliography can be consulted at http://www.constructivistfoundations.info/bib/

### Communication science

**> Scholl A. (2011) Der unauflösbare Zusammenhang von Fragestellung, Theorie und Methode. Die reflexive Bedeutung der Methodologie (nicht nur) in der Journalismusforschung [The inextricable connection between research question, theory and method. The reflexive implications of methodology (not only) within journalism research]. In: Jandura O., Quandt T. & Vogelgesang J. (eds.) Methoden der Journalismusforschung. VS Verlag für Sozialwissenschaften, Wiesbaden: 15–32.**

>> Universal theories, such as system theory, cultural studies, and critical theory, are often applied to journalism research. However, these theories are less often used for empirical research than are middle-range theories, such as news values, news decisions or news bias. This chapter reinterprets the role of methods and methodology within universal theories and for doing empirical research within the framework of universal theories. The author discusses methods of data collection, sampling procedures, and methods of data analysis from a (radical) constructivist perspective in order to overcome the shortcomings of critical rationalism, which is still the dominant epistemology and methodology within empirical social science.

**> Scholl A. (2011) Konstruktivismus und Methoden in der empirischen Sozialforschung [Constructivism and methodology in empirical social research]. Medien und Kommunikationswissenschaft 59(2): 161–179.**

>> In the field of communication science, constructivism seems to be important for theoretical development only. The relevance of constructivism for methodological reflections is often neglected. However, a constructivist way of thinking has also implications for the relationship between theory and methods, methodology, or empirical research. Exploring the consequences of constructivist thinking will cause some disturbances in methodological matters: it is neither necessary to bind a certain methodology (e.g. quantitative or qualitative methodology) to a certain epistemology (e.g. realism or constructivism), nor do we need a realist epistemology to do research in the sense of critical rationalism. Furthermore, the constructivist re-interpretation of the research process and of the relationship between theory and empirical research does not imply that we have to reinvent the established empirical methods within the discipline of communication studies. Rather, the constructivist way of thinking enables us to reflect phenomena of latency and to irritate empirical research in a productive manner.

### Computer science

**> Dodig-Crnkovic G. (2010) Constructivist research and info-computational knowledge generation. In: Magnani L., Carnielli W. & Pizzi C. (eds.) Model-based reasoning in science and technology. Springer, Heidelberg/Berlin.**

>> It is usual when writing on research methodology in dissertations and thesis work within software engineering to refer to empirical methods, grounded theory, and action research. The analysis of constructive research methods, which are fundamental for all knowledge production and especially for concept formation, modeling, and the use of artifacts, is seldom given, so the relevant first-hand knowledge is missing. This article argues for introducing the analysis of constructive research methods as crucial for understanding research processes and knowledge production. The paper provides characterization of the constructive research method and its relations to action research and grounded theory. The illustrative example of the Blue Brain Project is presented. Finally, the foundations of constructive research are analyzed within the framework of info-computationalism, which provides models of knowledge construction by information processing in a cognizing agent.
http://www.mrtc.mdh.se/~gdc/work/MBR09ConstructiveResearch.pdf

### Education science

**> Wilkins J. L. M. & Norton A. (2011) The splitting loope. Journal for Research in Mathematics Education 42(4): 386–390.**

>> The article describes a quantitative analysis that utilizes Piaget's structuralist approach to mathematical development. Results affirm Steffe's models of students' constructions of fraction schemes and operations, particularly regarding the construction of the splitting operation.

### Interdisciplinary

**> Schmidt S. J. (2011) Worlds of communication. Interdisciplinary transitions. Peter Lang, Oxford.**

>> The book presents a collection of articles that S. J. Schmidt has published in English over the last 40 years. It documents his way to constructivism and its application

in philosophy, literary studies, culture, and media studies.

**> Rafieian S. (2011) A biosemiotic approach to the problem of structure and agency. Bisemiotics (Online First).**

>> I argue in this paper that by taking a biosemiotic point of view, human "agency" may be defined as the ability of an individual to direct the incoming and internal streams of semioses and the ability to create an integrative and superordinate new stream of semiosis in addition to the upwardly and downwardly component ones, and I argue how such a view might open a new door for research into the concept of human "personality" and "agency." Obviously, these are key concepts in constructivist approaches and a better understanding of them can shed light on other aspects.

## Philosophy

**> Herrnstein Smith B. (2010) Natural reflections: Human cognition at the nexus of science and religion. Yale University Press, New Haven.**

>> A critical assessment of current evolutionary-cognitive explanations of religious belief from the perspective of a constructivist-pragmatist epistemology. Smith argues that crucial aspects of belief – religious and other – that remain elusive or invisible under dominant rationalist and computational models are illuminated by views of human cognition that stress its dynamic, embodied, and interactive features. She also demonstrates how constructivist understandings of the formation and stabilization of knowledge – scientific and other – alert us to similarities in the springs of science and religion, which are elsewhere seen largely in terms of difference and contrast.

**> Mascolo R. (2011) L'emergere della biologia della cognizione. La complessità della vita di Humberto Maturana Romecín [The emergence of Biology of Cognition. The complexity of Humberto Maturana Romecín's living] Aracne Editrice, Roma.**

>> With a preface by Pier Luigi Luisi, this book sketches the complexity of Humberto Maturana's life, through his early works, his studies in England, his doctoral thesis at Harvard, and leading towards the publication of "Biology of Cognition" in 1970. The author includes anecdotes and the poetry in Maturana's works that contribute to the development of his ideas. She presents the theoretical web he and his student and coworker Francisco Varela were weaving. In particular, the book focusses on aspects of visual perception and the theory of knowledge designed in "dialogue," including with classical philosophical authors such as Nietzsche. By anchoring itself in the turning points in his biography and by using the inherent redundancies in Maturana's language, the book wraps in on itself again in a way that reveals the inescapable circularities of living.

## Psychotherapy

**> Levold T. (2010) Systemtheorie und Konstruktivismus. Ein Daumenkino für Psychotherapeuten [Systems theory and constructivism. A flip-book for psychotherapists]. Person 14(2): 89–98.**

>> In the second half of the last century different variations of systemic and constructivist thinking emerged that not only have been important for the development and differentiation of systemic therapy but are increasingly becoming attractive for other psychotherapeutic approaches. This article explains some essential notions of all the theoretical models presented (complexness, self-organization, context sensitivity, and process orientation, as well as pattern generation and detection). Subsequently, basic ideas of the following theory models are presented: first order cybernetics, theory of autopoietic systems, theory of social systems (N. Luhmann), theory of problem determined systems, social constructionism, theory of self-organized systems (synergetics), and person-centered systems theory.

## Social science

**> García O. & Laulié L. (2010) The CLEHES-MOOD: An enactive technology towards effective and collaborative action. Systems Research and Behavioral Science 27(3): 319–335.**

>> The paper shows the creation of an enactive technology of self-observation that facilitates the search for effective and collaborative action strategies for any observer that belongs to an organization or human activity system, with the experience of the user as the cornerstone of design. What is called "enactive technology" are tools that help different users to look for the improvement of actions and personal performances in a systemic view from their own experience, in the assumption of knowledge as enaction (sensu Varela).