

## Call for Papers

### Special Issue of *Biosemiotics* (Springer): Constructive biosemiotics.

The journal *Biosemiotics* (Springer) is preparing a special issue on “Constructive biosemiotics” guest-edited by Tommi Vehkavaara and Alexei Sharov. By the epithet “constructive” we are referring to a naturalized approach to agency, normativity, and knowledge that emphasizes the primacy of activity and real construction of the cognitive agents themselves as opposed to the view to agents as mainly passively or mechanically reacting. The aim of the Special Issue is to integrate such constructive approach with biosemiotics so that organisms and perhaps other types of living systems are considered as agents that construct their “knowledge”, i.e. their habits of interpreting signs, their own functional structure, and their environment (that typically includes other agents) they are interacting with. Such constructive perspective is present to some extent in the works of theoretical classics of biosemiotics, especially of Jakob von Uexküll (concepts of functional circle and *Umwelt*), Gregory Bateson (cybernetics and information), and C.S. Peirce (meaning of sign as constructed by its interpreter). In this special issue we welcome also other constructive starting points – not so often employed in biosemiotics – like Jean Piaget’s constructivism, Richard Lewontin’s emphasis on construction over adaptationism, autopoietic approaches, cybernetics, General systems theory (Ludwig von Bertalanffy), evolutionary epistemology, and interactivism (Mark Bickhard) as far as they are somehow applied to biosemiotic problematics.

Independently on the chosen semiotic terminology (e.g., sign, representation, meaning, or information), constructive biosemiotics understands the referents of these terms as being constructed by biosemiotic agents. Either these referents are materially constructed (composed) by the agent, or some already existing and available material items are identified and taken into service by the agent so that only their semiotic roles are constructed. In both cases, material items are merely vehicles of their semiotic functioning that are picked up for use according to the actual needs of the agent. That would mean to take the organism or agent point of view in its interaction with the world. The activity of agents is controlled by their subsystems that are goal-directed or embodying some normative functional criteria, which in some cases enables the agent to judge and detect the success of its semiotic operations. Although the developmental or short-term time scale is more natural in constructive view, we suggest that constructive biosemiotics should expand to the evolutionary dynamics, evolvability and (re)construction of receptor and effector subsystems of agents, and the whole evo-devo problematic. E.g. what is the role of agential constructions in longer term time scales (e.g. Baldwin effect) and whether or in which sense there can be said to be evolutionary agents (lineages, populations, etc.) capable of learning (evolutionary epistemology, vertical biosemiosis).

The special issue of Constructive biosemiotics welcomes papers that emphasize the constructive perspective in biosemiotic processes at functional and evolutionary time scales. The central question is how biosemiotic agents or systems are constructed and are constructing their semiotic behaviors like

1. cognitive interactions (meaning formation and communication),
2. navigation in the environment (functional or intentional movements),
3. functional reconstruction of the environment (e.g. niche construction, moulding the other agents),
4. self-maintenance, self-modification, and (recursive) self-production of (semiotically) functional structures or scaffoldings (e.g., constructive development of full-scale competence), and

5. self-identification and -determination (e.g. the normative functioning of immune systems).

A further question concerns the criteria of agency. While organisms are usually understood as the prototype of biosemiotic agents, it can also be considered whether (or in which sense) it would be reasonable to consider also some other kind of biological unities – individual cells, organs, or populations, species, lineages, etc. – as agents capable of these behaviors.

The special issue welcomes theoretical works, empirical findings, and metatheoretical considerations that employ constructive perspective biosemiotically relevant way.

**Timetable and technical requirements:**

- Deadline for submitting tentative titles and abstracts: January 2016
- Deadline for paper submission: September 2016
- Electronic publication ahead of print: January-February 2017
- Paper version, Issue #2, August 2017.
- Recommended length 7,000 words. Figures and tables are welcome (if possible).
- Instructions for Authors:

<http://www.springer.com/life+sciences/evolutionary+developmental+biology/journal/12304>

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