What experimental semiotics teaches us about conventionalization of graphical sign systems

MARK METS

mark.mets@gmail.com

University of Tartu

The field of experimental semiotics uses laboratory experiments that require participants to cooperate on establishing novel communication systems (Galantucci et al. 2017). These experiments demonstrate how different properties of novel communication systems of various kinds and modalities emerge. The main research themes of this paradigm deal with the establishment of motivated signs and their development into conventional symbolic signs and the emergence of a combinatorial design (*ibid.*). I will firstly give an overview on how experimental semiotics has demonstrated the emergence of two of these properties — iconicity and symbolicity, in graphical communication systems. High iconicity indicates that the relationship between a sign and what it refers to is based on similarity, and is therefore highly motivated. High symbolicity means that this relationship is arbitrary and based on the regularities or conventions. As an example, Garrod et al. (2007) conducted a study where participants first created iconic signs to communicate with a partner. These signs then developed into more symbolic signs with the help of feedback through social interaction with a communication partner. Secondly, I will analyse the role of conventionalization in the emergence of icons and symbols in experiments with graphical communication systems. Conventionalization is the process by which the communicators agree upon sign and referent relationship by a habit or a convention. Different kinds of experiments show different aspects of conventionalization as well as the emergence of iconic or symbolic signs: whether it´s communication in a communicating pair (e.g. Garrod et al. 2007), community (e.g. Fay et al. 2004), between communities (e.g. Healey et al. 2007) or in an iterated learning paradigm (e.g. Garrod et al. 2010).

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