

## TRIADIC ONTOGENETIC RITUALIZATION: AN OVERLOOKED POSSIBILITY

EKATERINA ABRAMOVA

*Department of Philosophy, Theology and Religious Studies, Radboud University  
Nijmegen, The Netherlands  
e.abramova@fr.ru.nl*

This paper aims to contribute to the currently popular theory that language has emerged from manual gestures. I argue that in the discussion of potential mechanisms that could have given rise to a gestural protolanguage, one particular possibility has so far been overlooked, namely *triadic ontogenetic ritualization*.

Existing gestural theories typically propose that a gestural protolanguage was composed of a type of natural pantomimes, i.e. manual movements that resemble some actions or objects. Such accounts argue that pantomimes could have emerged through e.g. bodily mimesis (Zlatev, 2008) or an extension of the mirror neuron system (Arbib, 2012). Importantly, whatever the particular claim, they typically maintain that a sender consciously produces an iconic gesture with an intention to evoke a particular thought in the mind of the receiver and elicit a desired response via a recognition of this intent.

Put shortly, on a currently dominant view, a gestural protolanguage is a system characterized by two features. First, it is characterized by the properties of the signals that comprise it, which are triadic (can iconically stand for actions or objects) and intersubjective. Second, it is characterized by the properties of the cognitive mechanisms underlying pantomime-based communication, in which the ability to produce and comprehend communicative intentions is seen as a central achievement in the evolution towards human language. From this point of view, simpler cognitive mechanisms such as those available to contemporary non-human primates, i.e. mechanisms that subservise ontogenetic ritualization (OR), are seen as insufficient. OR is a process of transformation from recurrent instrumental social actions which are used to affect the behavior of a conspecific into communicative actions (Tomasello & Zuberbühler, 2002). This process is said to yield signals that do not stand for anything, are asymmetric between senders and receivers and produce responses due to over-trained elicitation, thus missing the two properties described above.

In the current paper, following Bar-On (2013), I argue that the traditional view that adopts a Gricean view on communication, as captured by the second feature

of a gestural protolanguage, i.e. communicative intentions, runs into the problem of constructing the gestural protolanguage on a cognitive basis which is itself left unexplained. I also suggest that OR can in fact lead to a language precursor with proto-semantic properties<sup>a</sup> – matching the first feature. All that is required is envisioning conditions in which ritualized signals are triadic (involve objects without referring to them) and intersubjective (the signal can be used equally by senders and receivers). Such conditions could be provided by a socio-cultural setting, in which joint action that involves objects, such as tool use, is common<sup>b</sup>.

Tool use has been argued to be implicated in language evolution (Stout & Chaminade, 2012) but so far solely as a bridge between hierarchical structure of complex action-sequences and the emerging syntactic structure. What is needed for my proposal is a recognition that interaction around objects is an inherently social activity. Artifacts are often constructed and used together, “in a chain of complementary actions guided largely by anticipation of what the other participant will do” (Reynolds, 1993, p. 412). If at some point in our evolutionary history, interactions around objects became more complex and complementary, ritualized signals could emerge from recurring episodes, where participants learned to anticipate each other’s actions from increasingly abbreviated intention-movements directed towards those objects.

The signals resulting from such a process would be imperative gestures for acting on an object in a specific way. In that sense they would be triadic and modestly referential. Furthermore, if such interactions were to happen among grown-up skilled individuals, the roles could be interchanged. That is, the same individual could have the chance to both produce and respond to a gesture, lending the signals intersubjective quality. Finally, coordination with multiple individuals on different occasions would introduce a pressure to converge on shared forms, establishing a trajectory in which gestures become more symbolic as they become more shared. In such a scenario, postulating a generatively open set of pantomimes, which then needs to be replaced with speech, is not necessary. Rather, the system grows in tandem with a growth of types of interactions available until a point is reached where novel communicative forms can emerge through the processes of cultural creativity and transmission (Brighton, Smith, & Kirby, 2005).

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<sup>a</sup>The claim is, that whatever mechanisms are found to underpin *dyadic* OR are also involved in the *triadic* case, albeit perhaps extended in important ways that have to do with other mechanisms involved in joint action. Naturally, empirical studies and computational simulations of TOR would be needed to establish whether, how and under what conditions such mechanisms could lead to an emergence of a gestural proto-language.

<sup>b</sup>For my proposal, any *triadic* activity that takes place regularly would be adequate. The advantage of tool use is the availability of objects that persist across different interactions and can structure them in consistent ways.

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