

Nonarbitrary representation and the evolution of symbolic communication

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Many theories of language origins have looked to gesture, or nonarbitrary bodily representations, as a means to explain how linguistic abilities evolved. Common to these theories is the idea that nonarbitrary bodily communication preceded symbolic communication, the former serving to ground the latter. Specifically, nonarbitrary gestures are said to have transitioned into arbitrary, symbolic gestures (Arbib, 2005; Corballis, 2002; Tomasello, 2008). While recognizing the importance of nonarbitrary representations in establishing novel symbol systems (Theisen, 2010), these theories do not provide a satisfactory evolutionary account of how language as it exists today came to be: a semantically and temporally coordinated system of spoken (symbolic) and gestural (nonarbitrary) expression (McNeill, 2005).

I propose that considering the multimodal nature of communication makes it possible to account for symbolic communication without appealing to evolutionarily untenable solutions. The presence of a concurrent channel of signaling – one with far less capacity for nonarbitrary representation (Fay & Lim, 2010) – presents an opportunity for (mostly) arbitrary forms to be mapped to meanings simply through temporal correlation; nonsymbolic vocalisations could become associated with meanings expressed in part through co-occurring bodily representations. In this way, symbols would emerge naturally through cultural processes of learning and repeated communicative exchange.

References

- Arbib, M., 2005. From monkey-like action recognition to human language: An evolutionary framework for neuroscience. *Behavioral and Brain Sciences*, 28, 105-124.
- Corballis, M., 2002. From hand to mouth: The origins of language. Princeton University Press.
- Fay, N. & Lim, S., 2010. From hand to mouth: An experimental simulation of language origin. *The Evolution of Language: Proceedings of the 8th International Conference*

(*EVOLANG*), (eds) A.D.M. Smith, M. Schouwstra, B. de Boer & K. Smith. World Scientific.

McNeill, D., 2005. *Gesture and Thought*. Cambridge University Press.

Tomasello, M., 2008. *Origins of Human Communication*. MIT Press.

Theisen, C. A., 2009. Nonarbitrariness in novel sign systems. PhD Thesis, University of Edinburgh.