

LASTING IMPACTS OF THE CODE MODEL ON PRIMATE COMMUNICATION RESEARCH

ERICA A. CARTMILL

Department of Anthropology, UCLA, 341 Haines Hall,

Los Angeles, CA 90095-1553, USA

cartmill@anthro.ucla.edu

The ability to mark a particular behavior as a communicative act—instead of relying on a small set of phylogenetically-shaped signals—expands the potential of a communicative system exponentially. Essentially any behavior can be made communicative through ostension. When paired with the ability to infer meaning from novel contexts and behaviors, this generates a powerful communicative engine. Human language is arguably built upon just such an ostensive-inferential engine (Sperber & Wilson, 1995; Origg and Sperber 2000; Scott-Phillips, 2014). The ability to take an action or sound and imbue it with meaning through “performing” it as a signal is undoubtedly an integral part of modern human language. But is it *uniquely* human?

Recently, Scott-Phillips extended the discussion of the O-I system by systematically contrasting the communication systems of great apes and humans with respect to their properties as codes (Scott-Phillips, 2014, 2015). He argues that ape communication is a “natural code,” relying on associative mechanisms and expanded by metapsychological abilities. Human language, by contrast, is a “conventional code,” built upon metapsychological abilities (the O-I system) and made more powerful by associative mechanisms. This contrast between natural and conventional codes makes important predictions about the communicative behavior of apes and humans; in particular, it predicts that only humans possess and recognize *communicative intentions* (an act that provides information that it is communicative, i.e., signaling its own signalhood). This capacity, in turn, lies at the heart of the O-I system. The evidence that ape communication is a natural code (and not based on communicative intentions) comes from the published literature on ape communication. This is reasonable, but could lead to biased conclusions about the nature of primate communicative

systems, because the code model itself has had a dramatic impact on the types of studies that are conducted (and published) in the field of primate communication.

Studies of primate communication search for and highlight predictable forms and contingencies that might be interpretable as codes. Ape gestural communication is less predictable and more flexible than the communication systems of many other animals. While the presence of communicative flexibility is used as evidence of intentionality in the ape gesture literature (Call & Tomasello, 2007), ambiguities in form or use are often discarded or overlooked. In fact, they are largely unanalyzable under this framework, which relies on predictable associations between identifiable forms and functions. Apes use their gestures flexibly, modifying them in response to their communicative partners: they direct their signals towards others, account for their partner's gaze, and wait for a response after gesturing. Yet the majority of published papers focus on predictability of signal to response—because authors are searching for codes.

I will review common data analysis procedures in ape gesture research, like excluding gestures that are not observed frequently enough to analyze (e.g., Cartmill & Byrne, 2010). I then discuss how these procedures influence the perception that gestures are natural communicative codes. I will present video examples of gestures that are typically deemed “unanalyzable.” Many unanalyzable gestures are simply rare or ambiguous gestures that do not show a simple one-form-to-one-meaning mapping and are thus not compelling in a research framework build around the search for codes. Ironically, these examples have the greatest potential to demonstrate ostensive communication in great apes. The theory that human communication is built on a framework of ostension and inference is compelling, but to determine whether humans are unique in these abilities we must assess the lasting impact of the code model framework on studies of primate communication. Primatologists should tackle this challenge head on. Emerging meta-analytic tools may facilitate this analysis by pooling rare events across studies and detecting complex regularities. These approaches would make significant advances in our understanding of the relationship between primate communication and human language.

References

- Call J, Tomasello M (2007) The gestural communication of apes and monkeys. Lawrence Erlbaum Associates, Inc, Mahwah.
- Cartmill, E., and Byrne, R. (2010). Semantics of primate gestures: intentional meanings of orangutan gestures. *Animal cognition*, 13(6), 793-804.

- Origi, G., and D. Sperber. (2000). Evolution, communication and the proper function of language. In *Evolution and the human mind: language, modularity and social cognition*. P. Carruthers and A. Chamberlain, eds. Cambridge: Cambridge University Press. Pp. 140–169.
- Scott-Phillips, T. (2014). *Speaking Our Minds: Why human communication is different, and how language evolved to make it special*. Palgrave MacMillan.
- Scott-Phillips, T. (2015). Nonhuman primate communication, pragmatics, and the origins of language. *Current Anthropology*, 56(1), 56-80.
- Sperber, D., and D. Wilson. (1995). *Relevance: communication and cognition*. 2nd edition. Oxford: Blackwell.