

GREAT APE PRAGMATICS

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Increasingly, animal behaviour researchers are applying a linguistic framework to studying nonhuman communication (Berhet et al., 2021; Fishbein et al., 2020). While animal communication systems alone likely do not provide the key to human language evolution (Fitch, 2020), applying linguistic tools to communication systems beyond language can be revealing. Ethologists have long been aware of the impact of context on behaviour (e.g. Smith, 1965), and so it is somewhat surprising that pragmatics (the role of context in communication) has not been more widely applied to research on primate communication. Part of the problem has been that historically researchers have methodologically muddled semantics and pragmatics, allowing context to stand in place of meaning without considering the relationship between them. To disentangle the two, it is necessary to look separately at (1) the behavioural outcome of the signal that seems to satisfy the signaller, and (2) the context in which the signal was deployed.

Recent research in ape gestural communication has made great strides in semantics, determining the meanings of gestures independently of the immediate behavioural context or social relationship between signaller and recipient (Cartmill & Byrne, 2010; Graham et al., 2018; Hobaiter & Byrne, 2014). Pragmatics has received more attention in primate vocal research (Seyfarth & Cheney, 2018), although here the underlying intended meanings are not always clear. Given its large, diverse repertoires, used by all apes to achieve their day-to-day goals across contexts and with flexible meanings, gestural communication is a promising system for studying pragmatics in nonhuman species. And indeed it seems that bonobo gestures have different meanings in different contexts (Graham et al., 2020). We expect context to similarly impact meanings for other ape gestural communication systems, raising intriguing questions about the underlying

cognitive mechanisms involved, and their shared similarities with those underpinning human language.

Here, we make a theoretical case for expanding the study of pragmatics across animal communication research. We sift through existing research on nonhuman communication to extract pragmatics where possible, and use this as a jumping off point from which to offer suggestions on ways of studying pragmatics in nonhuman species. We make specific recommendations in regards to recording and extracting data on different aspects of context that may be relevant to nonhuman interlocutors, such as behavioural (e.g. prior behaviour of signaller, recipient, or audience), social (e.g. kin relationships, rank), and environmental (e.g. vegetation density, weather) contexts, including how we may operationalise these. We draw on linguistic approaches and incorporate these with our own expertise in great ape gestural communication. We propose that broadening our view to include the context in which signals are deployed will provide new insight into understanding nonhuman communication from their perspectives.

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