

THE PUZZLE OF GREAT APE GESTURE & A SOLUTION

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Searching for evolutionary homologies between humans and non-human great apes, one promising approach is to focus on social cognition and in particular in cognitive capacities for attention manipulation. Indeed, arguably the most intriguing thing about great ape interaction is how they often inform one another in ways that can seem very ‘human’ (for an example see e.g. Genty & Zuberbühler, 2014). *How to describe great ape gesture in a way that accounts for both its behavioural similarity with some forms of human communication, but also its limited range relative to the human case?* One proposed solution to this puzzle focuses on the role of ‘we intentionality’ in human communication (Tomasello, 2008). In our view we-intentionality is not a cognitive process but a behavioural phenomenon itself in need of explanation. Here we summarise a novel approach.

Figure 1 presents five embedded subsets, each a more or less specific means of manipulating others’ attention (from Scott-Phillips & Heintz, in press). This ‘special case of’ approach is a novel alternative to existing frameworks for animal communication that are based on a supposed hierarchy of ‘levels of intentionality’ (see e.g. Townsend et al., 2017). It also helps to meet a growing demand for analyses that go beneath the surface of behaviour to consider underlying cognitive processes (e.g. Graham et al., 2020).

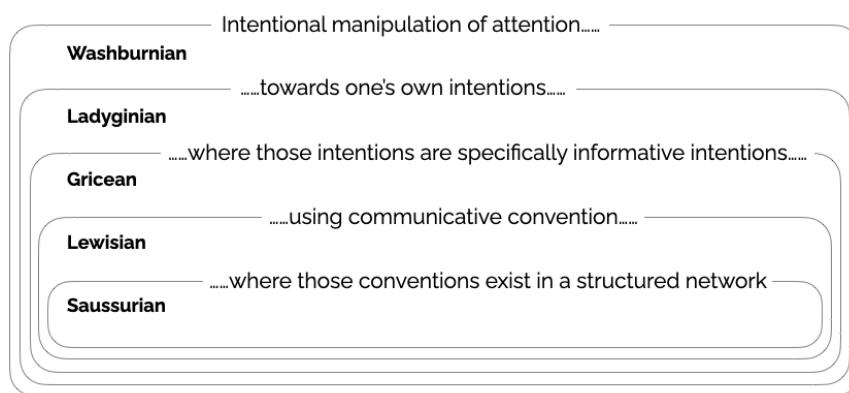


Figure 1. *Cognitive means of attention manipulation*. See main text for detailed description.

To describe these subsets we begin in the middle. With ‘Gricean’ we follow established characterisations in the Relevance Theory literature (e.g. Wharton, 2008; Wilson & Sperber, 2012; *inter alia*). This is the intentional manipulation of attention towards one’s own informative intentions. Working inwards, ‘Lewisian’ is Gricean communication by means of convention (following Lewis, 1969). A great many instances of Gricean communication entail communicative conventions, such as nodding, winking and pointing. At the same time, humans can improvise non-conventional communication when necessary, sometimes called ‘pantomime’ (e.g. Zlatev et al., 2020). A further subset of Lewisian communication is when the conventions in question are organised in structured networks, commonly called ‘languages’. We call this layer ‘Saussurian’, following the emphasis that Ferdinand de Saussure placed on structure in linguistic analysis. At the other extreme, the outermost subset includes all instances of the intentional manipulation of attention. We assume this subset extends well beyond humans. We label it ‘Washburnian’ after Margaret Floy Washburn, who pioneered the study of cognition in a wide variety of non-human animals, at a time when more behaviourist approaches were coming into vogue (Washburn, 1908).

The key novelty in our analysis is specification of the second innermost subset (see also Warren & Call, 2022, who present a somewhat similar analysis). Here, individuals intentionally manipulate others’ attention towards evidence of the intended outcome, which could be, for instance, grooming, play or sex. This is possible if observers can identify such intentions on the basis of the observed behaviour. We name this subset ‘Ladyginian’ after Nadezhda Ladygina-Kohts (born Nadezhda Ladygina), who was one of the first scientists to document in a systematic way the similarities and differences between the expressive behaviours of humans and chimpanzees. The difference with Washburnian is that whereas Washburnian behaviour is intentional towards any ends, Ladyginian behaviour intentionally reveals intentions (to be groomed, to play, etc). The difference with Gricean is that Gricean behaviour intentionally reveals not simply intentions but specifically informative intentions.

We suggest that most great ape gesture may be best characterised as Ladyginian but not Gricean. This suggestion is potentially convergent with other, previous analyses of great ape gesture (in particular Moore, 2016; 2017). However, those previous analyses maintain the label ‘Gricean’. This conflates two distinct modes of interaction that can and, in our view, should be separated. Explaining the evolutionary origins of human communication, and hence languages, requires identification of the ecological reasons why humans, and apparently only humans, transitioned from Ladyginian to Gricean modes of interaction (Heintz & Scott-Phillips, in press).

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