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Title	Ostensive communication, market exchange, mindshaping, and elephants
Authors	Ross, Don
Publication date	2023-02-17
Original Citation	Ross, D. (2023) 'Ostensive communication, market exchange, mindshaping, and elephants', Behavioral and Brain Sciences, 46, p. e14. Available at: doi: 10.1017/S0140525X22000760.
Type of publication	Article (non peer-reviewed)
Link to publisher's version	10.1017/S0140525X22000760
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Download date	2026-11-05 18:50:47
Item downloaded from	https://hdl.handle.net/10468/14294



University College Cork, Ireland
Coláiste na hOllscoile Corcaigh

Commentary on Christophe Heintz and Thom Scott-Phillips

Word counts: Abstract: 68; Main text: 830; References: 34; Entire text: 1025

Title: Ostensive communication, market exchange, mindshaping, and elephants

Don Ross

School of Society, Politics, and Ethics
University College Cork
Cork
Ireland
T12 AW89

School of Economics
University of Cape Town
Rondebosch 7701
South Africa

Center for the Economic Analysis of Risk
J. Mack Robinson College of Business
Georgia State University
Atlanta GA 30303
USA

don.ross931@gmail.com

http://uct.academia.edu/DonRoss

Abstract: Heintz and Scott-Phillips's hypothesis that the topic range and type diversity of human expressive communication gains support from consilience with prior accounts of market exchange as fundamental to unique human niche construction, and of mindshaping as much more important than mindreading. The productivity of the idea is illustrated by the light it might shed on why elephants seem to engage in continuous social communication for little evident purpose.

Heintz and Scott-Phillips's (HS) complex hypothesis, according to which the topic range of human communication and the diversity of human expressive signals is derived from cognitive foundations in partner discrimination for shared enterprises, is rich in its implications and consilience of evidence. It naturally complements Ofek's (2001) defense of the thesis that the origins of human ecological dominance and expansion of community scales lie in market exchange and specialization traced to the Upper Pleistocene. Indeed, Ofek's account arguably provides the evolutionary foundation for HS's story, with prehistoric markets (for, e.g., hearth maintenance) constituting the constructed niche in which ostensive communication of intentions for partner matching became adaptive. HS's thesis also comports smoothly with Zawidzki's (2013) argument that human mindreading – inferring stable latent intentions from observed behavior – is a relatively difficult, unusual and special-

purpose capacity that relies on more ubiquitous and basic processes of mind*shaping*, that is, mutual co-adjustment of intentional interpretations to support coordination and cooperation. Mindshaping is a plausible basis for the shared attention and presumption of relevance in communication that, according to HS, are required for successful ostension. Mindreading is not. This conceptual complex of market exchange, mindshaping dynamics, and ostensive communication of intentions (with the "unleashing" of expressive power that derives from it according to HS), might furnish a complete general theory of human ecological specialness.

This speculation invites tests based in comparative psychology. HS mainly consider evidence from great apes, presumably on the usual grounds that they provide the best available behavioral evidence about capacities of our most recent non-human ancestors. On the other hand, they recognize that dogs attend to expressed human intentions in ways that chimps don't, and attribute this to the fact that dogs are adapted to the human-constructed niche in which general cooperative commitment to communicative relevance is a valid presumption. This does not hold in the more individualistic and purely competitive social ecology of chimps. It is not clear that a similar obstacle applies to the much more cooperative dispositions of gorillas. Here is an instance where Ofek's foundational account might be usefully invoked: gorilla foraging in verdant rainforests involves no pressure for evolution of market exchange.

Given the general significance of evolutionary convergence, it is good exploratory strategy to look beyond apes and consider other large-brained social animals that are more intensely cooperative. Elephants are particularly potentially relevant in the context of HS's account, because, unlike any extant apes, they engage in communication at a level of frequency that approaches that of humans. Elephant sub-sonic rumbling, along with trunk gesturing and touching, is clearly communicative. It is an intriguing puzzle that although researchers are beginning to decipher the meanings of some elephant signals associated with group traveling decisions and greeting rituals, elephants "chatter" continuously when they are together, even when their circumstances are apparently uneventful. Unlike songbirds or (perhaps) dolphins, elephants do not need to continuously signal their locations to keep rapidly traveling groups connected.

HS's emphasis on the power of *human* language as being derived from unleashed expression neither implies nor requires the assumption that language is unique to humans. Indeed, it may be an *attractive* feature of their account that it re-directs attention, in explaining human specialness, from the McGuffin of human linguistic structural complexity. There is no convincing reason to *assume* that elephants lack language: their communication system has sufficient acoustic variation and regularity, and information appears to spread among them with surprising efficiency and specificity (Ross 2019). However, there is no evidence that their communicative expression is unleashed. It might be leashed not by lack of language but by the fact that they are *too* relatively and reliably cooperative to be motivated to attend as closely to subtle differences in expressed intentions as successful

humans must do. Matriarchal elephants have status hierarchies but are not competitive about them.

As HS discuss, chimps are, compared with humans, relatively uninterested in one another's dispositions to cooperate, and this blocks unleashing of their expressiveness. Elephants appear to be primarily preoccupied with food, water, babies, and one another's emotions. For them, the first two topics of concern reduce to interest in collective travel decisions. This, along with their relative imperviousness to predation and the ecological uselessness of deception to them, may have prevented them from developing promiscuousness of shared attention to a wide range of aspects of the non-social external environment, which could block unleashed expression.

An element of irony may lurk here. If HS are right, then humans are distinguished by devoted attention to expressions of conspecifics' beliefs and preferences. Yet in elephants we might have a species in which individuals are even *more* relatively preoccupied with one another's attitudes – but *too much* so to get traction for unleashed expression. Elephants, before humans came along to shatter their peace, may not have been under enough pressure to care about relevance; perhaps their conversation is mostly obsessive phatic communication. It is a tribute to the productivity of HS's intriguing perspective that it frames this novel hypothesis about the elephant puzzle.

Conflicts of interest: None

Funding statement: This research received no specific grant from any funding agency.

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