

In his introduction to Thom Scott-Phillips's *Speaking Our Minds*, Olivier Morin mentioned my review of the book in the TLS. For reasons of length I could not include more substantive objections to chapters 3 and 4 of Thom's book in that review. However, since the gaps in his argument undermine his claim to have explained why humans but not apes acquired language, I don't think the issues are trivial. While I develop some of these points elsewhere (see the footnote for details), since some of those papers are not yet out, this discussion seems like as good a place as any to point out the reservations that I have with some of the central claims of the book.

Central to Scott-Phillips's explanation of why humans alone evolved language are, he claims, two cognitive abilities: the ability to act with and understand fourth order meta-representations, and the ability to distinguish between 'informative' and 'communicative' intentions. Scott-Phillips argues that humans but not apes acquired language because they possess both of these abilities in ways that apes do not. I don't think this claim is defended adequately in his book.

As I mentioned in the review, there is currently no evidence that pre-verbal infants could understand fourth order meta-representations. Indeed, there is evidence – not discussed in the book – that some six-year-olds struggle to entertain even second order meta-representations (Perner & Wimmer, 1985). Scott-Phillips appeals to the existence of O'Grady et al. (2015) to show that human adults can entertain seventh-order meta-representations. However, since this ability may be a function of their language acquisition and not a pre-requisite of it, and since Scott-Phillips's claim must be true of pre-verbal children if it is to support his conclusions, the O'Grady study just doesn't tell us what we would need to know.

This takes us to the discussion of the significance of the informative-communicative distinction. According to Scott-Phillips's view, ostensive inferential communicators (including pre-verbal children) must be capable of each of the following:

- (1) the expression of informative intentions
- (2) the recognition of informative intentions
- (3) the recognition of communicative intentions
- (4) the expression of communicative intentions

I won't say anything about (1), (2) and (3) here. (There is more to be said about each one, but that may require a great deal of further unpacking. For example, there now exist data for (3) that show inconsistent roles for ostensive cues in both human and ape gesture interpretation; and while I agree with Thom's empirical claims about (1), I would have liked to see more theoretical support for the benchmark that he sets.) However, I do want to raise some issues with this discussion of (4), understanding of which Thom takes to be manifested in engaging in hidden authorship. I found his handling of this point to be disingenuous.

On Scott-Phillips's view, which he repeats in his 2015 *Current Anthropology* paper, it is a pre-requisite of grasping the informative-communicative distinction that one should be able to act with hidden authorship, since that requires recognising the significance of the ability to inhibit one's communicative intention.

He supports the claim that pre-verbal children could distinguish between informative and communicative intentions by pointing to his own hidden authorship study (Grosse et al., 2013) on children. Although he refers to the subjects in this study only as 'children', the youngest children tested in this study were three years old, and so the study does not show that pre-verbal children are capable of hidden authorship in the way that his argument requires. It is not appropriate to draw

conclusions about what pre-verbal children can do based on the abilities of three-year-olds. Indeed, when he and Gerlind Grosse ran their hidden authorship study in Leipzig at the end of 2009, they presumably also did not expect that preverbal children would show hidden authorship in their paradigm – since they did not attempt to test any children younger than three. It is a problem throughout Thom's book that he is inattentive to the ages of subjects when making claims about human ontogeny.

The fact that Scott-Phillips over-interprets his own hidden-authorship data might be more forgivable if he did not also claim that the absence of evidence of apes performing well in the same paradigm should be interpreted as an 'implicit collective acknowledgment' by primate researchers that apes would fail the task. I agree with him that in this case, they probably would. However, since we don't even know whether pre-verbal human children would succeed in this paradigm, it's hard to know how to interpret this. I am sceptical that they would do so – but I also think this inconsequential, since hidden authorship is the wrong marker to use (Moore, 2015; under revision). Moreover, I am troubled that Scott-Phillips interprets an absence of evidence favourably in humans but unfavourably in apes, despite having reasons to doubt that the finding would really be present in pre-verbal children.

Since he thinks these abilities necessary for ostensive inferential communication, and since his attributions of the relevant abilities to pre-verbal children remains empirically unsupported and tendentious, we ought to be sceptical of his conclusion about why humans alone evolved language.* There may be many reasons why apes did not acquire language. My preferred explanation is that, unlike humans, they simply failed to grasp the coordinative potential of their existing communicative abilities – perhaps because they did not face the same ecological challenges as our ancestors, which forced them to overcome more challenging tests of coordination. I suspect that many of the abilities that he thinks are pre-requisites of ostensive-inferential communication are really acquired only after language. (I defend this view at length in the submitted paper mentioned in the footnote.) Even if my view is false, though, I don't think Scott-Phillips's discussion is sufficiently detailed to warrant any strong conclusions about the origins of language.

To give another example of his too quick treatments of important issues, there is no question that Mike Tomasello's hypothesis about the cooperative foundation of human language is a hugely important one. However, Scott-Phillips dismisses it in a few paragraphs at the end of chapter 3, following only a very superficial discussion of the relevant literature on joint action. In fact, Tomasello's claims about the cooperative foundations of communication follow from his acceptance of claims that Thom also accepts – namely, the need for pragmatic interpretation of utterances. On Tomasello's view, pragmatic interpretation is possible only because speaker and hearer together take themselves to be engaged in a joint project of bringing the hearer to grasp the speaker's communicative goal. Scott-Phillips's cursory treatment of this point fails to get to grips with Tomasello's underlying (and admittedly not entirely clear) motivation, and so does not make it clear why Mike's view should not be accepted.

I hope that these comments won't be interpreted as showing hostility to Scott-Phillips's work. While I disagree with much of what he says, he is a wonderfully clear thinker, and my own ways of thinking about these issues have benefitted hugely from the perspicacious ways in which he carves up the conceptual terrain. At the same time, his preference for simple, clear answers leads him to ignore details. While it is too much to expect a book of 200-odd pages to answer all of the problems that it raises, it is not unreasonable to expect it to temper its conclusions in the absence of attention to detail. Scott-Phillips's claim to have explained why humans alone evolved language is unsupported by the arguments that he offers.

On a general level, it may be that given Thom's fondness for big pictures over details, he won't

worry about these complaints. As he says in his book:

“There is nothing wrong with lumping in science. On the contrary, it is how we develop our major theories and paradigms.”

The problem with this view is that ultimately it is details that will falsify our major theories. Ignoring them is therefore not an option.

I develop these points further in three related papers - my response to his Current Anthropology paper (Moore, 2015, 'A common intentional framework for great ape and human communication'), my response to his recent Animal Cognition paper ('Meaning and ostension in great ape gestural communication' currently under revision at the same journal) and an original paper ('Gricean communication and cognitive development', under review). In both of the response papers I spell out an alternative test of the informative-communicative distinction. In the cognitive development paper I argue that neither fourth order meta-representations nor sophisticated folk psychological abilities are a pre-requisite of ostensive inferential communication. If anyone is interested, all of these can be downloaded from my page on ResearchGate:

https://www.researchgate.net/profile/Richard_Moore14.