

We don't have a thorough understanding of evolution of language

He adds that, "our understanding of the evolution and the origin of language is not very well **fleshed** out. We know very little about the origin of the human language — so any possibility of gaining insight into it is worth pursuing."

↓ studies the brain functions

↓ gut a fish?

Thom Scott-Phillips, a **cognitive** science researcher at the Central European University in Budapest, Hungary, who was not involved in the review, says Kendrick and his coauthors' paper "seems authoritative." He accepts that many different species use coordinated exchanges to communicate. However, he cautions that "we need to be careful what conclusions we draw from that."

Be cautious w/ research findings

The Means To Shared Behavior Is Likely Different

Just because similar behavior can be observed in different species, he points out, doesn't mean these traits involve similar brain activity or biology. "Shared behavior between species is not evidence of shared mechanisms," he says.

Why Phillips says to be cautious w/ Kendrick's research.

One of the main questions is whether this turn-taking trait could have evolved independently in different species. This would be much different than if it evolved once long ago in an ancestor shared by all the different species. Scott-Phillips believes turn-taking as it's used by humans has evolved independently from other species, though he adds that more research will bring greater clarity.

Is turn taking independent to a species or

Kendrick singles out another element worth comparing: the silence between exchanges. In a typical human conversation, we generally pause for 200 milliseconds or so before answering. According to Kendrick, a longer or shorter pause tends to signal something is amiss, such as a delayed response from a politician when confronted with an accusation of corruption, or a lightning-quick "it wasn't me" from a kid with a baseball bat beside a broken window.

from a common ancestor

Examines Pauses, silences, delays

"If you ask someone to dinner, then there is a 600 millisecond pause. One of the inferences you might draw is the answer might not be 'yes,'" he says.

(Example) long pauses can signal a problem

The idea of turn-taking might bring to mind a picture of orderly, well-mannered animals. Kendrick stresses this isn't always the case. Like politicians interrupting each other or reporters jockeying to get their question answered, barn owl chicks may try to outdo each other by chirping louder or more quickly in an effort to attract favor from their mothers during feeding.

Animal behavior is compared to politicians

"Pay attention to me"

Just Like Human Behavior?

Some skilled operators even know how to hijack the conversation to their advantage. Antbird males, for instance, call out flirtatious entreaties to single females near them. However, just when a young female gets interested enough to respond, another male will often jam up the process by answering her before the first male can continue his conversation. The second male either calls more loudly or at the same time in an effort to steal the female's affection.

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to take over RUPE

These cases of overlapping signals can be seen as the exception to the rule, highlighting the importance of turn-taking in general, says Kendrick.

One of the problems with studying this kind of turn-taking is that researchers themselves do not know how to communicate with others outside their particular species of interest. Kendrick says a goal of the review is to bring together all the separate research on turn-taking, allowing scientists to conduct more cross-species comparisons.

Since species can't inter communicate the research isn't exact.