

Johnson

## An argument over the evolution of language, with high stakes

*Daniel Everett believes that language began 1.9m years ago with Homo erectus, the ancestor to Homo sapiens. Many experts furiously disagree*



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SPEECH leaves no fossils, so palaeoanthropologists have no direct evidence for the emergence of the quintessential human trait: language. Many scholars work on the topic nonetheless, but few of their findings have achieved consensus.

On one thing, at least, most agree: though animals communicate, only humans have true language, with the power to organise complex thoughts into a string of words, often about absent or abstract things. And most scholars also reckon that *Homo sapiens* is the only species ever to have had

such language. They think it must have emerged somewhere between 200,000 and 50,000 years ago.

Now Daniel Everett, of Bentley University in Massachusetts, has, in “How Language Began”, published a broadside against that idea. He thinks that *Homo erectus*, *Homo sapiens*’s predecessor, had something that could be called language—and not just grunting proto-speech. This would make language not 200,000 years old, but something like 1.9m.

At issue is more than chronology. Noam Chomsky has proposed that one human developed, through one genetic mutation, an ability called “Merge”, about 50,000 years ago. “Merge” allows two linguistic units to be joined into a single one, such as a complex noun phrase (*the house* and *the hill* becoming *the house on the hill*) or a complex sentence (*Sally loves Lucy* becoming part of *Bill knows that Sally loves Lucy*). The mind can further merge and manipulate the new units to make even more complex ones. This, called recursion, is what Mr Chomsky calls the language faculty “narrowly defined”. Other elements, like advances in auditory processing, he thinks, are shared with animals, or are also used for non-linguistic purposes.

Mr Everett published, in 2005, an article claiming that an Amazonian tribe he had lived with for years, the Pirahã, had no recursion. This led the press to crown Mr Everett as the anti-Chomsky: Mr Chomsky has spent his career at MIT, focusing on theory. He is caustic and imperious with opponents. Mr Everett lived in the jungle with his family and several different tribes, learning their languages. He went as a missionary, only to renounce his Christianity, quite publicly, later on. Mr Chomsky is not known for conceding error.

Mr Everett claims that recursion is neither necessary nor sufficient for human language. *Homo erectus*, he thinks, probably really did talk something like “Me Tarzan, you Jane”—but with this he could do quite a lot. Mr Everett proposes that language required a series of “signs” of advancing complexity. The first is the “index”, a non-arbitrary and non-intentional sign, like a hoofprint that makes clear a horse has been near. Next comes the “icon”, a non-arbitrary but intentional sign, such as a drawing of a hoofprint to represent a horse. *Homo erectus* seemed to value stones resembling things like a phallus and a fertile woman. This indicates abstraction and

“displacement”, where an object is made to represent something not physically present.

Then, Mr Everett reckons, icons developed into “symbols”—some of them spoken, arbitrary sounds that, unlike icons, had lost any connection to their referent (as “cat” sounds nothing like a cat). Gesture and intonation would have been crucial to making these symbols understood and agreed upon. All the while, the brain and speech organs were evolving to handle more and more complex utterances.

When *Homo erectus* began using several symbols one after the other in a more predictable pattern (but not yet recursively), Mr Everett thinks he could be said to be using human language. The linguist points to circumstantial evidence: *Homo erectus* would have needed it to build rafts or boats and plan seaborne voyages to reach places like Flores, an Indonesian island 24km from the nearest land, where tools from that era have been found.

The intellectual and philosophical stakes in the debate are high. If language is a recent great leap forward in *Homo sapiens*, this implies that all human languages are fundamentally similar, while marking a sharp break between humans and other animals. But if language is an invention relying on general-purpose parts of humans’ brains, in interaction with local culture over a million-plus years, then human languages may be rather different from each other, and more continuous with the abilities of animals and distant ancestors. The argument isn’t just about language, but about human nature.

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