

Why Only Us: The language paradox

Noam Chomsky's new book makes some big, and dubious assumptions about how language evolved



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Did language originate for internal thought or communication?

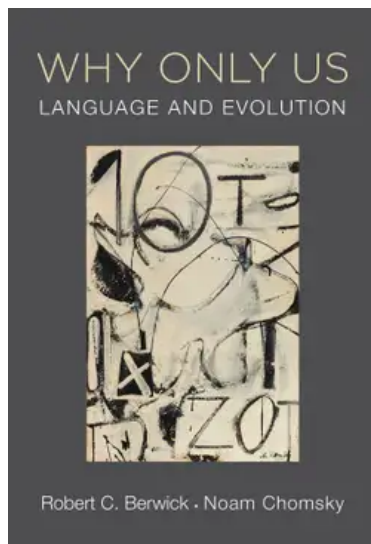
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WHEN the Linguistic Society of Paris was founded in 1873, it famously included in its constitution a prohibition against speculating on the evolutionary origins of language. A few years later, the London Philological Society followed suit. This admonition against positing what, then, amounted to no more than “just so” stories held for well over a century.

In the last couple of decades, the situation has changed, and with good reason. Discoveries in archaeology, cognitive science, primate behaviour, dating of ancient DNA and computational modelling of how languages have evolved mean we can now do significantly better than merely speculate.

Against this backdrop, linguist Noam Chomsky has teamed up with Robert Berwick, a computer scientist. In *Why Only Us*, they address precisely the question of how language

evolved. But at times it feels as if they are still given to speculation.



Chomsky has been working on a simplified version of this universal grammar proposal. For early modern humans to have evolved language, the genetic leap that made it possible must have been as simple as possible. This he boiled down to the capacity for a relatively simple grammatical operation that he called Merge back in the early 1990s, which allows words to be combined.

“It’s quite a stretch to suggest that language didn’t evolve to enable communication”

In *Why Only Us*, Chomsky and Berwick argue that this pared-down version of universal grammar is what would have enabled early humans to make the evolutionary jump from language-less creatures to the loquacious beings of the Upper Palaeolithic, some 40,000 years ago. This, in turn, would have resulted in the unheralded rich cultural explosion around that time, including cave art, jewellery and ritual burials.

Their argument goes like this. As our capability for grammar is genetically programmed, and as no other species has language, it stands to reason that language emerged fairly suddenly, in one fell swoop, because of a random mutation. This is what the authors refer to as the “gambler’s-eye view” in contrast to a “gene’s-eye view” of evolution. The sudden appearance of language occurred perhaps no more than 80,000 years ago, just before modern humans engaged in an out-of-Africa dispersion.

But to be convinced by this, the reader has to swallow a number of sub-arguments that are debatable at best. For one thing, the authors presume the Chomskyan model of human language – that the rudiments of human grammar (or syntax) are unlearnable without an innate knowledge of grammar. Its position seems less reasonable today that it once did.

Developmental and cognitive psychologists now have a clearer sense of the ways in which conceptual and linguistic learning works. A human infant seems to have a range of both primate and species-specific learning mechanisms and abilities that enable the acquisition of language. The emerging consensus is that language acquisition can occur without an innate blueprint for grammar.

Second, the authors make dubious assumptions about the evolutionary trajectory of language, and attempt to convince the reader that Darwinian theory breaks down when applied to language. The issue, they claim, is that no other species has language, and that the cognitive abilities of all extant species simply couldn’t be scaled up to achieve the capability.

In short, as language exists only in our species, without precedent elsewhere, then it did not evolve from some simpler form of communication. Hence, it must have evolved fairly

quickly and in one discontinuous jump. As the hallmark of language is a simple, computational syntax-engine, then, so the argument goes, this sort of species-specific event is not at all improbable.

However, this ultimately paints *Homo sapiens*, a species no more than about 200,000 years old, into a corner. Modern humans become an evolutionary curiosity, isolated from the 2.8-million-year evolutionary trajectory of the genus that led to us. It also amounts to a highly selective and partial presentation of the recent research literature.

Although Berwick and Chomsky are dismissive, recent evidence points to Neanderthals, who died out around 30,000 years ago, as having been, more or less, our cognitive equals. Recent archaeological findings suggest that they possessed a material culture approaching that of late StoneAge humans. And they may have had the anatomy, acoustic facility and cognitive smarts that made language possible.

Moreover, there is clear evidence of interbreeding between Neanderthals and humans. **The implication is obvious: both species must have had language.** That being the case, this pushes the origins of spoken language back much further, perhaps even to half a million years ago.

In addition, research in primatology and animal behaviour suggests that some of the precursors for language do exist in other species, ranging from European starlings to chimpanzees – with the latter using a sophisticated gestural form of communication in the wild. In fact, gesture may well have been the medium that incubated language until ancestral humans evolved the full-blown capacity for it.

An influential, alternative view of the evolution of language is to take a bigger-picture perspective from the one that Berwick and Chomsky espouse. The alternative sees language as an evolutionary outcome of a shift in cognitive strategy among ancestral humans, fuelled by bipedalism, tool use and meat-eating.

This new biocultural niche required a different cognitive strategy to encourage greater cooperation between early humans. Building on the rudimentary social-interactive nous of other great apes, an instinct for cooperation does seem to have emerged in ancestral humans. And this would have inexorably led to complex communicative systems, of which language is the most complete example.

Ultimately, *Why Only Us* is something of a curiosity. It takes a reverse engineering perspective on the question of how language evolved. It asks, what would language evolution amount to if the Chomskyan proposition of universal grammar were correct? The answer is language as a mutation that produces a phenotype well outside the range of variation previously existing in the population – a macromutation. This flies in the face of the scientific consensus. Indeed, the book attempts to make a virtue of disagreeing with almost everyone on how language evolved. To see language bucking the kind of gradual evolutionary change that Darwin proposed is surely a controversial perspective.

“Gestures may have incubated language until humans evolved the full-blown capacity for it”

The reader is asked to swallow the following unlikely implication of their logic: language didn't evolve for communication, but rather for internal thought. If language did evolve as a chance mutation, without precedent, then it first emerged in one individual. And what is the value of language as a communicative tool when there is no one else to talk to? Hence, the evolutionary advantage of language, once it emerged, must have been for something else: assisting thought.

But this conclusion seems unlikely. The structure and organisation of the world's 7000 or so languages indicates that its primary function is for communication between individuals. It's quite a stretch to suggest that language didn't evolve to enable this sort of interpersonal interaction.

Ultimately, the reader is left with a paradox: the evolutionary view entailed by Chomsky's stripped down, minimalistic universal grammar calls into question the very account of language Berwick and Chomsky attempt to provide us with.

Why Only Us: Language and evolution

Robert C. Berwick and Noam Chomsky
MIT Press (Buy from [Amazon*](#))

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