



Puzzles and mysteries in the origins of language



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ABSTRACT

Language evolved in no species other than humans, suggesting a deep-going obstacle to its evolution. Could it be that language *simply cannot evolve* in a Darwinian world? Reviewing the insights of Noam Chomsky, Amotz Zahavi and Dan Sperber, this article shows how and why each apparently depicts language's emergence as theoretically impossible. Chomsky shuns evolutionary arguments, asserting simply that language was instantaneously installed. Zahavi argues that language entails reliance on low cost conventional signals whose evolutionary emergence would contradict basic Darwinian theory. Sperber argues that a symbolic expression is, literally, a falsehood, adding to the difficulty of explaining how – in a Darwinian world – systematic reliance on language could ever have evolved. It is concluded that language exists, but for reasons which no currently accepted theoretical paradigm can explain.

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'Thus semiotics is in principle the discipline studying everything which can be used in order to lie.'

[Umberto Eco \(1976: 7\)](#)

1. Introduction

Language evolved in no species other than humans, suggesting a deep-going obstacle to its evolution. One possibility is that language simply cannot evolve in a Darwinian world – that is, in a world based ultimately on competition and conflict. The underlying problem may be that the communicative use of language presupposes anomalously high levels of mutual cooperation and trust – levels beyond anything which current Darwinian theory can explain.

Representing radically divergent disciplines, Noam Chomsky, Amotz Zahavi and Dan Sperber are major figures whose insights have a bearing on this problem. Chomsky shuns evolutionary arguments, asserting simply that language was instantaneously installed. Zahavi argues that language entails reliance on cost-free social conventions whose evolutionary emergence would contradict basic Darwinian theory. Sperber argues that a symbolic expression is, literally, a falsehood, adding to the difficulty of explaining how – in a Darwinian world – systematic reliance on language could ever have evolved. It is concluded that language exists, but for reasons which no currently accepted theoretical paradigm can explain. Language evolved in no species other than humans, suggesting a deep-going obstacle to its evolution.

2. Noam Chomsky

'Language is, at its core, a system that is both digital and infinite', writes [Noam Chomsky \(1991: 50\)](#). 'To my knowledge', he adds, 'there is no other biological system with these properties.' Chomsky attributes the capacity to deploy finite

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means to express an unlimited array of thoughts to a uniquely human organ installed in our species by a single genetic mutation.

A mutation occurs in an individual, not a group. The first speaker, reasons Chomsky, must therefore have been talking to itself. A critic might object that this makes no sense: Why talk when no one else existed who could understand? But the objection is invalid. 'Actually', explains Chomsky,

'you can use language even if you are the only person in the universe with language, and in fact it would even have adaptive advantage. If one person suddenly got the language faculty, that person would have great advantages; the person could think, could articulate to itself its thoughts, could plan, could sharpen, and develop thinking as we do in inner speech, which has a big effect on our lives. Inner speech is most of speech. Almost all the use of language is to oneself... So if one organism just happens to gain a language capacity, it might have reproductive advantages, enormous ones. And if it happened to proliferate in a further generation, they all would have it.' (Chomsky, 2002: 148)

Once everyone shared the same faculty, they could use it in various ways – for example, for purposes of communication. But, insists Chomsky,

'... language is not properly regarded as a system of communication. It is a system for expressing thought, something quite different. It can of course be used for communication, as can anything people do – manner of walking or style of clothes or hair, for example. But in any useful sense of the term, communication is not *the* function of language, and may even be of no unique significance for understanding the functions and nature of language.' (Chomsky, 2000b: 76)

Language, insists Chomsky (2011: 276), emerged in 'one fell swoop':

'To tell a fairy story about it, it is almost as if there was some higher primate wandering around a long time ago and some random mutation took place, maybe after some strange cosmic ray shower, and it reorganized the brain, implanting a language organ in an otherwise primate brain' (Chomsky, 2000a: 4).

Gradualist scenarios involving intermediate steps can be excluded on logical grounds. This is because there are no intermediate positions between a mind capable of a bounded range of expressions and one capable of an infinite range. Any supposed incremental step – any imagined part of infinity – is no part at all. From the moment of its installation, therefore, language must have existed in perfect form (Chomsky, 1996: 29–30).

Chomsky concedes that apparent imperfections abound. 'One massive case', he notes, 'is the phonological system: the whole phonological system looks like a huge imperfection, it has every bad property you can think of' (Chomsky, 2002: 118). The requirement for audibility – for phonology – makes the world's natural languages *sound* all too different. But the fault lies not with language. It resides, rather, in people's insistence on using it for communication:

'... a large range of imperfections may have to do with the need to 'externalize' language. If we could communicate by telepathy, they would not arise. The phonological component is in a certain sense 'extrinsic' to language, and the locus of a good part of its imperfection, so one might speculate.' (Chomsky, 2004: 405)

We have, therefore, a paradoxical situation. Language 'is, fundamentally, a system of sound-meaning connections' (Hauser et al., 2002). Yet its scientific study involves isolating it from any connection with externally audible sounds.

Might we say, then, that there exists just one language spoken to this day across the world? Leaving aside variability in speech sounds, which are extraneous, this is indeed what we find: 'the basic structure of language is essentially uniform and is coming from inside, not from outside' (Chomsky, 2002: 93). 'The Martian scientist might reasonably conclude that there is a single human language, with differences only at the margins' (Chomsky, 2000b: 7).

Can it further be claimed that since the speciation of *Homo sapiens*, every human individual has come into the world endowed genetically with one and the same set of word meanings? This, too, is scientifically confirmed:

'There is overwhelming reason to believe that concepts like, say, *climb*, *chase*, *run*, *tree* and *book* and so on are fundamentally fixed.' (Chomsky, 2000a: 75)

But what about, say, 'carburetor' or 'bureaucrat'? Can these, too, be genetically determined? Surprisingly, the answer is yes. 'Furthermore', as Chomsky (2000b: 65–66) explains,

'there is good reason to suppose that the argument is at least in substantial measure correct even for such words as *carburetor* and *bureaucrat*... However surprising the conclusion may be that nature has provided us with an innate stock of concepts, and that the child's task is to discover their labels, the empirical facts appear to leave open few other possibilities.'

Variation occurs, but only on the superficial level of 'labels' – arbitrarily agreed sounds associated with particular concepts. The concepts themselves don't change.

Chomsky doesn't often team up with evolutionary biologists, but in 2002 made an exception to this rule. In a widely discussed collaborative article published in the journal *Science*, Marc Hauser et al., (2002) distinguish between 'FLB' – the language faculty as broadly construed – and 'FLN', the system's narrowly defined computational core. Only the unseen, unheard, crystalline and unchanging component – FLN – is of perfect design. The rest – FLB – includes equipment for sound production, movement, cognition and so forth not necessarily restricted to language or to the human species. 'FLN is the

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