

Language evolution: What linguists can contribute

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Abstract

Three factors contribute to the evolutionary development of an organism: (i) historical accident (the genetic raw material available for natural selection to work on); (ii) adaptation through natural selection; (iii) nonbiological (especially physical) constraints. The same factors apply in principle to characteristics of an organism, such as the biological basis of the capacity for language in humans. From the point of view of these three factors, the author discusses recent contributions from linguists to language evolution research, including the contributions in this volume. He emphasises the importance of language evolution research for the development of linguistic theory, and the consequent need for more linguists to get involved in language evolution research.

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How and why did language evolve? That question has fascinated thoughtful people and provoked speculation for centuries. Among non-linguists, it is perhaps the most interesting of all linguistic issues. It is for this reason, presumably, that Aronoff and Rees-Miller chose to open *The Blackwell Handbook of Linguistics* (2000) with a chapter on language origins. At the same time, notoriously, it is a question that linguists have been reluctant to tackle. Most of us learn during our graduate years that the Linguistic Society of Paris decided at its inception in 1866 to ban papers devoted to it. In the context of 19th-century advances in historical linguistics, which were both startling and robust, it is not hard to see why linguists would have been inclined to avoid a topic on which there was at that time so little evidence solid enough to earn the respect of anyone who took language seriously as an object of study. But scholars in other disciplines (notably psychologists, anthropologists and philosophers) have never been so abstemious. This has left

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linguists with a dilemma. Should they join in, with their customary plaintive admonition ‘But language isn’t as simple as that!’? Or should they stay on the sidelines while psychologists, anthropologists and others eagerly discuss such evidence as there is?

One good reason not to stay on the sidelines is that scholarship has moved on since 1866. Not surprisingly, vastly more is now known about a range of cognate topics: archaeology, biological anthropology, neurophysiology, sign language studies, animal cognition, and animal communication. Linguists can thus no longer argue so convincingly that to investigate language evolution is frivolous. The extent of recent multidisciplinary interest is evident most notably in the volumes emerging from the biennial language evolution conferences that began in Edinburgh in 1996 (Hurford et al., 1998; Knight et al., 2000; Wray, 2002; Tallerman, 2005) and in the state-of-the-art survey of the field edited by Christiansen and Kirby (2003).

A second good reason is that among linguists themselves, despite a wide divergence of views about the fundamental nature of language and its relationship to other aspects of cognition and behaviour, there is a growing consensus that we should be concerned not only with the way languages are (individually) and the way language is (in general) but also with why language is the way it is. For linguists of a functionalist and cognitive bent, inclined to emphasize the links between language and other human capacities, this ‘why’ question has always been recognized as important. But among formalists now, too, at least within the Chomskyan mainstream, it has become acceptable to treat Universal Grammar as not merely the explanatory framework for language but as something that itself needs explaining. The title ‘Beyond explanatory adequacy’ that Chomsky gave to a recent working paper (2001) testifies to this, as do Chomsky’s even more recent thoughts on the design of language in relation to its evolution (2004a:153–155, 2004b). Chomsky has even co-authored an article on the language faculty with two animal behaviour experts, Mark Hauser and Tecumseh Fitch (Hauser et al., 2002)—a development that few would have predicted 10 years ago, and that has proved highly controversial (Pinker and Jackendoff, 2005).

On reading the opening pages of ‘Beyond explanatory adequacy’, I was struck by a parallel with some comments on evolution by the biologist George C. Williams. Chomsky is concerned with the initial state of the language faculty in an individual (let us call it S_0), prior to linguistic experience. Chomsky suggests (2001:2–3):

[W]e can proceed . . . to disaggregate S_0 into elements that have a principled explanation, and others that remain unexplained at this level of analysis: perhaps path-dependent evolutionary processes, or properties of the brain that remain unknown. These would have to be studied along similar lines, sorting out the effect of general principles (physical, chemical, mathematical), interface conditions, and a residue to be accounted for in other terms. The principled elements of S_0 are the conditions imposed on [the faculty of language] by the systems with which it interacts . . . including the sensorimotor (SM) and conceptual-intentional (C-I) systems that enter into thought and action. Insofar as properties of L [i.e. an ‘I-language’] can be accounted for in terms of IC [i.e. interface conditions] and general properties of computational efficiency and the like, they have a principled explanation . . . Summarizing, the initial conditions on language acquisition fall into the categories (i), (ii) and (iii): . . .

- (i) unexplained elements of S_0
- (ii) IC (the principled part of S_0)
- (iii) general properties

Principled explanation, going beyond explanatory adequacy, keeps to (ii) and (iii).

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