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The origins of language: A slim guide. By JAMES R. HURFORD. Oxford: Oxford University Press, 2014. Pp. 173. ISBN 9780198701668. \$65 (Hb).

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The Oxford University Press ‘Slim guides’ are intended ‘to be non-technical, readable, and short, while still conveying what is unique and special about language and its continuity with non-human life’ (from the front matter). James R. Hurford is uniquely placed to produce such a guide on the topic of language origins. He wrote one of the first linguistically informed articles on the topic (Hurford 1989) and has recently published two mammoth volumes covering the origins and evolution of linguistic meaning and grammar (Hurford 2007, 2012, respectively). I doubt that there is any other living scholar (with the possible exception of Derek Bickerton) who combines the breadth of knowledge of language evolution studies with the ability to synthesize complex, often contradictory, material into a readable package for the lay reader.¹ The degree to which H has succeeded is exemplified by the glowing testimonials (on the inside cover of the book) by four scholars whose approaches to language differ markedly from each other: Cedric Boeckx, N. J. Enfield, Tecumseh Fitch, and Maggie Tallerman. Boeckx has phrased his evaluation in a

¹ [Editor’s note] Bickerton’s book on this topic, *More than nature needs* (Harvard University Press, 2014), is also reviewed in this issue of *Language*.

manner that I could not hope to surpass: ‘Hurford has written a delightful little book, an ideal point of entry into the range of complex issues facing anyone that wants to understand how human language evolved. Darwin himself would have cherished this guide’. In this review I outline the chapters and then turn to some general issues that occurred to me while reading the book.

Ch. 1 of *The origins of language (TOOL)*, ‘The prehistory of a very special ape’, traces what is known about the nature (physical and cognitive) of the hominid species ancestral to and contemporaneous with *Homo sapiens*, along with discussion of their geographical placement and migration patterns. Of particular interest are the arguments for not identifying the origins of art with the origins of language. The first chapter of *TOOL* introduces a recurrent theme of the book, namely that, contrary to claims ‘that the human language capacity arose abruptly, ... a more plausible alternative, considering the way in which evolution usually works, is that there was some degree of gradualness in the evolutionary process’ (16–17).

Ch. 2, ‘Nature, nurture, and language’, begins with a discussion of the FOXP2 gene, which serves as a prelude to a general discussion of the interaction of biological and cultural mechanisms in human evolution. *TOOL* takes a strong stand against the idea (associated with Noam Chomsky and others) that language arose in the species as a mechanism for enabling ‘private thought’ instead of for enabling and enhancing communication. The last part of the chapter discusses computer modeling of the evolution of language (one of H’s areas of specialization) and in particular models illustrating how language might have arisen gradually.

Ch. 3, ‘How trusted talk started’, discusses the evolutionary antecedents of human communication and how language might have come to play a central role in the creation and maintenance of social structures. A wide range of topics are discussed, including dyadic and triadic communication, ontogenetic ritualization, joint attention, and reciprocal altruism. Special attention is paid to the latter, given that clear examples of reciprocal altruism in nonhuman groups are rare. In fact, language helps to enable this very human trait: ‘The naturalness of altruism to close kin is extended to artificially maintained groups by language’ (57).

Ch. 4, ‘Concepts before language’, traces the evolution of concepts, from very primitive organisms to humans. Various steps along the journey include the development of representations that are detached from external stimuli, episodic memory, and displaced reference. While ‘many non-human animals have quite richly structured information in their heads about the world around them[, ... o]nly humans have developed rich systems for externalizing this information in the form of public messages’ (73).

Ch. 5, ‘We begin to speak, and to hear differently’, focuses on the origins of the physical apparatus involved in speech and in hearing (and interpreting) speech sounds. While the much-discussed ‘descent of the larynx’ has been observed in several nonhuman species, the L-shape of the human vocal tract, which enables us to make vowels of different qualities, is unique. H finds fossilized evidence, of the sort that can be gleaned from examination of exhumed hyoid bones, thoracic canals, and the hypoglossal canals, to be quite inconclusive, insofar as it might bear relevance on the linguistic capacities of their possessors. Much of the chapter is devoted to the coevolution of the capacities for speech production and speech perception: the human perceptual apparatus has been fine-tuned evolutionarily for discerning and distinguishing human speech sounds.

Ch. 6, ‘Coining words’, deals with the origins of words, as the title suggests. *TOOL* uses the term ‘protolanguage’, I think idiosyncratically, to describe ‘the one-word stage, where there is vocabulary, but no grammar’ (102). Normally, I think, the term is used to describe the stage in language evolution where the number of words is not restricted, but their ordering is not governed by grammatical rules. H comes down in favor of an atomistic approach to protolanguage, where words signified single concepts, as opposed to the holistic approach advocated by some scholars. He considers the possibility that the first language utilized a manual medium, not a vocal one, though he recognizes that there is no conclusive evidence to decide in favor of one possibility over the other. A CV syllable structure, he argues, was likely present at the beginning. Words might well have started out onomatopoeic and/or synesthetic, but the demands of rapid production soon gave them their arbitrary character. Indeed, the development of the arbitrariness of the

sign was highly adaptive. The chapter concludes with a discussion of the evolutionary spiral between vocabulary development and the capacity for enhanced thought.

Ch. 7, 'Building powerful grammar engines', is the sole chapter devoted to the origins and development of morphosyntax. H opts for a construction grammar approach, though there is next to no discussion of either this model of grammar or its rival approaches. He is skeptical that early language had syntax, but no semantics, like we find in birdsong. He repeats the arguments (discussed in his 2007 book) for the human language preferences for one to three arguments per clause, and no more than that. Surprisingly, *TOOL* speculates that the first human language had SOV order. The meat of the chapter is devoted to arguing that most of the complexities of human language morphosyntax arose via historical processes of grammaticalization, rather than via biological evolution. Thus, in H's view, the first language had no recursion, no distinction between lexical categories and functional categories, and no bound morphemes. They all arose over the course of historical time in the manner discussed in much functionalist literature. The chapter closes with an interesting review of the ways that the advent of civilization (and its accompanying written language) can both simplify and render more complex preexisting grammatical systems.

Ch. 8, 'Pronunciation gets complex', deals with the origins and development of phonological systems. Both the empirical data and computer modeling support the idea that these systems have been shaped by the interplay between the competing forces of economy and distinctiveness. The first phonological inventories contained largely 'unmarked' elements (though *TOOL* does not use this term). Segment types like [h], glottal stop, voiced fricatives, and schwa arose over historical time. There is also an interesting discussion on whether, as some have claimed, click sounds can be traced back to protolanguage.

My sole 'structural' criticism of *TOOL* is that the book ends abruptly with a paragraph devoted to German umlaut. In fact, most chapters do not end with summaries, and, more seriously, there is no concluding chapter tying everything together.

To turn to more substantive issues, as Ray Jackendoff famously put it, 'Your theory of language evolution depends on your theory of language' (2010:63). I have never been particularly engaged by the theory of construction grammar, and so H's brief discussion of how constructions arose (discussed in much more detail in his 2012 book) left me unconvinced. But, in fact, *TOOL* is in general very adept at weighing the various approaches to the topic under discussion without degenerating into the 'on the one hand, ... , but on the other hand' sort of exposition that drives many readers crazy. We learn what H believes and why he believes it, without feeling that one point of view has been shoved down our throats.

I was at first stunned that the term 'universal grammar' (UG), along with its associated constructs, does not appear even once in *TOOL*. Until recently, the punch line of any study of language evolution has been that the evidence presented either supports or refutes the idea of an innate UG. But then I realized that there would be no point in bringing up UG, since nobody has a clear conception of what is entailed by that term. The days of the postulation of a complex abstract UG are long gone, and UG is now—what? Hauser, Chomsky, & Fitch 2002 postulates that the narrow faculty of language (which may or may not be equivalent to UG) contains only recursion. At the time, this was widely interpreted to mean that every language has sentential embedding. A strong claim. But now, 'recursion' is identified with the Merge operation, which means no more than that language allows one structure to be combined with another. If that is all that there is to UG, then it is understandable why H simply ignored the concept.

A related issue involves the gradualness of language evolution, which, as noted above, is advocated by *TOOL*. A gradualist perspective seems incompatible with current minimalist 'biolinguistic' work, as exemplified in the following quotation:

There is no possibility of an 'intermediate' syntax between a non-combinatorial syntax and full natural-language syntax—one either has Merge in all its generative glory, or one has effectively no combinatorial syntax at all, but rather whatever one sees in the case of agrammatic aphasics: alternative cognitive strategies for assigning thematic roles to word strings. (Berwick 1997:248)

But the issue here is purely terminological (as is pointed out in Clark 2013). There is vastly more to language than can be captured by Merge, and any or all of these recursion-independent com-

ponents of language might have developed gradually. And Merge itself needs to be restricted in various ways, since there are conditions on what can merge with what. These conditions could well have appeared gradually over evolutionary or historical time.

To summarize, *The origins of language: A slim guide* is an outstanding work. James R. Hurford is to be congratulated for writing what is uncontestedly the best general introduction to the issues surrounding language origins and evolution.

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Kayardild morphology and syntax. By ERICH R. ROUND. Oxford: Oxford University Press, 2013. Pp. xix, 295. ISBN 9780199654871. \$135 (Hb).

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Since its introduction by Aronoff (1994), the concept of the morpheme has had profound effects on the field of morphology. Once one acknowledges that a language's morphology may be sensitive to properties, categories, and patterns to which the rest of its grammar is simply blind, one is naturally inclined (or more inclined) to think of morphology as an autonomous grammatical component. Formerly tolerated as pesky anomalies, morphemic phenomena now invite closer examination for the insight they give into the organization of a language's morphology—and they do so pervasively.

In *Kayardild morphology and syntax*, Erich Round discusses a system of morphosyntax that, in his words, 'provides the clearest example yet of a linguistically significant morphemic level of representation, in the sense that a significant range of generalizations are accorded their simplest and most elegant expression in terms of the same, morphomically represented units' (38). The analysis that R proposes for Kayardild morphosyntax provides convincing support for this claim; in particular, his analysis provides a systematic account of the fact that, repeatedly in Kayardild, a heterogeneous set of morphosyntactic feature values is realized by precisely the same inflectional morphology (for example, the locative case, the TAM (tense/aspect/modality) properties 'instantiated', 'present', and 'immediate', the clausal property of complementization, and the derivation of place names are all independently subsumed by a morpheme 'μLOC' whose realization is the suffix *-ki*).

Kayardild is doubly remarkable for the intricate system of syntax in which such morphemes do their work. R argues that the distribution of morphosyntactic feature values in Kayardild syntactic structure is most cleanly definable not with respect to sentences' superficial constituent struc-