

**The Origins of Grammar**, by James R. Hurford. Oxford: Oxford University Press, 2012, 808 pages.

BIBLID [0873-626X (2013) 37; pp. 375-381]

James R. Hurford's *The Origins of Grammar*, another title adding to the ever-increasing literature on the evolution of language, happens to be the second of a two part collection touching on many other issues. The first, titled *The Origins of Meaning* and published in 2007, focused on the evolution of conceptual thought and communication from the perspective of animal cognition, setting the stage for the evolution of language that is tackled in the second volume. It will do us well, then, to summarise the prior volume before getting to grips with the second, much longer, one.

Evenly divided in two parts, the 2007 book starts by analysing the nature of animals' conceptual representation systems, arguing that differences with human conceptual systems are in most cases a matter of degree rather than kind. This is of course a rather controversial claim, but Hurford does offer evidence for the proposition that animal cognition is underlain by a rather rich conceptual structure; in particular, he argues that one can find examples of predication and propositional structure, reference and deixis, and some sort of episodic memory in animals' cognition. The second part of the book focuses on animal communication, a phenomenon Hurford characterises as doing things to each other dyadically, in contrast to the triadic relationships that typically arise in human communication between speakers, hearers and whatever is being discussed. Despite the reputed differences, these phenomena, Hurford tells us, constitute the 'seeds' of his evolutionary story: these animal abilities constitute the precursors to human cognition and language. How one goes from that to the full glory of human grammar is of course what needs to be explained; hence, volume two.

Alas, that is a long way out in *The Origins of Grammar*, as the relevant material, the 'what happened' of part 3, only comes in on page 481. Before that, part 1 discusses the 'twin evolutionary platforms' of language — animal syntax and lexicon —, whilst part 2 offers a crash-course in linguistic theory (some 300 hundred pages of it, though). Less roughly, part 1 is divided into two chapters, the first of which

has a long look at the structural features of various animal communication systems, showing that none of these systems approximate human language because, first, they do not exhibit the right expressive power (at least in terms of the formal languages and grammars of the Chomsky Hierarchy) and, more importantly, they all lack a 'complex semantically compositional syntax' (21), perhaps the key feature of human language. Chapter 2, in turn, focuses on the 'development of a shared system of conventionalized symbols' (153) — a lexicon — the origin of which is to be found, it is suggested, in animals' gestures and some sort of process employing sound symbolism and/or synaesthesia (127). Moving on, the tutorial starts by nominating Construction Grammar (CG) as the linguistic framework of choice, supposedly for being more compatible with the gradualist account of evolution Hurford adopts throughout (Chapter 3, 177-80). It is finally at this point that we are told that what is at stake here is an account of the evolution of linguistic knowledge, that constitutive part of a speaker's linguistic capacity which explains overt behaviour (207-8), a way of putting things that respects the well-known competence-performance distinction (with some modifications). In turn, Chapter 4 lists, and describes to some length, those features of language Hurford claims to be universal (among others, a massive store of symbols and the 'constructions' CG posits — form and function pairs that speakers store, supposedly resulting in a syntax-lexicon continuum). Finally, Chapter 5 argues that languages vary in complexity at different levels, the most important of which involves whether a language uses inflectional morphology, function words, single-valence verbs, and serial verb constructions (459). Crucially, these features relate to some of the pre-syntactic properties that Hurford is to focus on in part 3: topic-focus word order and concatenation (a case of non-hierarchy). The latter are present, we are told, in pidgins, new sign languages, and early child language, the linguistic systems Hurford feels to be most informative of how language actually evolved. Finally, Chapter 6 opens part 3 by summarising and centring the 'pre-existing platform' discussed both in the 2007 book and in the first two-thirds of this book (basically: rich conceptual representations, massive storage, and some sort of syntax). These features of animal cognition, it will be recalled, constitute the 'minimal seeds' of the language faculty, properties that differ from those of modern

humans' only in degree, discounting, Hurford thinks, the need for 'some incomprehensible process [to] bridge the gap' between animal and human cognition (537). Viewed this way, and with a little help from CG, the combinatoriality so often stressed of human language is 'itself no big deal' (ibid.), given that all is needed to account for it is a massive store of constructions that combine with each other, template-like. Of course, we are still owed an account of what happened in the 4 million years that separate our species from the pre-human ancestors, and Chapter 7 breaks the ice by offering some speculative ideas regarding how the first arbitrary symbols came to be learned (a different question to the origin of symbols more generally, which Hurford connected, it will be recalled, to animals' gestures and sound symbolism). Such a phenomenon could have come about, we are told, by 'the combined effects of increased group size, increased cooperation within groups, increased trust, and shared intentionality' (563), making our species enter a 'symbolic niche' in which exchanging messages for cooperation would have improved the (evolutionary) interests of both the individual and the group (564-5). From here, an ever more complex system was inevitable, it seems, as more complex messages would improve the chances of survival. There must have been, then, a transition from proposition-expressing one-word utterances (596 ff.) to two-word concatenations (606), the latter composed of a symbol expressing 'what is most urgent to convey' followed by a symbol that states 'what is next uppermost in [the] mind' (607) — think of constructions such as *Mommy sock*, typical of toddlers. Apparently, such deictic + predicating word constructions are typical of trained apes, pidgins, infants learning the ambient language, child deaf home-signers and creators of sign languages (620). How do children, in particular, go from this to multi-word combinations, though? By employing a synthetic, putting-things-together type of process, one typical of the theory of language acquisition CG favours — that is, a case of acquiring constructions gradually, (638-9). And since language acquisition is 'the most promising guide' to understanding language evolution (590), this is the most plausible scenario for the origins of grammar. The book ends with a chapter on grammaticalisation, a robust linguistic phenomenon according to which the 'effects of frequent use ... become entrenched as part of the learned structure of a language' (646). It is here put to use to

claim that topic-focus pairs — the central two-word combinations said to be present in all languages and of an early appearance in language acquisition and therefore in language evolution — derived the difference between nouns and verbs, and eventually that of subjects and predicates, by way of a grammaticalisation process (648 ff).

So much for a lengthy description of the book; in what follows, I aim to evaluate it along two dimensions: conceptually and empirically. That is to say, I first intend to discuss the underlying assumptions and then proceed to assess the empirical case for the scenario Hurford proposes.

Regarding the first set of issues, it is noteworthy that for an evolutionary book there is actually very little about the theory of evolution itself. As mentioned, Hurford adopts a gradualist account of the evolution of grammar, but we are hardly offered any details regarding what considerations precisely will be pertinent. All we are told is that such a stand is more plausible than ‘saltations to syntax’ (180), which may well be true, but given that it is not explained exactly why, the election is somewhat unprincipled. Further, it will be recalled that CG was adopted on account of being more compatible with a gradualist approach, but no more than that was offered as a way of justification, which is unfortunate for a number of reasons.

In recent years, there has been a convergence of various grammatical formalisms (minimalist grammar, tree-adjoining grammar, combinatory categorial grammar, etc.) regarding both the set of primitive computational operations they postulate (merge, adjunction/substitution, and composition — the basic rules of the aforementioned formalisms — have been shown to be roughly equivalent) and the expressive power they must model (natural language is said to be mildly context-sensitive; see Edward Stabler ‘Computational perspectives on minimalism’, in *The Oxford Handbook of Linguistic Minimalism*, ed. by Cedric Boeckx, Oxford, 2011, for details). Noticeably, CG is not part of this convergence in either respect, which is not an insignificant shortcoming, given that capturing the right expressive power of language ought to be regarded as a lower bound that any grammar must meet if it is to be considered adequate at all. This point goes unmentioned in Hurford’s book, despite devoting ample space to the issue of expressive power in Chapter 1, even discussing some of the grammatical formalisms I have mentioned.

Further, there is a wide range of syntactic data that CG quite simply fails to account for (see Jeffrey Lidz & Alexander Williams, 'Constructions on holidays', in *Cognitive Linguistics*, 20, 2009), casting doubt on the proposal to reduce all linguistic knowledge to form-function pairs (constructions). As Lidz & Williams point out, all sort of theories accommodate the notion of constructions, especially for the data most easily accounted for in these terms (such as idioms and argument structure), but there is a long way from that to the conclusion that linguistic knowledge in toto should be so described — and even more far-fetched is the resulting lexicon-syntax continuum that surely makes Hurford underestimate the importance of the syntactic engine.

Further still, Hurford's account is hostage to constructionist theories of language acquisition, particularly that of Michael Tomasello that he so approvingly cites (589 ff), and this is a crucial failing. Indeed, Hurford sees Tomasello's (2006, cited therein) 'overview of the course of child's grammar acquisition, couched in terms of acquiring constructions' as a theory that 'works' (589), and thereby goes his theory of language evolution. That Tomasello's theory of language acquisition 'works' is bound to surprise many a linguist; alas, it does not.

According to Tomasello's usage-based account (2006, loc. cit.), language acquisition proper starts at age 9-12 months, once the intention-reading skills of children develop, allowing them to recognise the communicative intentions behind the noise parents are directing at them. At this stage, children start producing holophrases — one-word utterances that describe an entire experiential scene —, the product of imitation, intention-reading, and cultural learning processes (ibid., 268). Building upon that, and by employing these processes further, 18-month-olds start combining words in pairs, thereby partitioning a scene into units (ibid., 269). These pairs gradually develop into pivot schemas, structures in which an element organises a whole utterance (such as *More X*; ibid., 270). A product of some sort of schematisation process, these schemas eventually become item-based constructions (by age 24 months and onwards), the first manifestation of word order and participant roles; that is, of syntax (as in 'pushee-pusher' pairs, which correspond to Hurford's two-word constructions; ibid., 270-2). By age 36 months, children

start employing pattern-finding abilities, most notably that of analogy, to form the first abstract constructions, the result of generalising across many dozen item-based constructions (*ibid.*, 279 ff). As a child grows older, it constructs ever more abstract linguistic knowledge thanks to various processes, such as entrenchment and pre-emption (the former probably operative before the age of 3), and functional based distributional analyses (*ibid.*, 287 ff). That is not all; all these processes are supposed to work in conjunction with syntactic operations such as ‘adding on’, ‘filling in’, and ‘cut and paste’ (*ibid.*, 291).

Unfortunately, none of these constructs, be they syntactic operations or the learning processes that Tomasello proposes (intention-reading, imitative learning, schematisation, etc.) are actually properly described, or indeed explained. In fact, nowhere is it shown, and this is especially true in the case of the very important process of analogy, how children actually do such things — if indeed they do (this much is admitted by Tomasello himself when he recognises that there is no ‘systematic research’ into how children align verb meanings ‘in making linguistic analogies across constructions’; *ibid.*, 285). Put simply, there is literally no demonstration of how children’s linguistic knowledge moves from one stage to the other by employing the operations and processes postulated.

In any case, the main problem with Tomasello’s take on things is that the expressions that children produce are taken to be a faithful representation of the structures that children mentally represent — i.e., of their grammar — but that is entirely unwarranted. Indeed, it is widely accepted within modern linguistic theory that language is mainly an internal phenomenon not always transparently manifested in overt behaviour. Relevant to our purposes here, two-year-olds are said to produce ‘telegraphic speech’, but this cannot be what they represent in their minds, for they are perfectly capable of understanding what is said to them in normal speech — their grammar allows it, suggesting a much richer structure than what is being produced (See Letitia Naigles, ‘Form is easy, meaning is hard’, *Cognition*, 86, 2002, 175-6, for references). Tomasello would have you believe that these very two-year-olds do not possess much abstract grammatical knowledge, given that this is not evidenced in the experimental tasks he uses (all geared towards eliciting verbal

responses), but comprehension tasks clearly show that these children understand many complex linguistic structures way before they can actually produce them (Yael Gertner, Cynthia Fisher & Julie Eisen-gart, 'Learning words and rules', *Psychological Science*, 17, 2006).

In sum, the linguistic behaviour of children does not correspond to their actual, internalised knowledge; nor does this knowledge go through the stages Tomasello has outlined, only their productions do — and *mutatis mutandis* for child deaf homesigners and creators of new languages, signed or otherwise. Thus, there does not appear to be a synthetic gradual process in which children go from two-word constructions to full syntax. If Tomasello's theory of language acquisition is the main motivation for Hurford's account of the evolution of language, then his own story can itself be neither coherent nor true.

So much for Hurford's conceptual assumptions and empirical details, then. I shall put an end to this review by making one final point. For a story of how language evolved, there is actually very little about the mental organisation underlying the language faculty. It is widely-accepted that language is that system of the mind that generates sound-meaning pairs, and this implicates a number of different components; at the very least, the sensori-motor systems, a phonology component, whatever semantic/conceptual structure participates, a syntactic engine and lexical items (roughly, bundles of phonological, syntactic and maybe semantic features that come together to form what we call words). Note that it is the coming together of these probably independent systems that gives you language. Thus, it is the emergence of such mental organisation, I should think, that an evolutionary account of language ought to elucidate.

David J. Lobina  
University of Oxford  
Faculty of Philosophy  
Radcliffe Humanities  
Radcliffe Observatory Quarter  
Woodstock Road  
Oxford, OX2 6GG, England  
david.lobina@philosophy.ox.ac.uk

