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William Croft, *Explaining language change: an evolutionary approach* (Longman Linguistics Library). London: Longman, 2000. Pp. xv + 287.

Reviewed by DAVID W. LIGHTFOOT, Georgetown University

William Croft offers another 'evolutionary approach' to language change. There have been many. Nineteenth-century linguists formulated sound changes and sought to explain them as instantiating general directions to change: Rask (1818) thought that there was a built-in tendency for languages to become simpler. Schleicher (1848) identified a progression from isolating to agglutinating to inflectional types, although this was said to hold for preliterate societies while Rask's drive to simplicity was relevant for literate societies. Darwin (1874) followed Max Müller in seeing languages progressing to shorter, easier forms. This historicist paradigm – the notion that there were laws of history to be discovered, which would account for a language's development – was largely abandoned in the early twentieth century. Indeed, there was a virulent anti-historicism among some of the early structuralists (Lightfoot 1999: 40–41). However, the typologists of the 1970s used Greenberg's harmonic universals to resume the search for universal diachronic trajectories and they were no more successful (Lightfoot 1999: chapter 8).

The desire to predict how languages change is, though, resilient and recent work has turned to biology. Bauer (1995) follows the evolutionary approach of Bernard Bichakjian, whereby the direction of change is rooted in human biology: languages evolve in the direction of features that are acquired early.

Other evolutionary approaches invoke natural selection to predict the direction of change. This is true of Deacon's (1998) e-language based approach, for example. For him, languages exist out there, extra-human entities, and they have evolved in a 'flurry of adaptation' (109) that has 'been going on outside the human brain' (109). They have become 'better and better adapted to people' (107) and attach themselves to children like viruses. For Deacon, languages have evolved, not brains. People have not changed but languages have, and they have changed selectively, but the selective principles driving language change are purely stipulative. Haspelmath (1999) also invokes adaptation gratuitously. He argues that certain languages become 'optimal' in some fashion, and pleads that this must reflect adaptation and natural selection, but he offers no argument. The simple fact that a language is 'optimal' in some way does not automatically implicate natural selection. But Haspelmath goes even further and sets up universal opposing tendencies, so that any change is adaptive with respect to one of these. For good discussion, see Drescher & Idsardi's (1999) commentary.

Croft's new evolutionary approach also uses selection but in a different way: speakers select utterances. He follows Dawkins (1976) on biology and Hull (1988) on scientific development in adopting a general theory of selection, and he applies it rather literally to language, seeking equivalents to genes, DNA and other biological constructs. The analogies often raise more questions than they illuminate, particularly with regard to the role of selection. He takes the speaker as the unit of selection and linguistic structures that can be inherited in replication as the units of replication; these are 'linguemes' (28), analogous to Dawkins's memes. They have linguistic structure and are parallel to the gene as the basic replicator in biology. Utterances are equivalent to DNA (12).

The equivalent to alleles of genes are VARIANTS of a lingueme, that is, alternative structures used for a particular structural element, such as alternative phonetic realizations of a phoneme, alternative words for the same meaning, or alternative constructions used to express a complex semantic structure such as comparison. (28)

Linguistic innovations emerge from the remarkable complexity of communication in social interaction. 'Once innovations occur, they are propagated through the equally complex social structures of the speech communities we participate in' (cover blurb). This is where Croft's Theory of Utterance Selection comes in, and 'utterance selection is the primary locus of language change' (30): change happens when speakers select different utterances. He presents four major 'theses', summarized in chapter 1 and never stated precisely:

1. Altered replication results from the gradual establishment of a new convention through language use. An example of a convention is placing

- a *wh*-phrase at the front of a sentence, something that others might see as a property of mental grammars.
2. Altered replication results from speakers adjusting the mapping from language structure to external function, what others might see as interface requirements, e.g. 'the mapping from phonological structure to phonetic reality' (8).
 3. Mechanisms for propagation of change are social, the kinds of things discussed by sociolinguists.
 4. External (contact-induced) sources of language change become more similar to internal sources once one recognizes that all speakers command multiple varieties or codes.

The theory lacks specification but it is comprehensive and Croft tackles many aspects of linguistics: grammatical change, pragmatics, social variation, language contact and 'genetic linguistics'. However, the reader must struggle to understand. Croft emphasizes a distinction between a linguistic system (2) and a mental grammar, but I cannot give a coherent account of that distinction. He discusses a wide range of literature and sometimes gives accounts which defy my reading. For example, on page 10, he characterizes Chomskyan linguistics as taking a 'literal approach' to an evolutionary model of language change: it claims 'a biological basis for the universal properties of languages' and therefore, astonishingly, that 'differences among languages reflect genetic differences among their speakers', which is, Croft notes, 'patently false'. Elsewhere he discusses the notion of UG parameters, so here and elsewhere I alternated between understanding assent and befuddlement.

There is much to agree with. Croft adopts a social view of languages (chapter 2), analogous to population definitions of species (17), healthily different from Deacon. Children are exposed to a population of 'utterances in a speech community' (26), since there is no coherent definition of a language. Furthermore, a grammar is a 'real, individual, psychological entity' (27), a 'cognitive structure in a speaker's mind that contains her knowledge about her language' (26). All of this is plausible enough. He distinguishes himself from Kirby (1997), Haspelmath (1999) and others who take functional explanation of language change to be analogous to adaptive explanations in evolutionary biology (39). Furthermore, Croft's notion that it is linguistic structures which are the units of replication seems rather similar to ideas about cue-based acquisition: that children scan the mental representations resulting from understanding utterances and identify elements of grammars, the cues (Lightfoot 1999).

If this is a correct reading of Croft, then one can ask what the biology talk amounts to for the purposes of the linguistic analyses. Croft assumes that there is a UG from which particular grammars may be drawn by children. In his terminology, children SELECT linguemes, hence grammars, on exposure to

elements of linguistic structure. This selection terminology has nothing to do with adaptive accounts of natural selection, but it is a way of seeing the child, plausibly, as an agent in the acquisition process, very different from Deacon's children. Under this view, changes emerge as children are exposed to different triggering experiences and that happens through social change of some kind. Others have tried to describe changes in terms of changes in parameter settings, changes in the distribution of cues, or in any of the myriad e-language based accounts. For Croft, linguistic selection is governed by social forces, and this is what the book seems to be about. Croft has little interest in the properties of UG or even in the properties of grammars, which for him are 'conventions', as noted. So one turns to the case-studies to see what is offered.

He discusses variation in childhood experience such that it triggers new grammars at certain points. He is surely right to discuss this in social terms, but there is nothing particularly innovative here, and the social factors are not spelled out. Croft is keen on taxonomies and he classifies types of grammatical change: hyperanalysis, hypoanalysis, metanalysis and cryptanalysis (chapter 5). They are changes in conventions, and Croft treats some familiar cases: the loss of governed oblique case (121–124), instances of grammaticalization (156–165), etc. The case studies offer only a rudimentary re-statement of a few facts, no analysis. For example, on the loss of governed oblique case, Croft points out that in earlier Russian certain verbs assigned genitive, dative, or instrumental case to NPs that they governed, whereas some of those verbs now assign only accusative case, an instance of 'form-function reanalysis' (121) and 'hyperanalysis of the oblique case' (123). Something similar happened in Germanic and Icelandic. Semantic irregularity and semantic overlap constitute conditions for hyperanalysis (122). No analysis is offered, there is no discussion about the relevant sociolinguistics, and discussion is concluded in less than three pages.

I am left not knowing what the triggering experiences consist of: are the linguemes unanalyzed e-language expressions or are they abstract structures? If so, what? The analyses are too sketchy to tell. The changes reflect social variation, to be sure. In none of the case-studies can I see what precisely has changed in such a way that a different grammar is selected, nor what the relevant social factors were. Even less can I see why the changes vary in some direction. We are given no idea, and one is left wondering where the 'evolutionary approach' of Croft's subtitle is. He tells us that 'the proper objects of the study of language are actually occurring utterances and an actual speaker's knowledge about her language' (229), a short list which does not include UG, social factors or anything about diachronic trajectories. He concludes his book by saying

The evolutionary framework for language – EVOLUTIONARY LINGUISTICS – will require a rethinking of the model of grammatical knowledge

developed by grammatical theory. The result of that rethinking will look quite different from most contemporary grammatical theories (see Croft to appear). (232)

Maybe the future work will have the details but the sketchy case studies here look rather conventional. We have taken a difficult and somewhat belabored tour through some rather suspect analogies with Dawkins and Hull and learned nothing new about language change, least of all what Croft's new EVOLUTIONARY approach is.

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