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Book review☆

Neo-Saussurian biolinguistics? The Nature and Origin of Language, D. Bouchard (Ed.), Oxford University Press (2013), 416 pp., Price: £30.00, ISBN: 978-0-19-968163-1

Denis Bouchard starts *The Nature and Origin of Language* [*NOL*] by thanking me for ''having awaked [his] interest in the origin of language'' (p. x). I did so as a result of ''challenging [him] by declaring that recursion and locality ''appear hopelessly irreducible to 'perceptual' or 'conceptual' substances''' in the pages of this very journal (Boeckx, 2005: 1683).

I am delighted to have contributed, in a small way, to *NOL*. I certainly enjoyed reading the book, parts of which I found quite illuminating and compelling. Before going into the details of Bouchard's argument, let me make clear that I regard *NOL* as an important contribution to the growing literature on biolinguistics, and on the evolution of language in particular. Despite the shortcomings that I will discuss below, I think that the book deserves to be read, with great care, by linguists and experts in allied disciplines interested in biolinguistics. Even if I will conclude this review by asserting that I stand by the comment I made in 2005, I am convinced that the field will be a better place if some of the points made by Bouchard that are highlighted in this review are assimilated and become part of the background assumptions of working biolinguists. These points really ought to be part of the ''body of doctrines'' of what Boeckx and Benitez-Burraco (2014) have called ''Biolinguistics 2.0''.

Taken as a whole, *NOL* can be read as an attempt to put the notion of the linguistic sign back at the center of (bio-) linguistics, and in so doing reinstate the figure of Saussure at the high-table of (bio)linguistics (often, it should be said, combined with side remarks attempting to minimize the originality or accuracy of some of Chomsky's remarks):[1]

> ''It is unfortunate to see the work of such a major contributor to linguistics as Saussure so lightly discarded. (p. 51) So the biolinguistic perspective began to take shape one hundred years ago, not fifty as is commonly assumed. (p. 76) [Saussure's] ideas have proven to be very fruitful, and still are (unbeknownst to many). (p. 82)''

The approach adopted in *NOL*, culminating in a ''Sign Theory of Language'' (chapter 3) is labeled ''neo-Saussurian'' (p. 74) (Bouchard also calls it ''post-generative'' on p. 133): ''Saussure offers a principled explanation of some fundamental properties of language ... I am adopting a methodological approach similar to his.'' (p. 77). For Bouchard (and other scholars he cites), ''the key innovation of human language is the emergence of discrete symbolic elements, i.e., signs/words'' (p. 151). Other properties of language, including those taken to be the most central ones in alternative accounts, ''all come from the unique innovation of the sign'' (p. 179).

NOL consists of four parts, and has a sandwich-like structure, but at least to this reviewer in this case the juiciest bits are not to be found in the middle section (Parts II and III, where Bouchard presents his own proposal concerning the origin of language); they are to be found in Part I and Part IV. Part I is, in fact, my favorite section of the book.[2] It consists of a detailed critical survey of past and current approaches to the evolution of language. One does not need to be an expert in evolutionary linguistics to know that numerous evolutionary scenarios have been entertained over the years, but though

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[1] I put the 'bio' part of biolinguistics in brackets in the previous sentence because I personally remain unconvinced of Saussure's commitment to the biolinguistic enterprise. Despite Bouchard's best attempts, I just don't see it in Saussure's writings. But I will not belabor this point here. This is a task for future historians of (bio)linguistics.

[2] As valuable as it is, I will not be dealing with Part IV in this review, as I want to concentrate on parts of the book that are of interest to both linguists and non-linguistics. Part IV of *NOL* offers a detailed critique of current linguistic theory, showing the explanatory limits of current Chomskyan accounts as well as the limitations of other systems such as Culicover and Jackendoff (2005), which Bouchard rightly views as ''not simpler than mainstream generative grammar'' (p. 276) I suspect that non-linguists will find the technical discussion of Part IV too tough-going. But I urge linguists to read it all with great care. They will be in for an extremely rewarding read.

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each one has its own special twist and story, most accounts tend to fall into just a few categories (socio-cultural accounts, adaptive accounts, exaptive accounts, and that's pretty much it), with some emphasizing continuity between us and other species, and others stressing uniqueness and discontinuity. Bouchard does a truly excellent job in presenting the essence of these (types of) accounts, focusing on influential representative publications in each case, and deconstructing them one by one. I cannot hope to do justice to this Part of the book in the limited space of the review. My advice to everyone is 'read it all, without skipping anything'. Everything in there is insightful, and most of the points are well-taken. I came away from each section of Part I with the impression that Bouchard really nailed it down, and that the limitations of all existing accounts are those that future work in this area should really try to overcome. Part I of *NOL* could certainly serve as excellent material for an intermediate or advanced level course on evolutionary linguistics, perhaps in combination with the broad panorama offered in the *Oxford handbook of Language evolution* edited by Tallerman and Gibson (2011). Used in this way, *NOL* would convince students that there is still so much to explain, even if at times it looks like all the options have already been explored.

Unfortunately (or fortunately!), if students proceed to Parts II and III, where Bouchard puts forth his own grand proposal, they will not find grounds to abandon this conviction. If they are like me, they will be unimpressed by the solution offered by Bouchard. Not because it is wrong. It could, in fact, turn out to be right, but because at the moment the proposal is, in many crucial respects, too sketchy and too vague to be testable, let alone be labeled right, wrong, or even plausible.

Bouchard certainly has his heart and mind in the right place. He correctly sees inquiry into the origin of language as a ''test for linguistic theories'' (p. 5), and, more importantly, he sees the need to look at the brain to shed light on the nature and origin of language. As he writes (p. 105),

> ''the way out of these problems [the problems at the heart of his critique in Part I] is to concentrate on the biological changes instead of the functionalities: to ask questions such as how human neurological structures differ from those of other primates, how these structures plausibly emerged in humans, and how they made human brains ready for imitation as well as language. Instead of looking at what humans do differently (imitate, speak), we will look at what their brains do differently.''

Amen to that. As I have written on many occasions, biolinguistics is, or ought to be, a brain-based initiative. Put another way, one can't do serious biolinguistics (or one can't expect biolinguistic work to be taken seriously) if one refuses to get ''wet'' and look into the wet-ware. Rhetorical formulae like ''we know so little about the brain that it is pointless to try to . . .'' just won't do. This is not to say that everything about language is to be traced back to the brain. Socio-cultural factors clearly play an important role in shaping the systems that humans eventually acquire, but no one seriously claims that socio-cultural factors are the only things to take into account. The very existence of these factors depends, in large part, on the brains of individuals that created this niche, and so the brain is where the buck eventually comes to rest.

So, why, given that he got the perspective right, am I not so enthusiastic about Bouchard's own proposal? The answer is easy: it's not brain-based enough!

Building on Saussure, Bouchard seeks to reduce all the complexity of language to properties of words/signs, but what is the brain-basis of these words/signs? What is specific and unique about the human brain that makes these properties emerge? Bouchard's answer is surprisingly, and, given the complexity of all things biological, I am tempted to say, deceptively simple: it boils down to the existence of what he calls, following a proposal of the late philosopher Susan Hurley, ''Offline Brain Systems'' (OBSs).

What are OBSs? In Bouchard's own words, ''OBS[s] are systems in the brain with the particular trait of being potentially activated with no link to brain-external stimuli or motoric action'' (p. 109). This is what allows for the ''offline, detached'' (p. 110) symbolic nature of signs to emerge. Very little else is offered in terms of detail, that is, in terms of 'brain detail'. No mechanistic explanation is provided as to how, really, brains achieve offline, sign-based computations.

As such, it is hard to know if it is really true that OBSs are unique to humans. Aren't other animals' brains active while they sleep, producing activity that is not directly linked to brain-external stimuli or motoric action? Too little is provided for us to know. It is not enough to say that ''OBS[s] are a known difference in human brains. I hypothesize that OBS (or systems like them) provide the neurological basis for . . . language'' (p. 114). Do we really know this? And how, in the absence of details about the brain mechanisms involved, can we be sure that these systems provide the neurological basis for language. Isn't Bouchard's own phrase ''OBS (*or systems like them*)'' (my emphasis) a form of hand-waving in the absence of mechanistic details?

In the absence of such details, aren't OBSs just another way of saying that the brain 'does' language (computing words/signs)? As David Poeppel is fond of saying, mapping a mental property onto the brain is not explaining.

As Bouchard writes on p. 65, ''the most basic observational proposition . . . is that language is a system that links concepts and percepts.'' Isn't OBS just a cover term for this? Sure, it sounds more brain-like talk, but it remains at the highest (Marrian) level of abstraction. Given that Bouchard uses the very same terms to characterize signs as he does to define OBSs (''the content of a sign is a concept abstracted from any sensory input or output'', p. 144), one feels that one could have called OBSs Sign-Processing systems, and no information would have been lost. In fact, appealing to ''OBSs''