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About *Linguistics and Evolution. A Developmental Approach*

For many years I taught a standard undergraduate Introduction to Linguistics, each year trying out one of the many textbooks currently available on the market. However, the longer I taught, the less happy I became with the fact that in a standard introductory textbook students encounter a body that is all cut up. In the chapter on speech production, the lungs, the larynx, and the oral and nasal cavities are discussed and represented, while the evolutionary adaptation of respiration to speech may or may not be addressed. The brain usually has its own chapter and is always pictured as a disembodied organ. The speech-gesture circuit has no place, and the hands only come into play if the topic is American Sign Language. The larynx often takes another turn on stage in the chapter on language acquisition given that babbling establishes connections between the larynx and the prefrontal cortex. The body finds itself in a context only in the chapter on pragmatics. And that chapter on pragmatics is usually at odds with the theoretical orientation of the chapter on syntax. So, by the end of an introductory course, students will have typically encountered a disembodied brain, a dismembered body mostly disembedded from context, along with a broken understanding of the very subject matter of linguistics. What's more, the students might not even be aware of all these fractures.

The cause of these problems is easy to diagnose, in that the template for the standard introductory approach derives largely from a work that is eighty years old, namely Leonard Bloomfield's *Language* of 1933. Although the book was masterful in its time, its organization has now outlived its usefulness. Surely, current introductory presentations regularly offer updated editions, incorporating recent findings from well-known subfields while sometimes adding new chapters, e.g. *Language and Brain*, *Language and Evolution*, *Language and Society*. However, while standard introductory presentations attempt to extend their reach by increasing the number of legitimate topics they survey, they end by doing too little in that they do not pause to retheorize and reorganize the whole.

It can be said that the problems in the textbooks are symptomatic of the problems in the discipline itself. Indeed, the philosopher John Searle has observed, "Often ... we can find out more about what is going on in a culture by looking at undergraduate textbooks than by looking at the work of more prestigious thinkers. The textbooks are less clever at concealment" (*Mind, Language and Society* 1998:20). Searle most likely means that textbooks, in presenting material whose complexities must necessarily be sifted out for beginning students, more readily expose to experienced observers the bare bones of a discipline's theoretical problems. Current introductory linguistics textbooks thus serve a useful, unintended purpose: they are reliable guides to the problems in the current state of the discipline's theory and practice.

The impetus for writing *LTD* came to me some years ago when, a good third of the way through such a standard introductory text as *An Introduction to Language*, I encountered the unremarkable yet startling statement: "Actually, every utterance is some kind of speech act" (Fromkin, Rodman, Hyams 2003: 215). I was put in mind of Ferdinand de Saussure's remark in *Cours de linguistique*



générale that “it is often easier to discover a truth than to assign to it its proper place” (1959 [1915]: 68). The question immediately arose: What would an introductory linguistics textbook look like if the central insight of J.L. Austin’s speech act theory outlined in *How To Do Things With Words* (1962) were found not on page 215 but rather on page one?

So I began with one move: I acknowledged upfront that every utterance is some kind of speech act, meaning that from the beginning of time – whether considering the temporal axis in terms of the evolution of the species or in terms of the development of the individual – every utterance has occurred in a context, has issued forth from a speaking subject, and has had certain effects. It turned out that this one simple move required an overhaul of the whole. Simple is not necessarily easy.

First, I made a historiographic intervention by incorporating into the discipline an important tradition of thinking about our subject matter that has thus far fallen outside the mainstream. Notably, it is a tradition that developed in the wake of Darwin. It begins with the American psychologist William James and continues with thinkers from a variety of disciplines and national origins including, among others: the Russian semiotician V.N. Vološinov, the Russian psychologist Lev Vygotsky, the British embryologist Conrad Waddington, the American developmental psychologist Susan Oyama, the Chilean neurobiologists Humberto Maturana and Francisco Varela. These are researchers who all share a deep interest in the role of language in their disciplines and have accordingly reflected in interesting and useful ways on our subject matter. They all share three general tendencies: i) an orientation toward our subject matter that can be summarized, circularly, as languaging (Maturana and Varela’s notion) as an orienting behavior; ii) an allowance for the role and place of the individual that permits, at the same time, for a layered approach to our subject matter, one that engages with a wide variety of neurological, cultural and even ethical elements, even if the theorists were/are not interested in exploring those layers themselves; and iii) an appreciation of how bodies (for the most part human) behave in environments and engage in feedback loops with their environments and each other. These theorists foreground the highly circumstanced nature of whatever it is that they are studying, always with bodies embedded in environments and minds fully embodied.

Second, I imported a constructivist view of development that is one in which: i) environment and organism are causally linked; ii) organisms not only determine what aspects of the outside world are relevant to them by the peculiarities of their shape and metabolism but also actively construct, in the literal sense of the word, a world around themselves; and iii) organisms are in a constant process of altering their environment. Of course, no constructivist thinks that the term *constructing* means that organisms get to make up the world any way they want, for they are always constrained by the histories of the particular phylogenies to which they belong and by the features of the niches they inherit.

One of the most well developed constructivist approaches, broadly speaking, is Susan Oyama’s Developmental Systems Theory (DST). In the past thirty years DST has done the social and biological sciences the immense favor of eliminating the conceptual chaos behind the nature/nurture dichotomy along with the epistemological framework in which those bedeviled terms have cur-



rency. In linguistics, the dichotomy has made possible a concept of an inborn universal grammar hardware (so-called nature) that efficiently responds to the variable language software (so-called nurture) that every child encounters. The problem with the universal/variable//hardware/software model is that: i) developmental explanations are short-circuited, because a universal, inborn ability is not open to individual and variable development; ii) the abstract principles proposed for the grammar hardware have been difficult, if not to say impossible, to work out on the evolutionary axis; and iii) the differing uses of, for instance, the term *nature* – presence at birth, reliable timing, appearance without obvious learning, resistance to perturbation, evolutionary stability, distribution in a population – require distinctly different explanations. By way of brief critique, to explain what is present at birth requires an investigation of the factors involved in nine months of gestation, while determining the distribution of some trait in a population is not a developmental issue at all. Lumping them under the same rubric *nature* guarantees confusion. Given that Oyama has been the theorist who has most carefully untangled the conceptual chaos of the dichotomy, I chose DST as the theoretical fulcrum upon which I have balanced my accounts of evolution and development.

Third, I needed a more dynamic conception of our subject matter, and I found it in Maturana and Varela's notion of *linguaging*, which they use: i) to underscore the idea that each individual responds differently to conditions and is thus oriented differently in his or her cognitive domain in any given linguaging situation; and ii) to foreground the intersubjective nature of the activity, such that linguaging is not a personal possession. In *LTD* I expand upon Maturana and Varela and mean for linguaging: iii) to scaffold cognition and to act as a means through which certain cognitive and conceptual developments are induced; iv) to span the troublesome distinction between the terms *language* and *speech* that some theorists maintain; v) to allow for multimodality, such that linguaging is not deemed to be exclusively or even primarily an auditory activity; and vi) to include gesture as a dimension of its multimodality.

Lastly – and, then, of course to begin with – new organizing questions were required. Instead of asking: What is language? or What are the properties of our capacity for language? or What do we know when we know a language?, the questions became: How do living beings become linguaging living beings? and How do we become the particular linguaging living beings that we do? These questions necessarily shake up the traditional way linguist have conceptualized and then talk about the subject matter.

I now had three clear sections to map out: first, I had to open up the history of the discipline to include the above-mentioned researchers and then to clear the ground for the new theoretical framework; second, I had to make good on my claim that coherent evolutionary and developmental stories could be told in this new framework; and third, I had to follow through on the disciplinary consequences of what I had set forth, which involved another look at the discipline's recent history and, most importantly, a call for the revision of introductory approaches.