

Recently, Kleantes K. Grohmann and I decided to found a new journal, *Biolinguistics* ([www.biolinguistics.eu](http://www.biolinguistics.eu)).

Here is some background information about this project.

### **I. What we mean by *Biolinguistics***

Exactly fifty years ago Noam Chomsky published *Syntactic Structures*, a slim volume that conveyed some essential results of Chomsky's then unpublished *Logical Structure of Linguistic Theory* (Chomsky 1955/1975). The results were presented in such a way as to emphasize key aspects of the combinatorial properties of grammar (a reflex of the fact that the volume grew out of class notes for an audience of engineers), but, as is well-known, *Syntactic Structures* had an important subliminal message that was made explicit in Chomsky's famous review of Skinner's *Verbal Behavior* (Chomsky 1959), and even more so in chapter 1 of *Aspects of the Theory of Syntax* (Chomsky 1965). The message, decidedly psychological in character, defines the central goal of the generative enterprise as that of identifying the properties of the human language faculty. This central goal can be broken down into a series of more precise questions (see Chomsky 1986, 1988):

1. What is knowledge of Language?
2. How is that Knowledge acquired?
3. How is that Knowledge put to use?
4. How is that Knowledge implemented in the brain?
5. How did that Knowledge emerge in the species?

Today these five questions constitute the conceptual core and focus of inquiry in fields like theoretical linguistics (the traditional areas of syntax, semantics, morphology, and phonology), language acquisition, pragmatics, psycholinguistics, neurolinguistics, and beyond.

What these research questions emphasize is the fact that language can, and should be studied like any other attribute of our species, and more specifically, as an organ of the mind/brain.

The past fifty years have shown, uncontroversially in our opinion, that it makes eminent sense, at various levels, to regard the study of the language faculty as a branch of biology, at a suitable level of abstraction. After all, the five questions listed above are but (conceptually unpacked) variants of Tinbergen's famous four questions in his 1963 classic papers on Aims and Methods of Ethology – a central document in the biology of (animal) behavior:

1. What stimulates the animal to respond with the behavior it displays, and what are the response mechanisms?
2. How does an organism develop as the individual matures?
3. Why is the behavior necessary for the animal's success and how does evolution act on that behavior?
4. How has a particular behavior evolved through time? Can we trace a common behavior of two species back to their common ancestor?

The goal of this new journal is to provide a forum, a context and a framework for discussion of these foundational issues. We decided to call the journal *Biolinguistics* to highlight the commitment of the generative enterprise to the biological foundations of language, and to emphasize the necessarily interdisciplinary character of such enterprise. There is both a weak and a strong sense to the term ‘biolinguistics.’ The weak sense of the term refers to ‘business as usual’ for linguists, so to speak, to the extent they are seriously engaged in discovering the properties of grammar, in effect carrying out the research program Chomsky initiated in *Syntactic Structures*.

The strong sense of the term ‘biolinguistics’ refers to attempts to provide explicit answers to questions that necessarily require the combination of linguistic insights and insights from related disciplines (evolutionary biology, genetics, neurology, psychology, etc.). We regard Eric Lenneberg’s book, *Biological Foundations of language*, published exactly forty years ago, as the best example of research in biolinguistics in this strong sense.

We would like our journal to provide a forum for work in biolinguistics in both the weak and the strong sense. We would like to stress that the term ‘weak sense’ is not meant to indicate that we regard work focusing narrowly on properties of the grammar as inferior to interdisciplinary work. Indeed we think that such work is not only necessary, but has very often proven to be the basis for more interdisciplinary studies.

## **II. Why start *Biolinguistics* now?**

The term ‘biolinguistics’ first appears, to our knowledge, as part of a book title, by Clarence L. Meader and John H. Muyskens, “Handbook of Biolinguistics,” published in 1950. The book advocates (as the authors put it) a modern science of biolinguistics, whose practitioners “look upon language study ... as a natural science, and hence regards language as an integrated group of biological processes. This group seeks an explanation of all language phenomena in the functional integration of tissue and environment. (p. 9).”

The term ‘biolinguistics’ resurfaces in 1974 as part of a report on an interdisciplinary meeting on language and biology, attended by Salvador Luria and Noam Chomsky, and organized by Massimo Piattelli-Palmarini, under the sponsorship of the Royaumont center for a Science of Man.

Around the same time (a period well-documented in Jenkins 2000: Introduction) Lyle Jenkins attempted to launch a journal entitled *Biolinguistics*, and received support from pre-eminent biologists (support documented by three extant letters reproduced in an Appendix to this manifesto). The journal never materialized, but the concerns and issues discussed in the 1970s didn’t disappear. As a matter of fact, all these issues, many of which anticipated in Lenneberg 1967, came back on the agenda of linguists and other cognitive scientists.

We believe that the recent resurgence of interest in ‘biolinguistics’ is due in large part to the advent of the minimalist program in linguistic theory (Chomsky 1993 and subsequent work). At the heart of the minimalist program is the question of how much of the architecture of the language faculty can be given a principled explanation. Specifically, minimalism asks how well the engine of language meets design requirements imposed by the cognitive systems it subserves. Inevitably, linguists working in the context of the

minimalist program are forced to address and sharpen questions of cognitive specificity, ontogeny, and phylogeny, etc., to even begin to understand the design requirements imposed on the language faculty. This is not to say that previous generations of linguists were not interested in such issues. But in practice biolinguistic issues had little effect on empirical inquiry into questions of descriptive and explanatory adequacy.

It is important for us to stress that biolinguistics is independent of the minimalist program. As Lenneberg's work makes clear, biolinguistic questions can be fruitfully addressed outside of a minimalist context. But we think that such a context certainly facilitates, indeed, necessitates inquiry into the biological foundations of language. Last, but not least, we want to remind readers that minimalism is an approach to language that is largely independent of theoretical persuasion. It is an aspect of linguistic research that can be shared by virtually all existing frameworks in linguistic theory that we are familiar with.

### **III. Our hope for *Biolinguistics***

To paraphrase T. Dobzhansky well-known dictum, we think that nothing in language makes sense except in the context of the biology of grammar.

It is a tribute to Chomsky's own efforts (as well as the efforts of his associates, such as Eric Lenneberg) to treat linguistics as a natural science, and by doing so help her become one, that the term biolinguistics is now seen in course titles, workshops, reading groups, and so on. One can only hope that the term biolinguistics will make its way into institutional categories. Our hope is that this journal will contribute to this exciting and rapidly growing field.

We are fully aware of the fact that the uniquely interdisciplinary character of biolinguistics poses difficult problems of communication and misunderstandings, but we feel that a growing community of scientists of diverse background, including linguists, evolutionary biologists, molecular biologists, neuroscientists, anthropologists, psychologists, computer scientists, and so on, are slowly overcoming these challenges. Only collaboration and mutual respect will make this type of research possible. We would be delighted if the contributions to *Biolinguistics* could clarify issues, unearth new data, and answer some of the questions that will help us understand the nature of language, and what it is that makes us human.