

A Possible Link between Cognitive Linguistics and the Lennebergian View on Biological Evolution of Language

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Lenneberg (1967), unfortunately, has quite often been mentioned only in connection with emphasizing the biolinguistic view of the Chomskyan generative grammar. However, given the central role accorded to the cognitive process of categorization in human language in his work, it should in fact be more in line with the field of cognitive linguistics, where it has been well demonstrated that categorization plays a pivotal role in human language and cognition (Lakoff 1987, Taylor 2003 *inter alia*). While the question of how categorization came into play in language evolution has been addressed in the context of cultural evolution in cognitive approaches (Contreras Kallens et al. 2018 *inter alia*), it has never been concretely discussed in connection with the emergence of the human language symbolic combinatory mechanism in biological evolution of *Homo sapiens*.

My aim is to suggest a possible direction for filling this gap by revisiting Lenneberg's (1967: 374) conjecture on biological evolution of language that states that "[t]he cognitive function underlying language consists of an adaptation of a ubiquitous process (among vertebrates) of categorization and extraction of similarities" (which should be eventually linked to the similarity and analogy-based processes current in many cognitive approaches to linguistics, e.g., Gentner's 1983 analogical reasoning and Haiman's 1983 iconicity *inter alia*). It is to be noted that here the term "adaptation" does not mean "adaptation to the environment" but rather it means "structural innovations on a molecular level" (Lenneberg 1967: 72) of DNA. Thus, the issue of primary importance is to investigate how the ubiquitous process of categorization and extraction of similarities would be "adapted" to yield human language in phylogeny.

Although an in-depth molecular biological study on this matter is beyond the scope of this presentation, developing and refining the line of my earlier work (Hoshi 2018), which is based upon the Lennebergian view of language evolution, I will carefully compare the similarities and differences between Lenneberg's (1967) *interrelational categorization* (*IntCat*) and *grouping/merge*, and will propose a hypothesis that the human language symbolic combinatory mechanism such as Langacker's (1997) *grouping* (or alternatively *merge* in generative grammar) derived from *IntCat* as part of evolutionary recombination of the two sub-elements in *IntCat*, viz., an array of "concepts" and a cognitive set-formation operation, affecting the nature of categorization in our species in a fundamental fashion. Also, given the fact that the cognitive process of categorization per se has been preserved in our species, it will be suggested for a future research possibility that the relevant genetic mutation in the biological evolution of language created a novel neural substrate system for implementing *grouping/merge*, independently of the one for categorization, via multi-level biochemical interactions in our brain (Fisher & Vernes 2015).

References

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