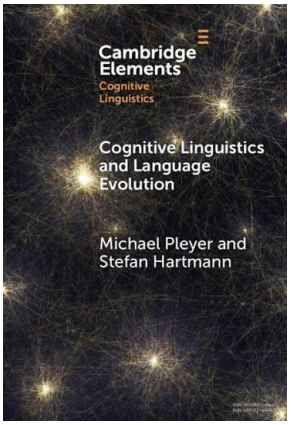
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Review of *Cognitive Linguistics and Language Evolution* by Pleyer and Hartmann[1]

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The origin and evolution of language remain one of the most debated questions in linguistics, drawing sustained attention from scholars in linguistics, anthropology, and philology alike. In the field of linguistics, the most widely influential approach is that of Chomsky, who views language as an innate capacity (Chomsky, 1965). In this view, children are born with what Pinker (1994, p. 18) calls a "language instinct": a specialized biological module that allows them to develop the specific grammar of the language to which they are exposed independently of other cognitive faculties.

Contrary to this innatist hypothesis, the book Cognitive Linguistics and Language Evolution by Michael Pleyer and Stefan Hartmann proposes a paradigm shift. In it, the authors argue that language is not an isolated module, but emerges from general cognitive abilities and, fundamentally, from social interaction. They also postulate that "domain-general cognitive, social, and interactional processes are the basis of the emergence of linguistic structure both in language change and language evolution" (Pleyer & Hartmann, 2024, p. 1).

The work belongs to the Cambridge Elements in Cognitive Linguistics series, which seeks to extend the theoretical and methodological horizons of the field through expert-authored, accessible contributions. In this volume, Pleyer and Hartmann bring together fields that rarely interact so closely: developmental psychology, which traces how capacities emerge in the individual, and historical linguistics, which tracks how patterns stabilize across communities. This combination allows for the examination of the evolutionary hypothesis as an observable phenomenon across multiple temporal scales.

The book is organized into six sections, addressing a question fundamental to the field of linguistics: is language an innate ability or a complex configuration of general cognitive skills? In addressing this question, the authors argue that biological and social factors contribute to language development and consider that Construction Grammar, by offering a suitable framework for studying language evolution, may be the most influential approach within the broad field of Cognitive Linguistics.

Grounded in a usage-based perspective, the volume redefines linguistic knowledge as a network of constructions of varying schematicity. Meaning is treated as dynamic and context-dependent, co-constructed in interaction rather than fixed in advance, a move that shifts the evolutionary debate from genetic mutation to the adaptation of pre-existing cognitive and social capacities. This perspective aligns with what Lakoff (1990) calls the "cognitive commitment" (p. 40), that is, the requirement for linguistic theories to draw on established findings about cognition from other disciplines. Such a commitment demands that "one's account of human language accord with what is generally known about the mind and the brain from other disciplines as well as our own" (Lakoff, 1990, p. 40).

Pleyer and Hartmann thus establish a reciprocal relationship between the two fields: studies on the evolution of language supply the biological grounding for Cognitive Linguistics, while Cognitive Linguistics, in turn, offers the

interpretative apparatus for making sense of how the social and interactional factors shape grammatical structure.

To deepen our understanding of the evolutionary process of language, Pleyer and Hartmann revisit studies that compare human communication to animal communication. In analyzing Hockett's classic model of "Design Features," this section points out limitations of ignoring the sociocognitive dimension and proposes a transition from dichotomous logic to a scalar analysis. They argue that properties such as displacement, i.e., the ability to talk about things that are outside the here-and-now axis (see phenomena of fictivity in Langacker, 2017, p. 45) and arbitrariness, the lack of relationship between form and meaning, are not suddenly emerging human exclusivities, but a matter of degree that finds clear precursors in other biological systems.

Pleyer and Hartmann's criticism focuses on the fact that the characteristics in Hockett's original model are presented in an all-or-nothing manner, while a closer examination reveals that many of them are expressed at different levels of complexity among species. This change in perspective is fundamental to the argument of the work, as it reinforces the idea of evolutionary continuity and bases language on shared cognitive abilities. In short, the authors conceptualize language as the culmination of capacities already present in other species, which were further developed in humans through social and cultural interaction over time.

The operationalization of this theoretical proposal is detailed through four-time scales that interact constantly: enchronic, ontogenetic, diachronic, and phylogenetic. On the enchronic scale, that is, social interaction, local and temporal patterns emerge and serve as shared linguistic resources for the moment of communicative exchange. These patterns, if successful, tend to repeat themselves, entering the ontogenetic scale (that of individual development). It is at this level that the phenomenon of entrenchment occurs: the repetition of a construction strengthens its representation in the learner's memory, automating its use (Goldberg, 2006, p. 93).

In the next level, the diachronic (historical and cultural) scale takes place, where an individual's original cognitive habit spreads and stabilizes as a social convention in the speech community. Pleyer and Hartmann argue that this cycle of use, entrenchment, and conventionalization is the engine of cultural evolution of language, allowing simple systems to gradually become more complex and structured. Finally, through the phylogenetic (species) scale, human biology provides the sensory-motor apparatus and hierarchical processing capacity necessary for these cultural dynamics to occur.

Although the authors also draw on research on language evolution in the laboratory, such as experimental semiotics and iterated learning, the validity of this multiscale model finds one of its strongest empirical pillars in the study of emerging sign languages. The case of Nicaraguan Sign Language, a sign language that developed spontaneously in Nicaraguan schools around the 1980s,

is explored as an example of how grammatical structure can emerge without prior linguistic models, based on the need for communication. The authors note that the first generation of deaf people relied on gestures that were holistic and unsystematic. Regularization came only with children who acquired the system afterward. It was this second generation that analyzed those forms and, within a few decades, built genuine grammatical structure out of them.

This case supports the book's central argument: linguistic ability does not require an innate universal grammar, but rather a shared intentionality and capacity for iterative learning. Nicaraguan Sign Language proves that, given social necessity and adequate cognitive support, grammar emerges naturally as an adaptive solution to communicative needs.

The book is methodologically sound and well written; it offers a necessary synthesis of language as a complex adaptive system. Far from being an innate biological module, it is the result of the convergence between general cognitive skills and social interaction dynamics that manifest themselves on multiple temporal scales: "The global characteristics of the system emerge out of the complex local interactions of different factors in different dimensions and on different timescales" (Pleyer & Hartmann, 2024, p. 50).

One gap remains in the authors' account, however, concerning the cognitive mechanisms underlying what they call the ontogenetic scale. Shared intentionality is no doubt necessary for communication to get off the ground, and for the linguistic patterns that follow from it. However, for Tomasello (1992), language acquisition is driven not by repetition or entrenchment alone, but by the child's grasp of the speaker's pragmatic intentions in a given usage event, intentions that the child continually works to decipher. This gap, though, does not undercut the book's broader achievement. It effectively establishes the biological and evolutionary foundations necessary for a broader cognitive understanding of language.

The volume informs lay individuals and scholars along, mainly by integrating findings from primatology, developmental psychology, and neuroscience, all from the perspective of Cognitive Linguistics. For studies on the evolution of language, the text offers empirical evidence supporting Construction Grammar as a tool capable of explaining the transition from rudimentary forms to complex grammatical systems. Moreover, the work reinforces the discipline's commitment to a cognitive perspective by seeking evolutionary evidence to support usage-based models and providing them with a stronger biological foundation.

In doing so, Pleyer and Hartmann bring together evidence for primatology, developmental psychology, and construction grammar to develop an account of language evolution as a single, coherent problem, rather than as a collection of separate questions, as it is often treated. For this reason, the book is a valuable reading for researchers interested in a perspective that recognizes

language as a collective achievement, shaped by the constant need for social interaction.

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Author's contribution

The author declares that she contributed to the writing (review and editing) of the article.

Conflicts of Interest

The author declares that she has no conflict of interest in the writing, development, and publication of this article.

Ethical implications

The author declares that there are no ethical implications to be reported in the development of this research or in the writing and publication of this manuscript.

Statement of use of artificial intelligence

The author declares the use of artificial intelligence as a tool for the revision of the article.

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