



## Scientific commitments in linguistics: Cognitive, cultural, and biological

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### Abstract

From its inception, cognitive linguistics has been characterized by several shared basic commitments, most notably the “generalization commitment” and the “cognitive commitment” (Lakoff, 1990). These are instances of the general model of scientific explanation, which comprises reduction and emergence as two sides of the same coin. An explanation must show a) that a complex phenomenon can be analyzed as resulting from (i.e., as reducible to) the interaction of certain simpler phenomena under certain conditions, and by the same token, and b) that the special properties of the complex phenomenon, while not present in the basic phenomena involved, emerge from this interaction. For language, with its special cognitive and communicative features, this conception of explanation entails a biological commitment and poses a challenge. How can we show that these special features emerge from more basic biological phenomena? Since the theory of evolution provides the unifying conceptual framework for answering such questions, an indispensable component of the answer is an account of the evolution of these features, and given the diversity of languages, cultural evolution will have to be part of that account. The biological commitment entails employing the generally accepted model specifically for explanation in biology known as “Tinbergen’s four questions” (Tinbergen, 1963; Bateson & Laland, 2013). This study will show that these various elementary requirements can be met in an illuminating way. In addition, it will explore how this might provide an opportunity for overcoming some long-lasting controversies in linguistics.

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