

A reflection on psycholinguistics through its questions about lexicon and morphology

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Psycholinguistics is often seen as an admirably interdisciplinary field. Psychologists and linguists attend the same conferences, publish in the same journals, and collaborate on many projects. In this talk, I will argue, that the dominant formulation of psycholinguistics implies a very narrow and specific approach to human language that is clearly reflected in the way psycholinguists formulate most of their scientific questions. I will also propose some guidelines for an alternative formulation of psycholinguistics.

When we ask questions such as “what is the content of the mental lexicon?” or “how is morphology organized in the brain?”, we are essentially adhering to a general type of question that follows the template “what is the psychological implementation of a linguistic notion?”. A defining characteristic of such questions is that they presuppose the notions and modularity of linguistics, where terms such as lexicon, grammar, phonology, morphology, syntax, and semantics are fundamental. By design, the result of this approach to psycholinguistics are answers which contain the pre-supposed notions. An archetypical result of this approach is the concept of a mental lexicon in which *the lexicon* is presupposed and *mental* merely specifies the lexicon's particular implementation.

This strong focus on the psychological manifestation of linguistic notions became commonplace in the second half of the twentieth century, starting with the mentalization of grammar, which can be attributed to Chomsky (1957). The question no longer was how a grammar should be implemented in general, but rather how it should be implemented to accurately reflect the mental processes of language users. The lexicon was given its explicit place in this theory in Chomsky (1965) and although Chomsky shunned the prefix mental, Lieberman (1969) uses “the mental lexicon” to refer to Chomsky's conception. It did not take long before the term was adopted in a psychological context (e.g., Bower, 1970; Fay and Cutler, 1977; Forster, 1976; Massaro, 1975).

In summary, the currently dominant formulation of psycholinguistics can be traced to Chomsky's objective to make linguistics a subfield of psychology and biology (Blumenthal, 1987), or, in other words, to psychologize linguistics. However, according a mental status to linguistic notions has resulted instead in a linguistification of psycholinguistics.

An additional problem is that nearly all linguistic resources imply the traditional linguistic notions and modularity. Psycholinguistic research in general, and computational modelling in particular, even if it apparently avoids symbolic processing, starts from representations found in resources containing material that is coded using phonetic symbols, orthographic characters, part-of-speech tags, etc. In other words, psycholinguistics largely relies on representations that are the result of linguistic analysis and that have a symbolic nature that reflects linguistic modularity. Although there is an awareness that these resources reflect a priori assumptions about how language is psychologically represented, their use is often considered inevitable. The main arguments for using linguistically coded material are practicality –they exist and without them we would not be able to work– and interpretability –we already know what the code is, from a linguistic point of view. The use of linguistic codes is so entrenched in psycholinguistics that it seems like a natural part of the enterprise of building models or setting up experiments.

If psycholinguistics wants to move beyond answering questions about psychological implementations of linguistic notions, it needs to start formulating questions differently. We should avoid formulating research questions that have a linguistic notion as their object of investigation. Instead, we need to formulate research questions that explicitly target the functions of language in the organism we study. This includes communicating, learning, remembering, expressing, and perceiving. An additional requirement is to avoid using linguistic resources, and, if this is not possible, to clearly think about the implications of their use.

References

- Blumenthal, A. L. (1987). The emergence of psycholinguistics. *Synthese*, 72(3), 313–323.
- Bower, G. H., & Springston, F. (1970). Pauses as recoding points in letter series. *Journal of Experimental Psychology*, 83(3, Pt.1), 421–430. <https://doi.org/10.1037/h0028863>
- Chomsky, N. (1957). *Syntactic structures*. Mouton.
- Chomsky, N. (1965). *Aspects of the Theory of Syntax*. M.I.T. Press.
- Fay, D., & Cutler, A. (1977). Malapropisms and the structure of the mental lexicon. *Linguistic Inquiry*, 8(3), 505–520.
- Forster, K. I. (1976). Accessing the mental lexicon. *New Approaches to Language Mechanisms*, 30, 231–256.
- Lieberman, M. R. (1969). The New Linguistics and the New Poetics. *College English*, 30(7), 527. <https://doi.org/10.2307/374001>
- Massaro, D. W. (1975). *Experimental psychology and information processing*. Rand McNally College Pub. Co.