

A biolinguistic vindication of sign languages: from acquisition to evolution

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Abstract

Current theories about language structure and function, language acquisition in the child, and language evolution in the species rely on data that overwhelmingly derive from the analysis of oral languages and the role of orality in communication. Biolinguistics is a recently emerged branch of Linguistics that promotes a biological approach to linguistic phenomena. Although it has certainly contributed to gain a deeper insight into language, Biolinguistics suffers from the same basic caveat. In this contribution we will specifically claim for a more central role of sign languages studies within this fresh research agenda. We will illustrate (and justify) our position by considering one (biolinguistically) plausible model of the Faculty of Language (i.e. the capacity of the mind/brain for acquiring and using a language; henceforth, FL), ultimately rooted in the model posited by Hauser et al. (2002). In our model, the FL is similarly conceptualised as a computational device that can interface with different cognitive and externalization/internalization devices, thus contributing to diverse functions. We have proved that this model of the FL can illuminate some controversial aspects of language acquisition, language disorders, and language evolution. Nonetheless, since one of the potential interfaces of the FL is a visual-gestural device, sign languages emerge as crucial piece of evidence for the improvement of this (and in fact, of any) model of language processing and evolution, and ultimately, for gaining a

better understanding of language facts. According to our model, we expect that deaf and hearing people show qualitatively similar ontogenetic itineraries (in particular, regarding syntax acquisition), as it seems to be the case. In the same vein, we expect that similar brain regions are active during syntax processing, as it seems to also be the case. More importantly, our model predicts that certain types of linguistic and non-linguistic deficits co-occur in impaired people, both deaf and hearing (thus clarifying the aetiological depiction of many comorbid disorders). Eventually, and also according to our model, the formal properties of sign languages (and the way in which these languages are acquired) preclude some evolutionary itineraries for the emergence of language in the species. In our presentation we will focus in this latter issue, perhaps the most appealing piece of evidence supporting our vindication of a more central role of sign languages studies within any biolinguistic approach to language.

References

1. Hauser, M. D., Chomsky, N., & Fitch, W. T. 2002. The faculty of language: what is it, who has it, and how did it evolve? *Science* 298, 1569-1579.

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