

# Bilingual language acquisition: The role of input and experience

JUBIN ABUTALEBI

*University Vita-Salute San Raffaele, Italy*

HARALD CLAHSSEN

*Potsdam Research Institute for Multilingualism, Germany*

The question of how much language a child can learn by modelling the patterns she is exposed to in the environment represents an age-old and persistent controversy in language-acquisition research. On a number of occasions researchers felt confident enough to claim that the controversy had been resolved, in favour of their own viewpoint, of course. One such attempt was Skinner's (1957) BEHAVIOURIST view of language development, which gave a prominent if not exclusive role to input and experience. After Chomsky's (1959) landmark review, however, Skinner's account was left in pieces and was not further pursued by many. A more recent attempt comes from USAGE-BASED accounts according to which children directly build linguistic categories and rules from the language they hear around them. Some believe that these accounts have resolved the controversy for good and have 'overturned' alternative less experience-driven approaches (e.g., Ibbotson & Tomasello, 2016; Dabrowska, 2015). Yet, casual inspection of recent research articles reveals that this announcement may be somewhat premature; see, for example, Everaert, Huybregts, Chomsky, Berwick and Bolhuis (2015), Boxell's (2016) rebuttal of Dabrowska (2015), and many acquisition studies published in the journal *Language Acquisition*.

In research on bilingual language acquisition, the question of the role of input and exposure also features prominently, with similar controversies as those mentioned above. While some researchers use measures of linguistic input and exposure to predict a child's proficiency in two or more languages (see, for example, Grüter and Paradis' (2014) collection of articles), others note that bilingual (like monolingual) children's linguistic knowledge goes beyond what is directly available through input and exposure (e.g., Meisel, 2011). Against this background, our *keynote article* (Carroll, 2017a) offers a critical review of recent research on the topic. Carroll points out a number of caveats against over-enthusiastic claims on how input and exposure determine bilingual language development. One common type of measure provided in favour of input-based accounts is positive correlations between a bilingual child's linguistic outcomes and corresponding features in her environment, which are supposed to have explanatory or predictive value. Hoff, Welsh, Place and Ribot (2014), for example, claim that differences in the relative quantity and quality

of input EXPLAIN individual differences among bilingual children (our emphasis). Carroll argues that such claims are overstated, because correlations may not necessarily reflect causal links. Another concern is related to the notion of 'language' employed in this literature and to the measures used to tap into 'language'. Carroll argues that the mental system underlying the knowledge of language(s) is complex and consists of distinct subsystems (e.g., lexicon, grammar, phonology, etc), and she reminds us that the commonly used vocabulary measures do not provide measures of 'language', but only of vocabulary. Consequently, findings regarding the relevance of input and exposure to vocabulary may not generalize to other subsystems of linguistic knowledge.

As expected, Carroll's keynote article elicited a vivid – even quite fierce – response, from 10 commentators. While many commentators agree with the caveats Carroll pointed out (De Houwer, 2017; MacWhinney, 2017; Pérez-Leroux, 2017; Armon-Lotem, 2017), several other commentators note that current research on input and exposure in bilingual language development already goes beyond these concerns. Grüter (2017) points to studies showing effects of input and exposure on bilingual grammar development. Likewise, Paradis (2017) mentions cases in which fine-grained properties of bilingual language use can be predicted from input data, in this case from parental reports. Gathercole (2017) criticizes the keynote article for not representing the field accurately, pointing to a number of additional studies to which the caveats do not seem to apply. Weisleder (2017) maintains that the amount of exposure has 'considerable explanatory power'. In addition, a number of commentaries mention other studies that are of interest to the broader topic. Armon-Lotem (2017) points to research on bilingual children with SLI, Mougeon and Rehner (2017) to research on the influence of classroom input versus community exposure on bilingual language development, and Bernardini (2017) to studies on the 'weaker' language of bilinguals. In her response, Carroll (2017b) clarifies her points and discusses what she believes are misunderstandings. What remains is the impression that the study of the role of input and experience in bilingual language development is challenging, that broad conclusions – 'exposure is (not) critical' – are probably wrong, and that progress can be made by asking more subtle

questions, such as how exposure affects different kinds of linguistic knowledge, different kinds of bilinguals, and what the mechanisms are by which the language learner employs information available from the linguistic environment.

We hope our readers will enjoy the keynote article together with the commentaries and the author's response as well as the interesting regular research articles and research notes presented in the current issue.

## References

- Armon-Lotem, S. (2017). Disentangling bilingualism from SLI: Dissociating exposure and input. *Bilingualism: Language and Cognition*, 20, 33–34. DOI: [10.1017/S1366728916000377](https://doi.org/10.1017/S1366728916000377)
- Bernardini, P. (2017). Weak interest in the weaker language. *Bilingualism: Language and Cognition*, 20, 29–30. DOI: [10.1017/S1366728916000341](https://doi.org/10.1017/S1366728916000341)
- Boxell, O. (2016). The place of Universal Grammar in the study of language and mind: A response to Dabrowska (2015). *Open Linguistics*, 2, 352–372. DOI: [10.1515/opli-2016-0017](https://doi.org/10.1515/opli-2016-0017)
- Carroll, S.E. (2017a). Exposure and input in bilingual development. *Bilingualism: Language and Cognition*, 20, 3–16. DOI: [10.1017/S1366728915000863](https://doi.org/10.1017/S1366728915000863)
- Carroll, S.E. (2017b). Explaining bilingual learning outcomes in terms of exposure and input. *Bilingualism: Language and Cognition*, 20, 37–41. DOI: [10.1017/S1366728916000511](https://doi.org/10.1017/S1366728916000511)
- Chomsky, N. (1959). A review of BF Skinner's Verbal Behavior. *Language*, 35(1), 26–58.
- Dabrowska, E. (2015). What exactly is Universal Grammar, and has anyone seen it? *Frontiers in Psychology*, 6, 852. DOI: [10.3389/fpsyg.2015.00852](https://doi.org/10.3389/fpsyg.2015.00852)
- De Houwer, A. (2017). Bilingual language input environments, intake, maturity and practice. *Bilingualism: Language and Cognition*, 20. DOI: [10.1017/S1366728916000298](https://doi.org/10.1017/S1366728916000298)
- Everaert, M. B., Huybregts, M. A., Chomsky, N., Berwick, R. C., & Bolhuis, J. J. (2015). Structures, not strings: linguistics as part of the cognitive sciences. *Trends in Cognitive Sciences*, 19, 729–743. DOI: [10.1016/j.tics.2015.09.008](https://doi.org/10.1016/j.tics.2015.09.008)
- Gathercole, V.C.M. (2017). Straw man: Who thought exposure was the ONLY factor?. *Bilingualism: Language and Cognition*, 20, 23–24. DOI: [10.1017/S1366728916000316](https://doi.org/10.1017/S1366728916000316)
- Grüter, T. (2017). Vocabulary does not equal language, but neither does morphosyntax. *Bilingualism: Language and Cognition*, 20, 17–18. DOI: [10.1017/S1366728916000286](https://doi.org/10.1017/S1366728916000286)
- Grüter, T., & Paradis, J. (eds.) (2014). *Input and experience in bilingual development*. Amsterdam: Benjamins.
- Hoff, E., Welsh, S., Place, S., & Ribot, K. (2014). Properties of dual language input that shape bilingual development and properties of environments that shape dual language input. In T. Grüter & J. Paradis (eds.), *Input and experience in bilingual development*. Benjamins: Amsterdam, pp. 119–140.
- Ibbotson, P., & Tomasello, M. (2016). Evidence rebuts Chomsky's theory of language learning. *Scientific American*, September 7, 2016.
- MacWhinney, B. (2017). Exposure is not enough. *Bilingualism: Language and Cognition*, 20, 25–26. DOI: [10.1017/S1366728916000328](https://doi.org/10.1017/S1366728916000328)
- Meisel, J. M. (2011). *First and Second Language Acquisition: Parallels and Differences*. Cambridge: Cambridge University Press.
- Mougeon, R., & Rehner, K. (2017). The influence of classroom input and community exposure on the learning of variable grammar. *Bilingualism: Language and Cognition*, 20, 21–22. DOI: [10.1017/S1366728916000304](https://doi.org/10.1017/S1366728916000304)
- Paradis, J. (2017). Parent report data on input and experience reliably predict bilingual development and this is not trivial. *Bilingualism: Language and Cognition*, 20, 27–28. DOI: [10.1017/S136672891600033X](https://doi.org/10.1017/S136672891600033X)
- Pérez-Leroux, A. T. (2017). The untouchables. *Bilingualism: Language and Cognition*, 20, 31–32. Doi: [10.1017/S1366728916000365](https://doi.org/10.1017/S1366728916000365)
- Skinner, B. F. (1957). *Verbal behavior*. New York: Prentice Hall.
- Weisleder, A. (2017). Towards a bioecological model of bilingual development. *Bilingualism: Language and Cognition*, 20, 35–36. DOI: [10.1017/S1366728916000389](https://doi.org/10.1017/S1366728916000389)