

Parent report data on input and experience reliably predict bilingual development and this is not trivial

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Carroll (Carroll) takes issue with the use of parent report to obtain quantity of language exposure measures in research on bilingual development. When discussing parent questionnaires, Carroll writes “Temporal units are crude measures of exposure and they tell us nothing about input”. While I agree that temporal units do not tell us much about the fine-grained details of the input within the temporal units, importantly, parent-report-based measures of input quantity have predicted variation in bilingual development of phonology, vocabulary and morphosyntax. These are robust and reliable findings across numerous studies, and yet, Carroll skates over them as if they did not matter, or dismisses them as trivial. Furthermore, Carroll seems to lead readers to believe that only coarse-grained, language-use temporal units have been obtained through this method; on the contrary, researchers have obtained fine-grained input quality details via parent report that also predict bilingual children’s development. Finally, in some circumstances, parent report data is the only feasible method for obtaining language exposure information.

Parent report has been frequently used in studies of simultaneous and sequential bilinguals to obtain cumulative (e.g., length of time) or relative (e.g., 60% French and 40% English) language exposure variables, which in turn are used to predict children’s language abilities (e.g., chapters in Grüter & Paradis, 2014). Studies in the reference list¹ marked with [*] – 39 in total – are those that found significant relationships between parent-report-based input quantity measures and children’s language abilities. Carroll writes, “Much of the bilingual exposure literature making claims about quantity or quality of exposure is little more than speculation . . .

that will not bear close scrutiny”. The scrutiny afforded by this reference list contradicts this statement because, if parent report on language exposure were too unreliable and speculative, such consistent findings would not exist.

Carroll cites de Houwer (chapter in Grüter & Paradis, 2014) as evidence for the unreliability of relative language exposure measures, but this study shows nothing of the sort. De Houwer found substantial individual variation in the amount of maternal speech in Dutch to bilingual children. Only speech in Dutch was measured. Presumably, the bilingual children’s French interlocutors also varied in their volubility, but this was not measured, nor was the impact of input variation on children’s language. Based on this study, we could hypothesize that variation in the amount of maternal speech would cause relative language exposure measures to be useless at predicting differences in children’s language. For example, 30% of exposure in Dutch might mean 1,000 words-per-hour for one child and 5,000 for another. However, the weight of empirical evidence (see reference list in Supplementary Materials) does not support this hypothesis. Research examining the impact of absolute and direct input measures on children’s development is worthwhile; my point is that indirect language exposure variables obtained via parent report have also proven their worth.

In the quote above, Carroll mentions “. . . quantity or *quality* of exposure . . .” [emphasis mine]. In addition to showing that input quantity measures are valid, studies have also shown that input quality variables obtained via parent report predict bilingual children’s language abilities. (See 18 studies in the reference list marked

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¹ For full reference list, see supplementary material accompanying this paper.

“[!]”). Input quality refers to factors such as: parental L2 fluency, diversity of interlocutors in a minority language, SES/parent education, or the richness of children’s experience with media, extra-curricular activities, and native-speaker friends in L1 or L2. Not only have studies shown that input quality matters, they have also shown that input quality sometimes trumps quantity, e.g., when the L2 fluency of parents is low, the amount of L2 input at home bears little relationship to children’s abilities in the L2 (Paradis, 2011). Carroll highlights the need for more fine-grained and direct investigations of the quality of language exposure in research with bilinguals, and I heartily support this. However, parent report has already yielded important and reliable findings on this topic that should serve as a launching pad for studies employing different methods.

Indirect measures like parent-, teacher- or self-report might be the only feasible means of obtaining input and experience information from older bilingual children. Tracking overlap in maternal input and child output might be possible for toddlers, but older bilingual children have multiple sources of input in L1 and L2: home, school, community, media, friends. So, counting all the words, and sources of all the words, that older bilingual children hear is impractical in observational research. Laboratory artificial-language learning can provide insights in this regard and is feasible with older participants; however, there is always a trade-off between precision of measurement and ecological validity in behavioural science research, meaning naturalistic and observational methods are always needed. Certainly, new paradigms for examining input and uptake in bilingual development would be very welcome, but, since we know

parent report data works, it should remain part of the toolkit of bilingual development researchers.

Carroll claims there is a consensus across theoretical approaches concerning the relevance of input and experience, and writes “Given this obvious consensus, I plead for a moratorium on studies whose sole theoretical claim is just that exposure to a given language matters”. In my view, there is no consensus about the nature, impact and longevity of input factors in acquisition between nativist and non-nativist perspectives. Nevertheless, I concur with a narrow reading of Carroll’s statement. Since so much research has demonstrated that cumulative or relative input quantity – largely based on parent report – predicts rates of bilingual development, any study examining this factor as its sole purpose runs the risk of not making a novel contribution to the field.

Supplementary Material

For supplementary material accompanying this paper, visit <http://dx.doi.org/10.1017/S136672891600033X>

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