

The untouchables

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Carroll's critique (Carroll) of the field of bilingualism yields strong directives. Let us not study specific groups of bilinguals, and make big claims about bilingual learning. Let us not study one domain, say vocabulary, and generalize to bilinguals' LANGUAGE. These are all valid points. She also voices strong skepticism about how current literature deals with language experience:

"Much of the bilingual exposure literature making claims about quantity or quality of exposure is little more than speculation, built from a 'logic' about amounts of exposure that will not bear close scrutiny." (8)

I will offer first a personal response. That my oldest son became a fluent bilingual, but my second son only acquired receptive skills in Spanish, remains in my mind inextricably linked to factors external to them. The firstborn grew up in a linguistically endogamous household, amidst a lively Latino community and enjoyed frequent family visits from the island. Fast forward ten years. His little brother was born in a blended family, his father an English speaker. Other matters had also changed: the community we lived in was less bilingual-friendly and declining health limited grandparents' ability to visit. So, yes, I do blame it on exposure.

For sure, Carroll does not say that exposure does not matter. What she does say is that exposure alone cannot be the whole story. Not even the most interesting part of the story. And, if we think that exposure really is the most interesting topic of research, we are in trouble – because measuring exposure is a hopeless business. I will start by considering the first and last issues, namely: Can we measure exposure; and How far can it take us?

I concur: exposure is difficult to study. It requires asking parents to play home-anthropologist. They often do a poor job, but who can blame them? Many questionnaires are designed to confuse them. Time is but an approximation of experience, and not a great one at that. Jia's work has offered a persuasive demonstration that time in a country is used differently by different bilingual individuals (Jia & Aaronson, 2003; Jia, Aaronson & Wu, 2002). Communities and households implement language choices in varied ways and with such degree of variability as to fully undermine even the most sensible strategies

for measuring exposure. Although the efforts invested in improving the study of bilingual exposure should be praised (not censured), Carroll is probably right to be skeptical as to their eventual pay off. Progress towards figuring out the social networks of bilingual children, the time spent in each, and what goes on then, etc., still leaves out a fundamental variable: the individual contribution of learners, how they process language, and how they themselves shape exposure. We are aware that individual differences explain variance in bilingual development (Castilla, Restrepo & Pérez-Leroux, 2009). We know there are great fluctuations in the intensity of exposure, but we haven't even begun on the question of how timing of these fluctuations determines outcomes, or how these interact with individual differences. We know that speed of lexical processing contributes to bilingual vocabulary growth beyond exposure (Hurtado, Grüter, Marchman & Fernald, 2014); but other important factors have yet to be explored. Inheritance and environment jointly shape developmental outcomes in monolingual children (Oliver, Dale & Plomin, 2004). It is not a stretch to think it will also for bilinguals. We can go further: the greater variability in bilingual contexts (Castilla-Earls, Restrepo, Pérez-Leroux, Gray, Holmes, Gail & Chen, to appear) might amplify the role of environmental factors. In our own research in Toronto, we witnessed how even young school age children can articulate their language choices:

(1) *DLT: Which one do you like more?

*ANG: Spanish

*DLT: You do. Why?

*ANG: Because it's what my dad and mom speak (ANG 6;11)

(2) *DLT: You like English more. Really? Why?

*KAR: Because I like # because # because my friends speak English (KAR, 5;10)

(Pérez-Leroux, Cuza & Thomas, 2011)

So Carroll is right: social context matters beyond number of speaker-hours, and context and children's

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language behavior have a dynamic and bidirectional interaction. But difficult does not mean impossible; just harder. Which brings us to the central issue: is studying bilingual exposure inherently interesting?

Interest is in the eye of the beholder. The environmental and the cognitive perspective on language seldom overlap on this. Opportunities for a common ground are vanishingly rare, so we should not miss this one. Language exposure matters greatly, but it matters DIFFERENTLY across different domains of grammar. As Carroll indicates, different learning problems will lead to different learning behaviors and respond differently to exposure (and the input it contains). This is why we study domain vulnerability (Müller, 2003), but the task is doomed unless both exposure and learnability conditions are carefully considered.

Curiously, what troubles Carroll most is not the indifference to the specificity of domains, but the interpretation given to target-divergent patterns produced in the weak language of asymmetric bilinguals. According to her, processing accounts assert that bilinguals may have the same competence in their weak language but differ in performance (because of increased competition between representations). Therefore, differences in accuracy are not be explained by differences in exposure, or in grammar. This is a peculiar move. As input is to others, the competence/performance dichotomy is for Carroll an untouchable.¹ In her account, we can only conclude that errors are the result of grammar to “the extent that they cannot be attributed to performance factors” (20). This bar is too high: we only know competence by the deeds of performance. This amounts to a denial of the possibility of grammar divergence in bilinguals. The same dynamic perspective of the phenomena Carroll calls for in the case of exposure is required here. I close by pointing to current developments in the study of sentence processing and developmental linguistics. These two enterprises are recently becoming more mutually relevant (Phillips & Ehrenhofer, 2015), so that the moment is ripe to reexamine the competence/performance divide. Bilingualism might just be the most promising field in

which to do this. That, however, is a topic for another day.

References

- Carroll, S.E. (2015) Exposure and input in bilingual development. *Bilingualism: Language and Cognition*. doi:10.1017/S1366728915000863.
- Castilla-Earls, A. P., Restrepo, M. A., Pérez-Leroux, A.T., Gray, S., Holmes, P., Gail, D. & Chen, Z. (To appear). Interactions between bilingual effects and Language Impairment: Exploring grammatical markers in Spanish-Speaking bilingual children. *Applied Psycholinguistics*. Published online November 2015. DOI: <http://dx.doi.org/10.1017/S0142716415000521>
- Castilla, A. P., Restrepo, M. A., & Pérez-Leroux, A. T. (2009). Individual differences and the developmental interdependence hypothesis. *International Journal of Bilingual Education and Bilingualism*, 12(1), 1–16.
- Hurtado, N., Gruter, T., Marchman, V. A., & Fernald, A. (2014). Relative Language Exposure, Processing Efficiency and Vocabulary in Spanish-English Bilingual Toddlers. *Bilingualism: Language and Cognition*, 17(1), 189–202.
- Jia, G., & Aaronson, D. (2003). A longitudinal study of Chinese children and adolescents learning English in the United States. *Applied Psycholinguistics*, 24(01), 131–161.
- Jia, G., Aaronson, D., & Wu, Y. (2002). Long-term language attainment of bilingual immigrants: Predictive variables and language group differences. *Applied Psycholinguistics*, 23(04), 599–621.
- Müller, N. (2003). (In) vulnerable domains in multilingualism (Vol. 1). Amsterdam: John Benjamins Publishing.
- Oliver, B., Dale, P. S., & Plomin, R. (2004). Verbal and nonverbal predictors of early language problems: An analysis of twins in early childhood back to infancy. *Journal of Child Language*, 31(03), 609–631.
- Pérez-Leroux, A. T., Cuza, A., & Thomas, D. (2011). Input and parental attitudes: A look at Spanish-English bilingual development in Toronto. In K. Potowski (ed.) *Bilingual youth: Spanish in English-speaking societies*, 149–175. Amsterdam: John Benjamins.
- Phillips, C., & Ehrenhofer, L. (2015). The role of language processing in language acquisition. *Linguistic Approaches to Bilingualism*, 5(4), 409–453.

¹ Entities and individuals that cannot be brought under legal scrutiny. [https://en.wikipedia.org/wiki/The_Untouchables_\(film\)](https://en.wikipedia.org/wiki/The_Untouchables_(film))