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Accounting for multicompetence and restructuring in the study of speech

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4aSC28. Accounting for multicompetence and restructuring in the study of speech



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1. BACKGROUND

- Linguistic competence is analyzed largely in accordance with a **MONOLINGUAL MODEL** of the 'native speaker' target (abstracting away from knowledge of other languages). [2, 6]
- But the **MONOLINGUAL MODEL** is problematic:
 - most language users are not monolingual [25]
 - language systems for a first language (L1) and a second language (L2) are 'shared' to some degree [1, 9-11]
- L2 learning turns monolinguals into '**multicompetent**' users [7] whose L1 use often differs from monolinguals'. [13-15, 19, 20, 22, 24, 27]
 - effects of L2 learning on L1 production (**PHONETIC DRIFT**) in:
 - VOT** [4, 5, 9, 16, 17] f_0 [4, 5, 18] $F_1 / F_2 / F_3$ [4, 5, 9, 12, 17, 26]
 - effects of ambient L2 exposure/use on L1 production [3, 21]
 - effects of L2 learning on L1 perception [23; cf. 8]
- QUESTION:** Is the monolingual model applied appropriately?
- GOALS:** (i) examine how monolingualism is described in contemporary phonetic research, & (ii) explore persistence of phonetic drift, esp. in *infrequent* users of an L2.

2. METHODS

- META-ANALYSIS:** 80% of year '10-'13 papers in *Journal of Phonetics*
 - all papers reporting **new data** generalizing to **adult monolingual** native speakers ($n = 127$)
 - unless stated otherwise, assumed that:
 - participants had knowledge of language(s) dominant in location of study
 - location of study = institutional affiliation (with highest n of speakers of subject language according to Ethnologue)



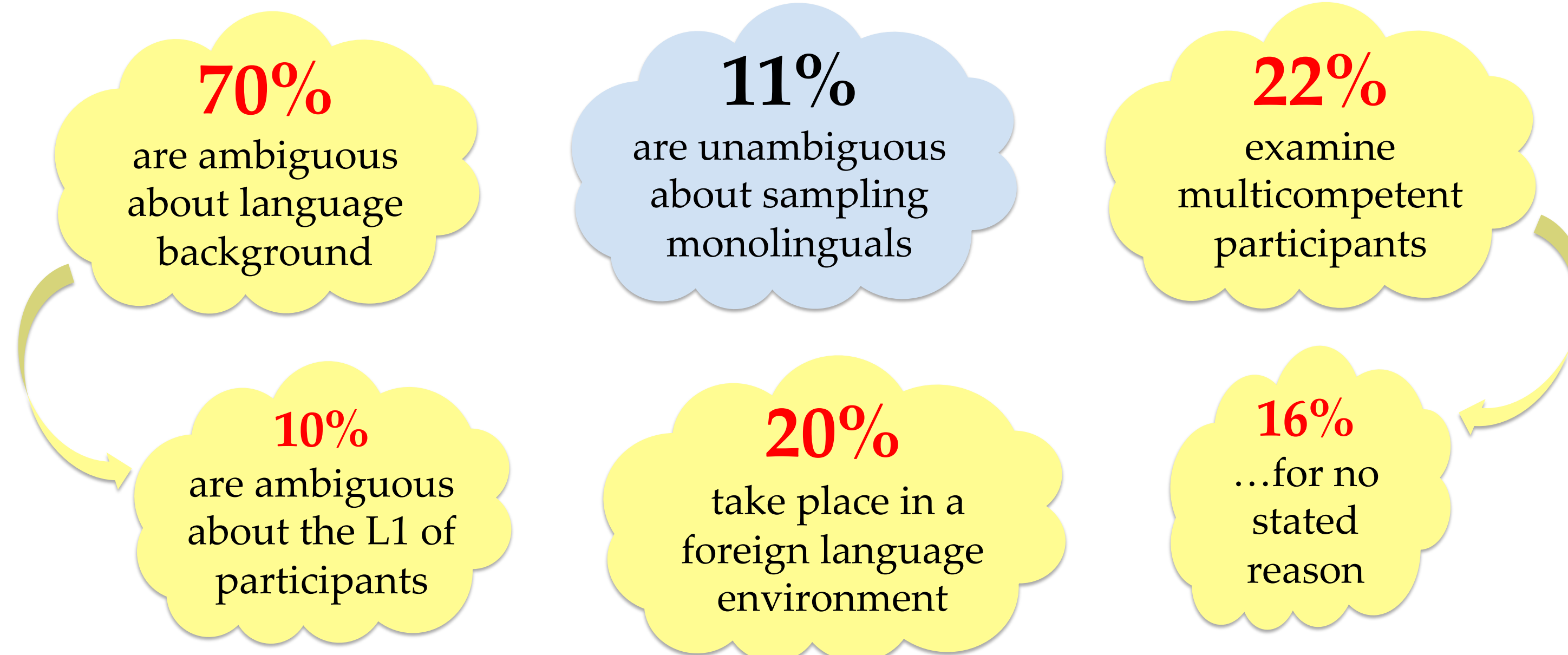
- PRODUCTION STUDY:** phonetic drift of **L1 English** in adult users of **L2 Korean** during a year abroad in South Korea

low-use L2 users (LU)			high-use L2 users (HU)		
$n = 8$	mean age 23.8 yr	8 f.	$n = 7$	mean age 23.7 yr	6 f.
mostly English at home & at work			Korean at home and/or at work		
Korean proficiency self-rated 'poor'			Korean proficiency self-rated 'fair'		

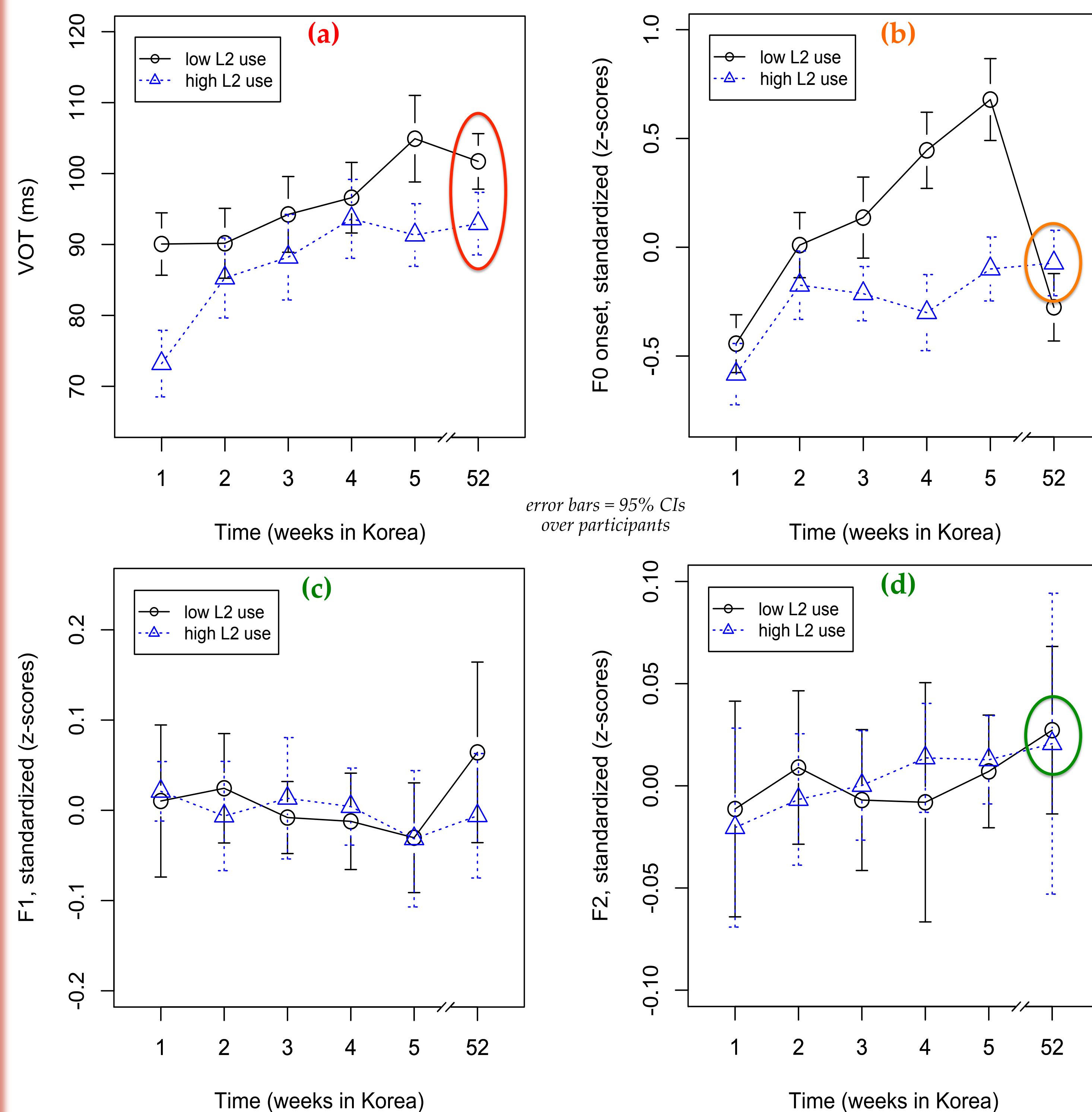
- elicited production of 24 English monosyllables (e.g., *pot*, *heed*) at end of wks. 1-5 of initial Korean classes & at end of year (wk. 52)
- acoustic analysis in Praat of: **VOT** & **onset f_0** measured manually, **mean F_1** & **mean F_2** measured at vowel midpoint

3. RESULTS

- Meta-analysis** shows many papers with information gaps and/or questionable methodology re: language background/context.



- Production study** shows phonetic drift persisting at >3 months after most recent Korean instruction (classes and/or tutoring):
 - VOT** drift lasts in both groups, while f_0 drift lasts in **high-use** group only
 - F_1 drift does not last, but F_2 drift lasts in both groups



4. DISCUSSION

- Meta-analysis results are concerning re: **interpretability** & **replicability** of published behavioral speech studies. However:
 - some samples clearly match intended populations
 - some studies provide useful details beyond participants' L1 (generally framed in terms of **limitations on knowledge of other languages**, e.g. 'no experience with vowel harmony')
 - some studies highlight general **restrictions on experience with additional languages** (esp. with ambient language in a foreign environment, e.g. 'low proficiency').
- Common pattern: emphasizing short **length of residence (LoR)** in an L2 environment. But no consistency in max LoR assumed!

OBSERVED RANGE IN MAXIMUM LoR IN L2 ENVIRONMENT (TO STILL QUALIFY AS 'MONOLINGUAL'):

3 months to **24 months**
(2 years)

- max LoR never justified explicitly → arbitrary or conventional
- Production study suggests that phonetic drift is **persistent**, but **variable** across acoustic properties.
 - not dependent on engagement in active L2 learning
 - not dependent on frequent L2 use in some cases (e.g., **VOT**)
 - possibly dependent on frequent L2 use in other cases (e.g., f_0)
 - possibly influenced by drift pattern in related acoustic dimensions (such as F_2 vis-à-vis F_1)
- Idea of '**critical mass**' of L2 knowledge: once an L2 is known, it cannot be 'un-known' (and, thus, L2 input is harder to ignore).

5. CONCLUSIONS

- Recent studies of speech contain vague definitions of target populations or mismatches between populations & samples.
- Multicompetent L1 users tend to differ from monolinguals**, esp. in an L2 environment (even with little use of the L2).
- For interpretation & replication, it is crucial to be explicit about: (a) the **language background** of a participant sample, & (b) the **language environment** of the study.

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