## MAX PLANCK INSTITUTE FOR PSYCHOLINGUISTICS



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Dear Members of the Editorial Team,

We submit to you our manuscript entitled, "Early language experience in a Papuan community". We use daylong recordings of children's language experiences in a subsistence farming community on Rossel Island, Papua New Guinea (language: Yélî Dnye, an isolate), to estimate how much directed and overhearable speech children under 3;0 typically encounter. Our study builds off of ethnographic work with this same community demonstrating that children and adults orient toward infants and young children as potential conversational partners. In contrast, using daylong recording methods, we find that Rossel children hear very little directed speech overall (less than 3.2 minutes per hour). This low rate of direct linguistic input, while unexpected on the basis of ethnographic work, is comparable to that established for an unrelated subsistence-farming community (Tseltal Mayan: Casillas et al., 2019 *Child Development*), and rings true with daylong recording findings in other pre-industrial contexts (e.g., Tsimane: Scaff et al., in preparation). We suggest that the linguistic input rates across daylong recordings effectively capture children's overall pattern of input, but are not sensitive to different caregiver attitudes about how to talk to children. Instead, the emerging picture of children's broader linguistic experience is one in which circumstantial aspects of everyday life (e.g., how many other people are present) are more critical in determining total input quantity than caregiver ideologies regarding how to talk to children.

## What is novel about this work?

There has recently been a (much-needed) uptick in studies using rigorous, replicable, quantitative methods to create cross-culturally comparable estimates of how much (directed) speech children hear in small-scale non-Western communities (e.g., Tsimane: Cristia et al., 2019; Scaff et al., in preparation; Quechua-Spanish bilinguals: Cychosz et al., in preparation; Yucatec: Shneidman and Goldin-Meadow, 2012; Tseltal: Casillas et al., 2019; Jul'hoan: Yetish, Cristia, & colleagues, ongoing; and multi-lingual children in Vanuatu: Colleran, Cristia & colleagues, ongoing). This ongoing set of studies makes enormous strides in adding data from economically, linguistically, and culturally diverse populations, and will be fundamental to establishing the constraints on linguistic input that support typical language acquisition.

However, it remains unclear how these generalized measures of input relate to caregiver ideologies about talk to young children or, given relatively little child-directed speech, what other mechanisms children rely on to extract the information they need from the language they *do* encounter. By pulling together threads from both ethnographic and quantitative work done on Rossel Island and with Tseltal Mayan families (Casillas et al., 2019), our paper lays out a nuanced view of children's linguistic input: (1) input rate (and thereby quantity) is primarily shaped by circumstantial factors, not ideological ones, (2) input rate is non-uniform over the day

(i.e., there are brief bursts of intense linguistic activity), and (3) despite a low average rate of linguistic input, children appear to experience no delay in reaching early linguistic milestones. We think that it is during these brief, bursty interactions that much of language development and socialization takes place—and we predict that it is during these same bursts that caregiver ideologies will be most on display.

Our study is novel in its methods (hand-transcribed segments from daylong photo-linked audio) and in the population represented (the first use of daylong recordings in Melanesia). These hard-won data are the result of three 4–6 week fieldtrips to the host community in 2016, 2018, and 2019. Notably, all data collection, archiving, transcription/annotation, and analyses were designed during active interaction with other daylong audio researchers; all tools and training materials used are open source; and the data can be securely-shared via HomeBank so that the recordings and findings will have a maximum long-term impact for future crosslinguistic comparative work and for future work focused on the acquisition of Yélî Dnye in particular.

Why are we submitting to the Journal of Child Language?

We regard the *Journal of Child Language* as the premier publication venue for developmental work on typologically diverse languages. Among its readers are researchers using ethnographic, linguistic, and psychology-derived methods. Our submitted paper, in its assessment of Rossel linguistic input, its discussion of language socialization work, its coverage of a comparison study of Tseltal, and its implications for theoretical models linking linguistic input to developmental outcomes fits nicely into the themes and audience of JCL.

We verify that these data and analyses have been presented at conferences, but are not published nor under consideration elsewhere, online or otherwise. The authors have all agreed to the content and declare no conflicts of interest.

All the data, code, associated scripts, and the manuscript itself are available from various open science repositories. To keep review double-blind, we have stripped the manuscript of these repository links, and we instead provide a temporary link in the main text to an anonymous OSF repository where the basic data and analyses presented in the paper can be found:

https://osf.io/h3gzm/?view\_only=c2b3b119f7e844378aafd7ae86f4dc85

The contact information for four potential referees is below:

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We do not recommend asking the following researchers or their lab members to review this manuscript as they are active co-authors on projects with the first author—in many cases involving this Yélî Dnye dataset—and may therefore have a conflict of interest: Drs. Elika Bergelson, Alejandrina Cristia, Camila Scaff, Melanie Soderstrom, and Adriana Weisleder.

Sincerely,

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