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Continuity and stability in emergent bilinguals' language development and code-switching practices spanning school entry

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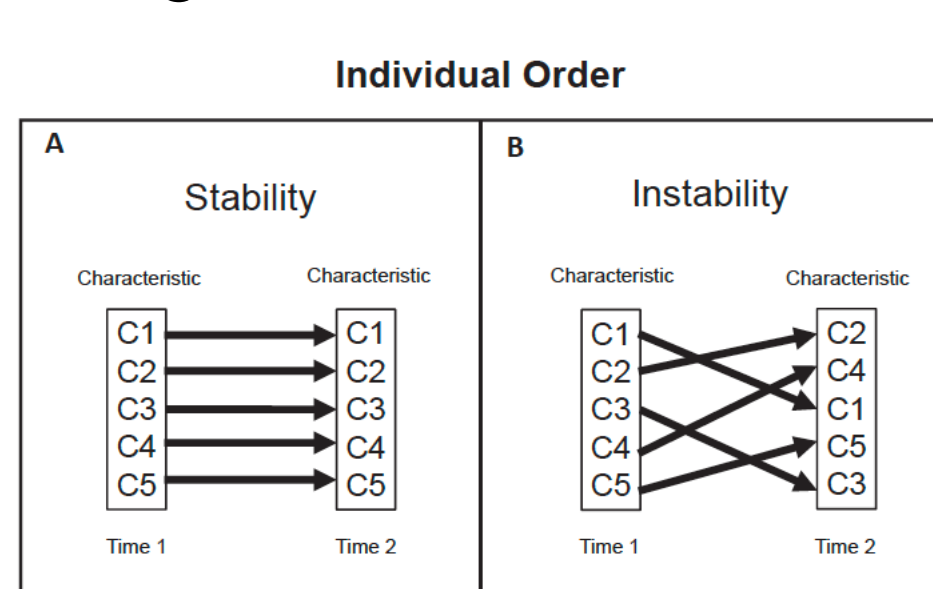
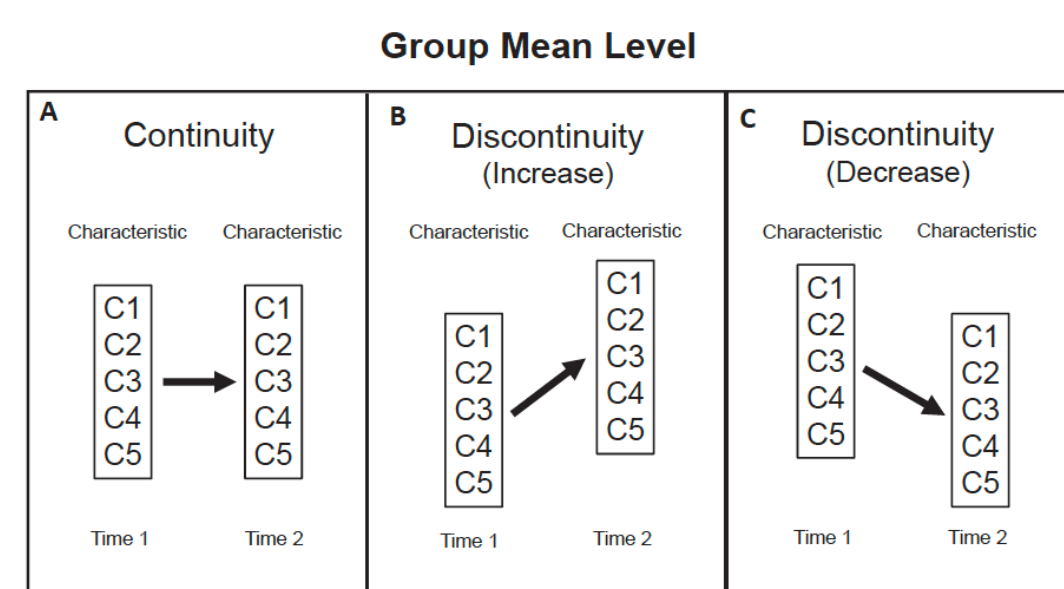
Background

- For emergent bilinguals (EBs) in the United States whose families speak a minoritized home language, the transition to school in pre-kindergarten (PK) represents a pivotal shift in day-to-day language environments.
- Previous studies have shown:
 - Increased use of English with parents, on average (Hammer, 2011; Wong-Fillmore, 1991)
 - Heterogeneous individual trajectories (Luo et al., 2020)
- The current longitudinal study investigates how EBs' home language practices change or remain stable during the transition to school by examining
 - Average increases or decreases in observed language use over time
 - The consistency of individual rank order in observed language use over time

Defining Key Terms

Continuity / Discontinuity: "Change in the group mean level of a characteristic through time." (Bornstein et al., 2017)

Stability/ Instability: "Change in the relative order, standing, or rank of individuals in a group on a characteristic through time." (Bornstein et al., 2017)



Bilingual Language Processes

Child-initiated code-switches (CS): % child utterances containing one or more words in English, following an utterance that only contains Spanish words.

Child lexical diversity (LD) in Spanish, English, and overall: Number of different word types per minute.

*PAR: *dime qué está haciendo el payasito.*
*CHI: *va a la bedroom.*

E.g., *va a la bedroom* = 3 Spanish types, 1 English type, and 4 overall types

Prediction: Discontinuity (increase) and stability

Prediction: Discontinuity (increase) and instability

Research Questions

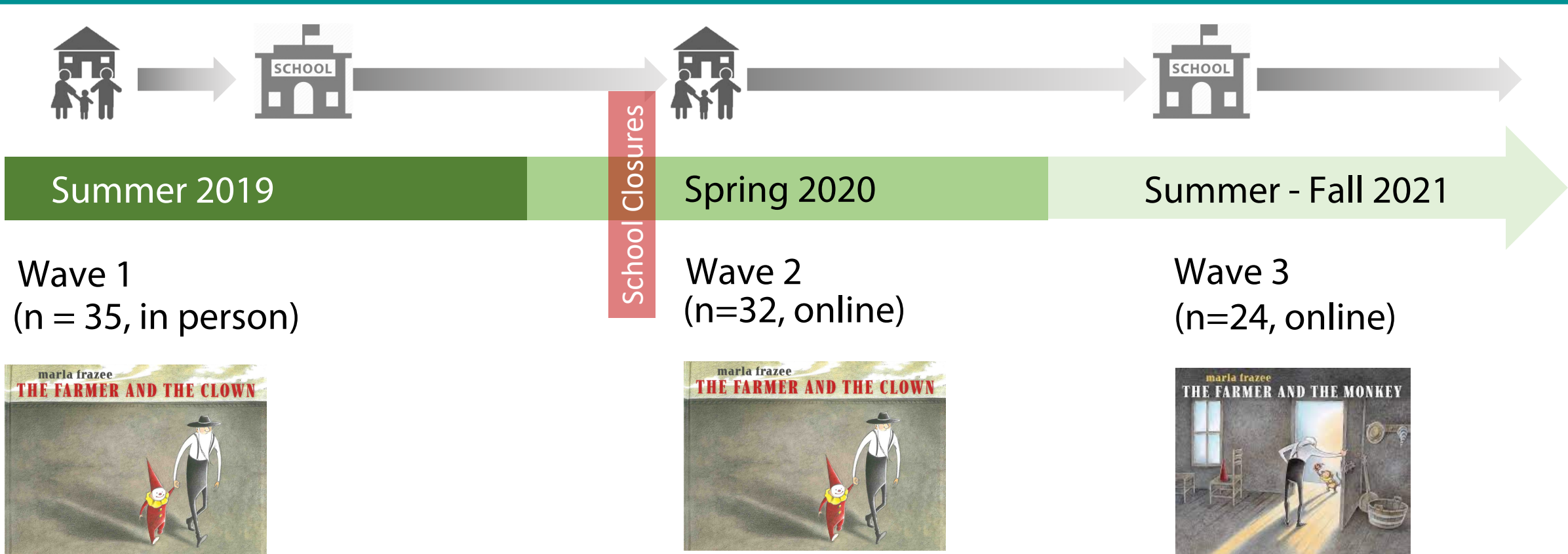
- RQ1:** Across PK – 1 (~age 3-6), when interacting with Spanish-speaking parents at home:
- 1A:** Do Spanish-speaking EBs increase in code-switching and lexical diversity, indicating *discontinuity*?
 - 1B:** Do Spanish-speaking EBs maintain the same relative rank in their code-switching practices and lexical diversity, indicating *stability*?

RQ2: What is the relation between changes in child code-switching and changes in lexical diversity?

Prediction:

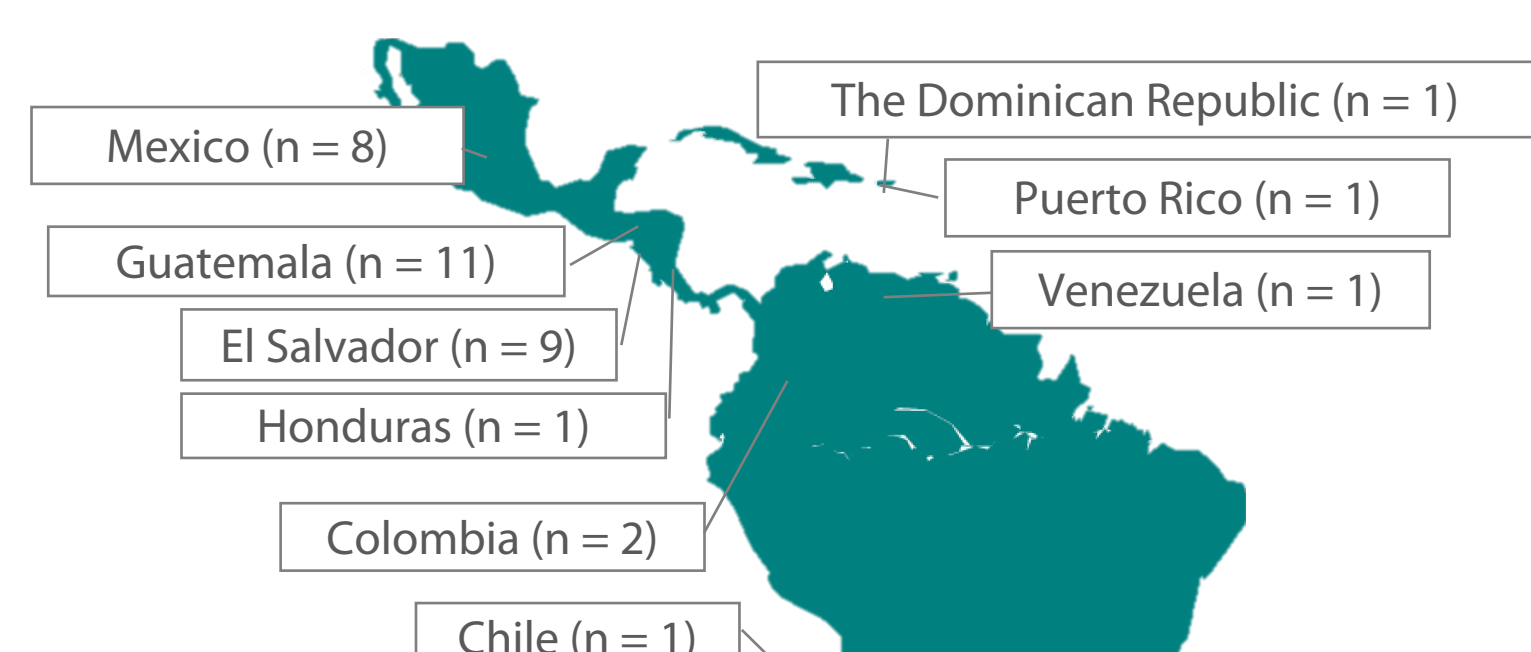
- EBs who increase in code-switching will increase in English lexical diversity and decrease in Spanish lexical diversity.
- This relation may be stronger earlier (age 3-4) than later (age 5-6) if younger children code-switch to fill lexical gaps and older children code-switch for sociopragmatic purposes (Halpin & Melzi, 2018; Montanari et al., 2019)

Methods



- Spanish-speaking parent-child dyads were visited at three timepoints
- Video-recorded parent-child interaction with a wordless picture book
- Transcribed in CLAN and coded for code-switching

Participants (longitudinal n = 24)



Parents

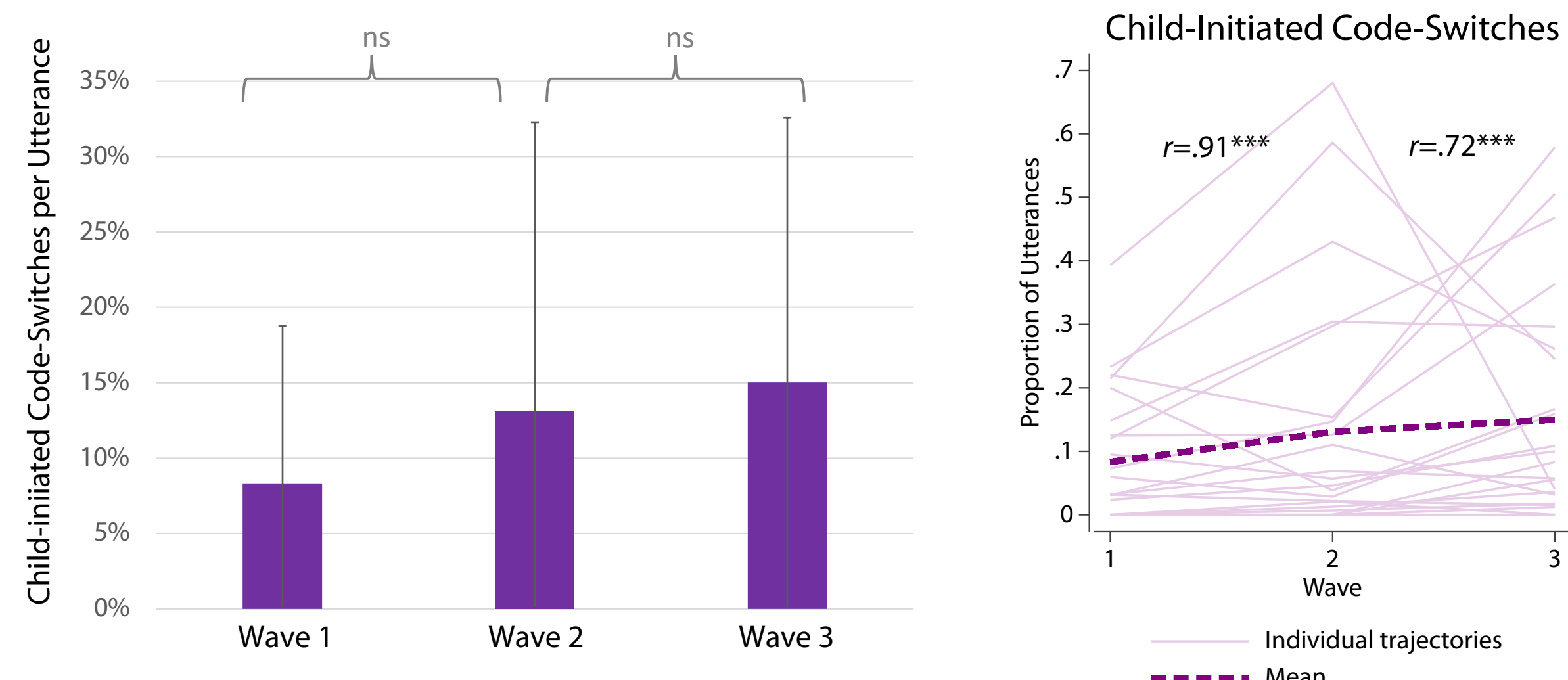
- Spanish-speaking parents in Boston, MA
- Immigrated from Latin America (M age at immigration = 26 yrs, SD = 6 yrs)
- Education ranged from primary school to graduate degree (M yrs ed = 12, SD = 5)
- 31% identified as bilingual in Spanish and English
- All used > 96% Spanish words with child at all 3 waves

Children

- 71% born and raised in U.S.
- 38% female
- M = 3 yrs; 10 mos at Wave 1
- 38% oldest or only child
- Age of English exposure M=2 yrs (SD = 1.9 yrs)
- Age of active English use M=3.48 yrs (SD = 1.39 yrs)

RQ1 Results

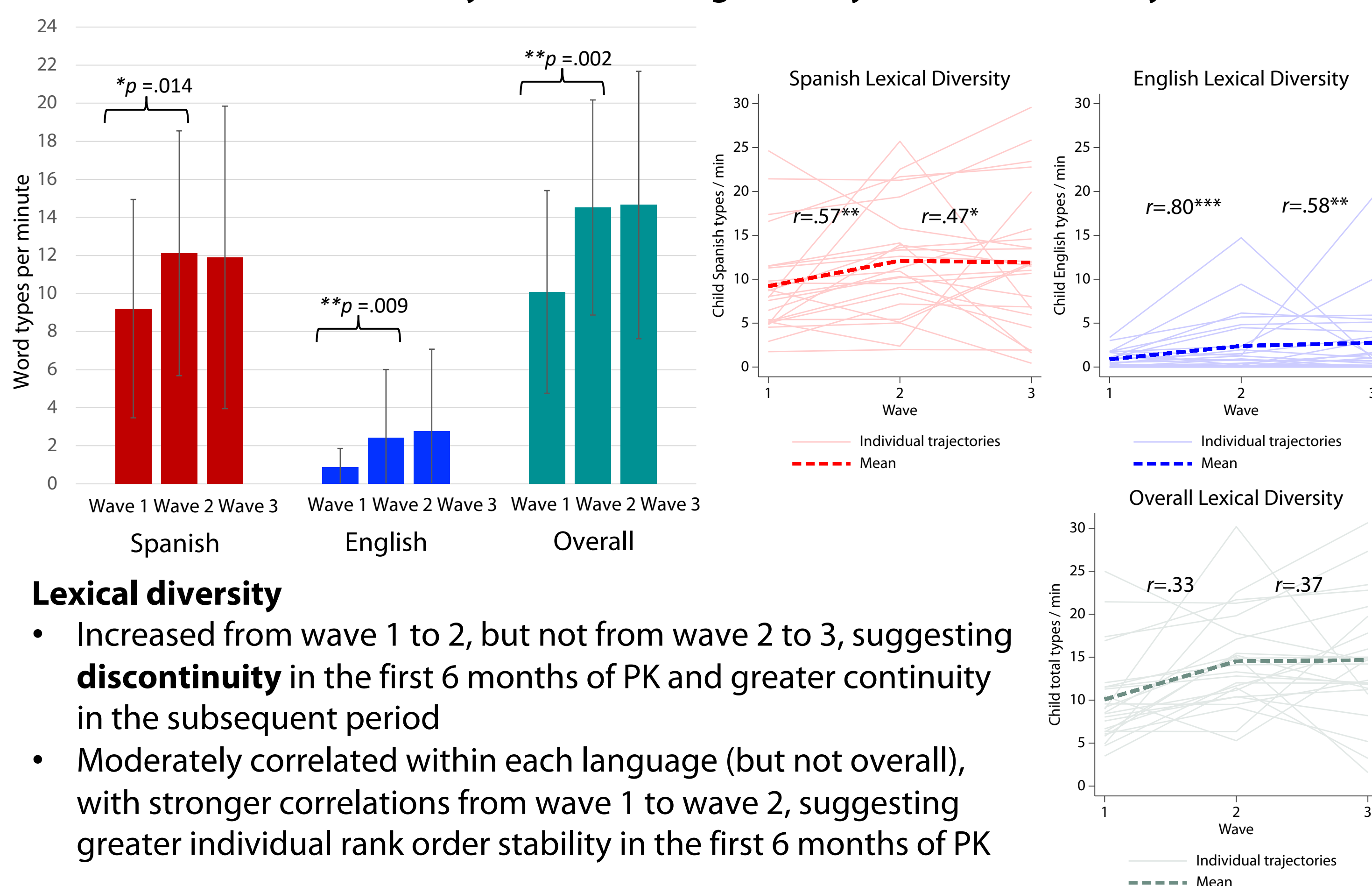
Continuity and Stability in Child-initiated Code-switches



Code-switching practices

- Highly variable within waves and not significantly different across waves, suggesting group mean continuity
- Strongly correlated across waves, suggesting stability in individual rank order

Partial Continuity and Decreasing Stability in Lexical Diversity



Lexical diversity

- Increased from wave 1 to 2, but not from wave 2 to 3, suggesting **discontinuity** in the first 6 months of PK and greater continuity in the subsequent period
- Moderately correlated within each language (but not overall), with stronger correlations from wave 1 to wave 2, suggesting greater individual rank order stability in the first 6 months of PK

RQ2 Results

Spearman rank order correlations between changes in child code-switching and child lexical diversity from W1 to W2 and from W2 to W3.

	Change from W1-W2 Child-Initiated Code-Switches (% utterances)	Change from W2-W3 Child-Initiated Code-Switches (% utterances)
Change from W1-W2 (n = 32)	Spanish Lexical Diversity: -0.16 English Lexical Diversity: 0.78*** Total Lexical Diversity: 0.28	
Change from W2-W3 (n = 24)		Spanish Lexical Diversity: -0.43* English Lexical Diversity: 0.54** Total Lexical Diversity: -0.02

* p < .05, ** p < .01, *** p < .001

Children who increased more in their code-switching

- increased more in their English lexical diversity (especially in the first 6 months of PK)
- decreased more in their Spanish lexical diversity (especially in K-1)

Conclusions, Limitations, and Future Directions

- EB bilingual language processes are highly variable in the years following school entry
- Bornstein et al.'s 2017 approach to describing continuity and stability reveals
 - Code-switching practices as continuous and stable
 - Lexical diversity as partially continuous – initial increase, then no change on average
 - Lexical diversity as more stable initially, followed by less stability
- Contrary to predictions, school-aged EBs may continue to code-switch to English with Spanish-speaking parents to fill lexical gaps.

Example (original)

*PAR: *estos cómo se llaman ?*
*CHI: *no sé, mamá.*
*PAR: *no sabes cómo se ... ?*
*PAR: *estos son ...*
*CHI: *estos, estos, chickens.*
*PAR: *chicken, pollitos, ajá .*
*CHI: *pollitos* [very quietly to self].

English translation

*PAR: *what are these called ?*
*CHI: *I don't know, mom.*
*PAR: *you don't know what ... ?*
*PAR: *these are ...*
*CHI: *these, these, chickens.*
*PAR: *chicken, chickens, uhuh .*
*CHI: *chickens* [very quietly to self].

Limitations and Future Directions

- Small sample from a specific sociolinguistic context
→ Future research should seek to replicate with different populations
- Focused only on % utterances with child-initiated code-switches
→ Future work should also examine other aspects of code-switching (within- and between-utterance switches, function of code-switches)
- Lexical diversity calculated based on child talk during a parent-child interaction with a wordless picture book → Future work should look at child talk during additional activities