



Age of Bilingual Exposure Predicts Distinct Contributions of Phonological and Semantic Knowledge to Successful Reading Development

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Funding: Petitto (PI) NIH 5R01HD45822 and NIH 5R21HD050558, NSF Grant SBE-0541953, Canadian Foundation for Innovation, Ontario Research Fund; Jasińska Ontario Graduate Scholarship



ABSTRACT

How do bilingual children learn to read when they face phonological and semantic processing across two languages?

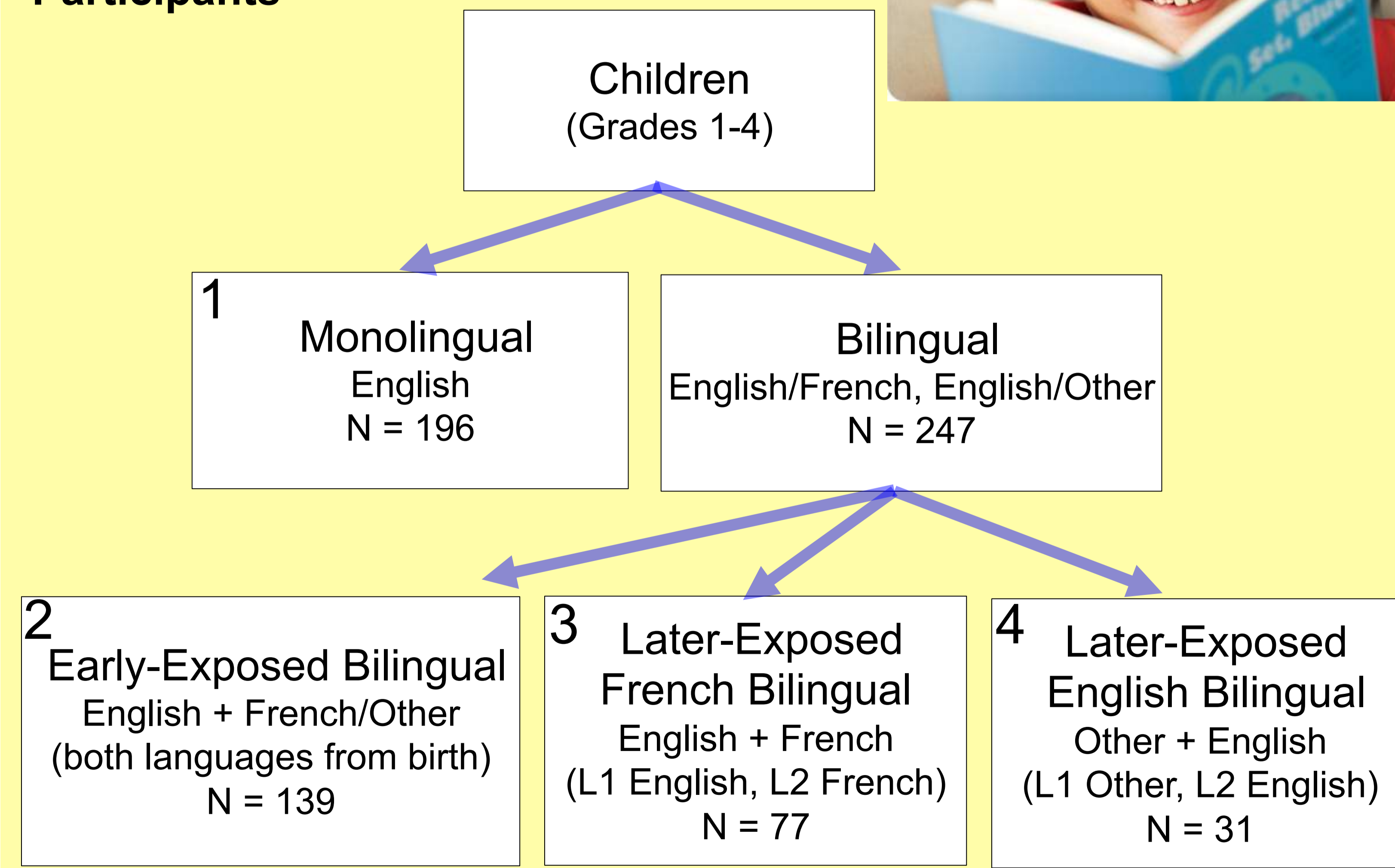
Phonological awareness (awareness of and ability to manipulate phonological units) and **semantic knowledge** (vocabulary) support skilled reading in monolinguals^{1,2}. Yet, phonology and semantics contribute to reading on a different maturational timetable, with preferential sensitivity to phonology among early readers and preferential sensitivity to semantics among later skilled readers. **Question: Is this true for the young bilingual reader?**

Bilingual exposure and the age of first bilingual language exposure impact phonological awareness and semantic knowledge and subsequent reading ability²⁻⁶. Early-exposed bilinguals show a language and literacy advantage in phonological awareness, semantic knowledge and reading^{5,6}.

NEW: Structural Equation Modeling revealed distinct contributions of phonology and semantics to reading among early-exposed vs later-exposed bilinguals as compared to monolinguals. The age of first bilingual language exposure is a potent predictor of how bilingual children best learn to read.

METHOD

Participants



Task

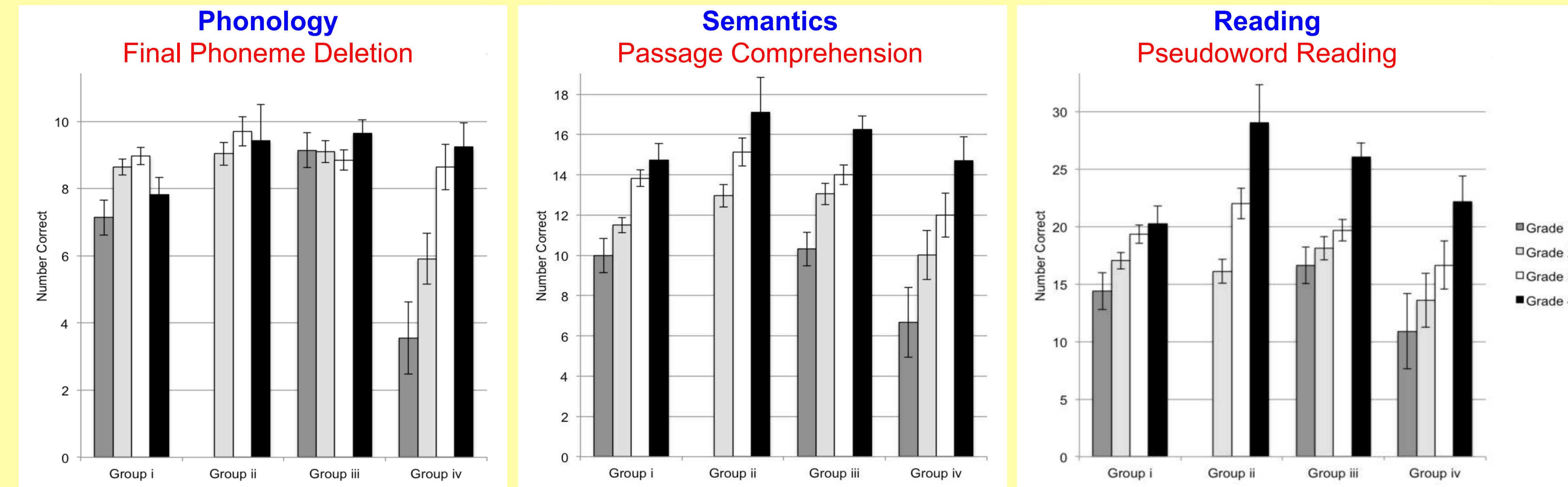
English Language and Reading Battery⁷
Measuring Phonology, Semantics, and Reading Ability

Analysis

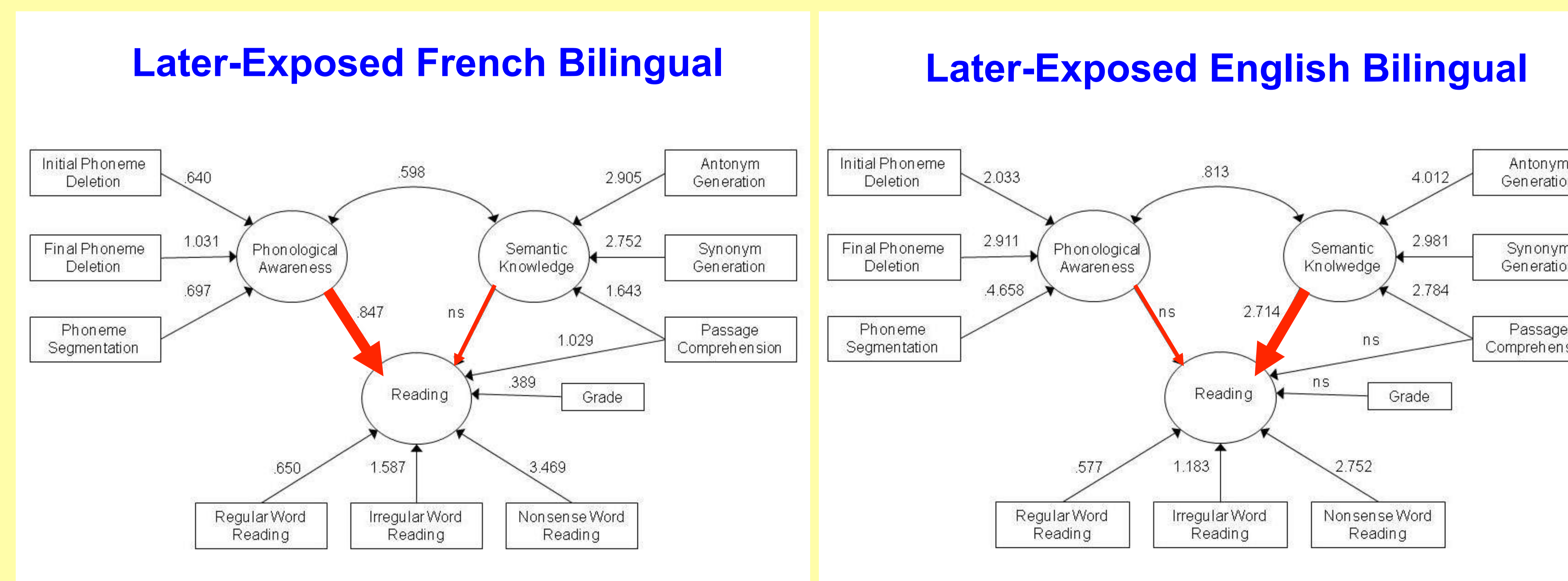
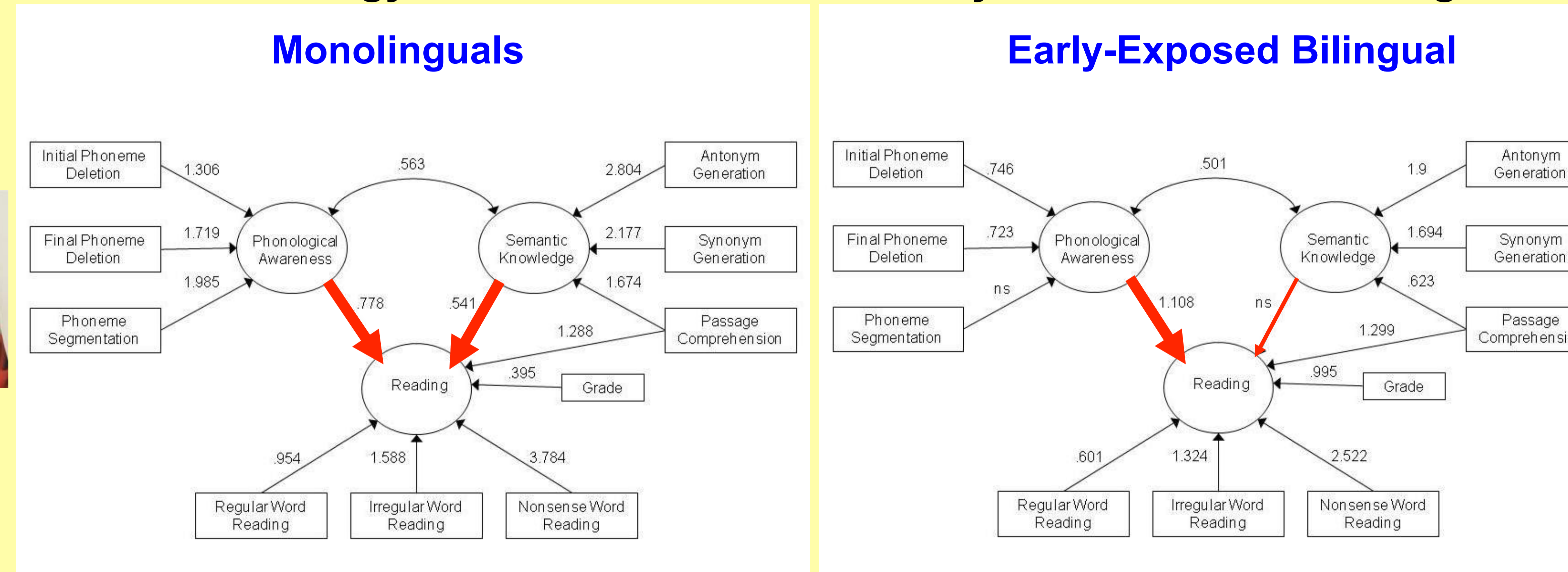
Structural Equation Modeling

RESULTS

Age of Bilingual Exposure Impacts Phonology and Semantics



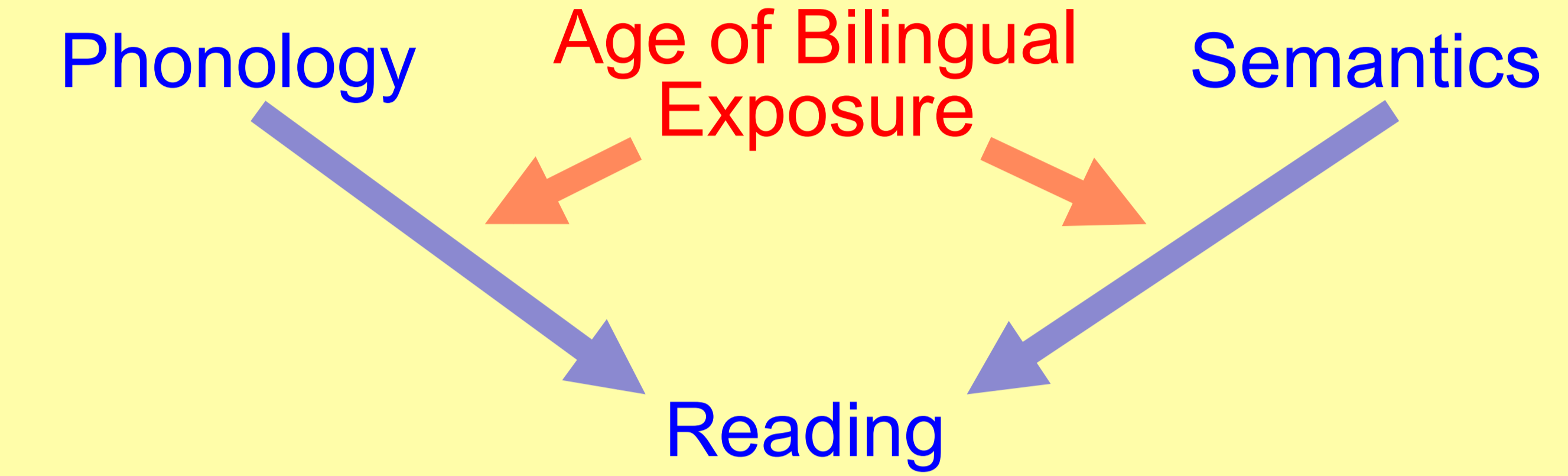
Phonology and Semantics Differentially Contribute to Reading



→ Strong Prediction
→ Non-Significant Prediction

CONCLUSION

Early language experience has important consequences for how a child learns to read. Specific parts of language knowledge and their contribution to reading mastery are altered as a result of early monolingual or dual language experience & age of exposure.



Beyond a “bilingual cognitive advantage,” exposure to two languages provides children with a “bilingual language & literacy advantage,” that, in turn, drives the higher cognitive advantage.

Supports Bilingual Language and Literacy Advantage Hypothesis²⁻⁶

Translational Impact

A young bilingual reader may benefit from reading instruction focusing on *phonological* processing in their earliest-exposed language, but may benefit most from reading instruction focusing on *semantic* knowledge in their later-exposed language.



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