

Socioeconomic Differences in Vocabulary, Syntax, and Process at Age Two: Assessment with Baby QUILS




Dani Levine¹, Rosalie Odean², Haley Weaver¹, Hannah Puttre², Emily Jackson³, Rachael McCollum³, Lauren Stites¹,
Kathy Hirsh-Pasek¹, Roberta Michnick Golinkoff², Jill de Villiers³, Aquiles Iglesias²

¹Temple University, ²University of Delaware, ³Smith College

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INTRODUCTION

Are there SES differences in two-year-olds' language skills on a newly developed tablet-based screener?

- Early language skills: foundational for academic and social success (Pace et al., 2019).
- Large SES differences by age 3 (Dollaghan et al., 1999; Levine et al., in press).
- Prior to age 3, SES differences found in language production (Hart & Risley, 1995; Vasilyeva et al., 2008), however:
 - Comprehension > production (Golinkoff et al., 2013).
 - Production alone is poor predictor of language impairment (Ellis & Thal, 2008).
- Based on  for ages 3-5 (Golinkoff et al., 2017), we designed a tablet-based language screener measuring 2-year-olds':
 - **Vocabulary** } Product: language children know
 - **Syntax** }
 - Process: how children learn new language

PARTICIPANTS


- 98 children
 - $M_{age} = 29.8$ months, $SD = 2.9$
 - 51 girls, 47 boys
 - 30 Low SES, 68 Mid SES
 - SES based on primary caregiver education
 - Mid SES: \geq Bachelor's Degree
 - Low SES: < High School—Associate's Degree



PROCEDURE

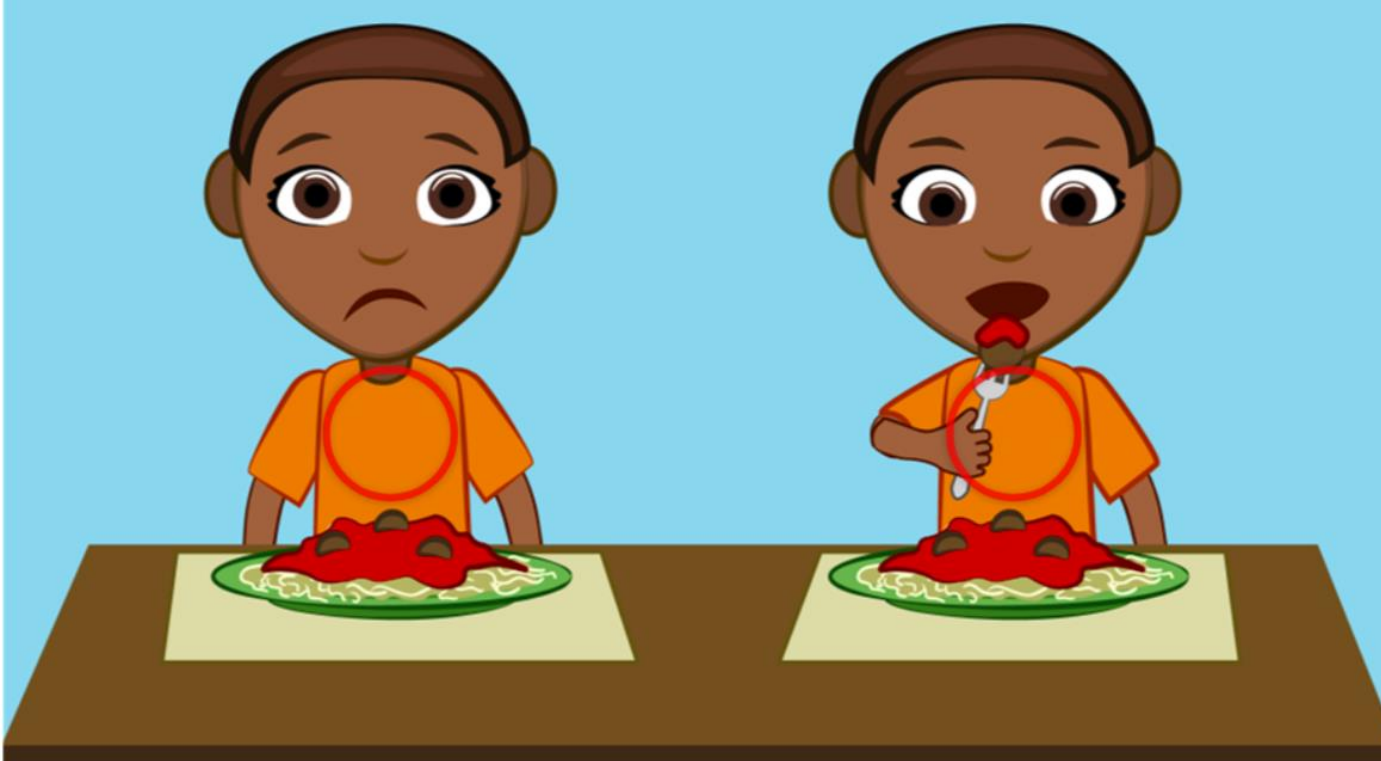
	PRODUCT	PROCESS
VOCABULARY	NOUNS	NOUN LEARNING
	ADJECTIVES	
	VERBS	
	PREPOSITIONS	
SYNTAX	WH-QUESTIONS	ADJECTIVE LEARNING
	NEGATION	VERB LEARNING
	REVERSIBLE TRANSITIVES	
	REVERSIBLE PREPOSITIONS	

ADJECTIVES



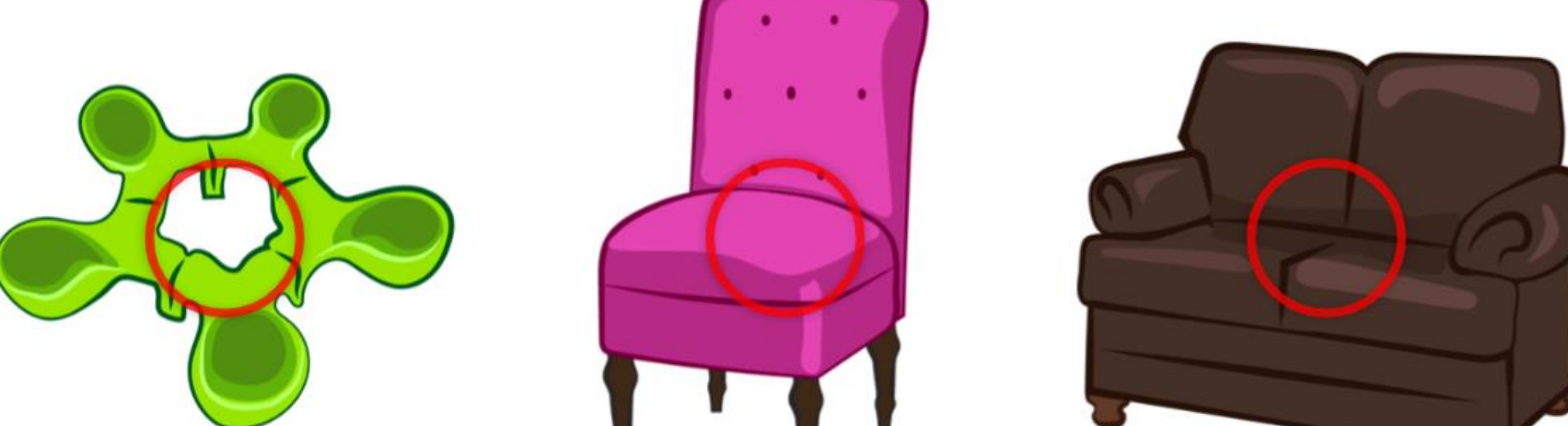
Which one is cold?

NEGATION



Who is not eating the food?

NOUN LEARNING



Can you find the tulip?

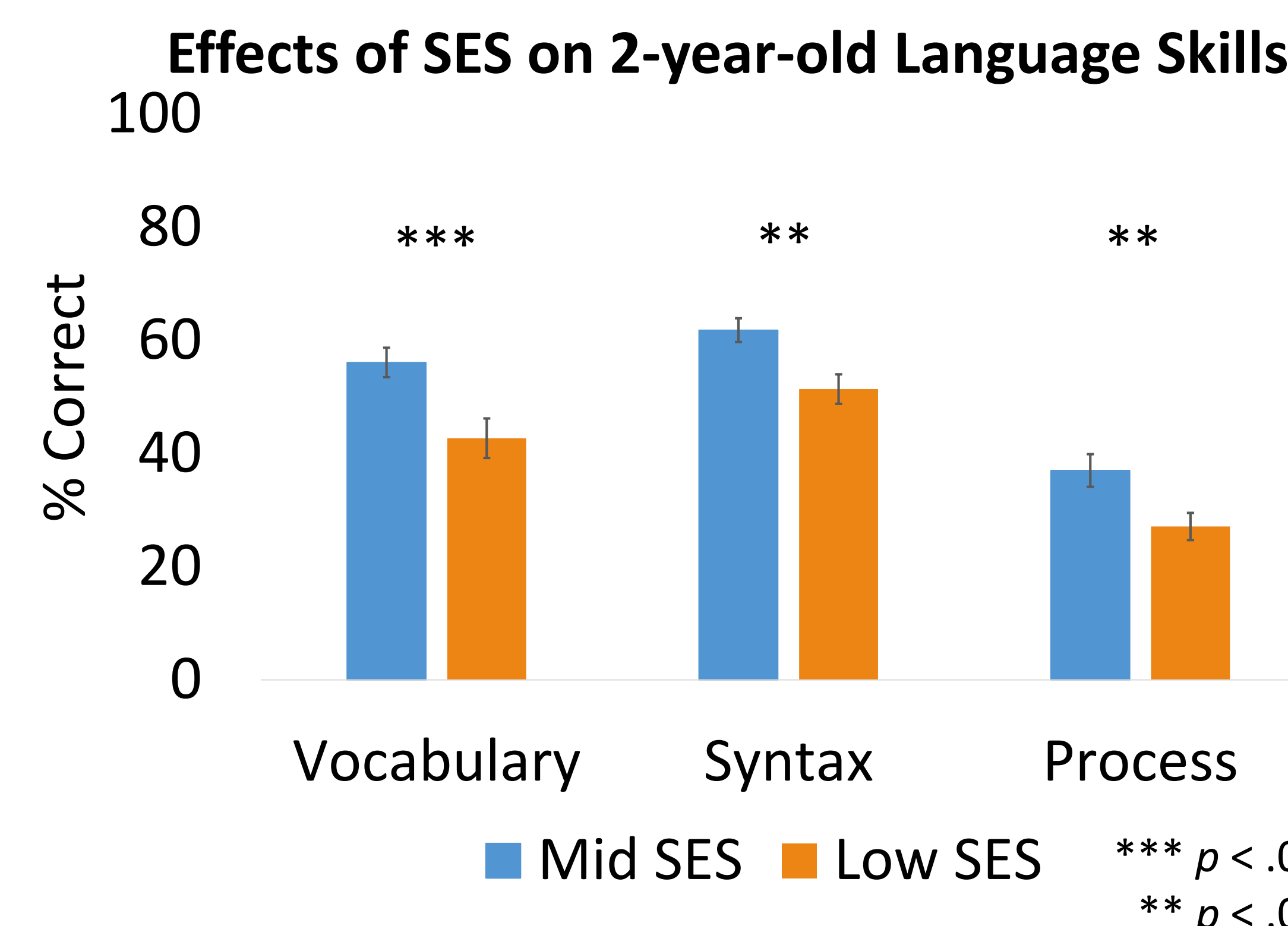
NOUN LEARNING



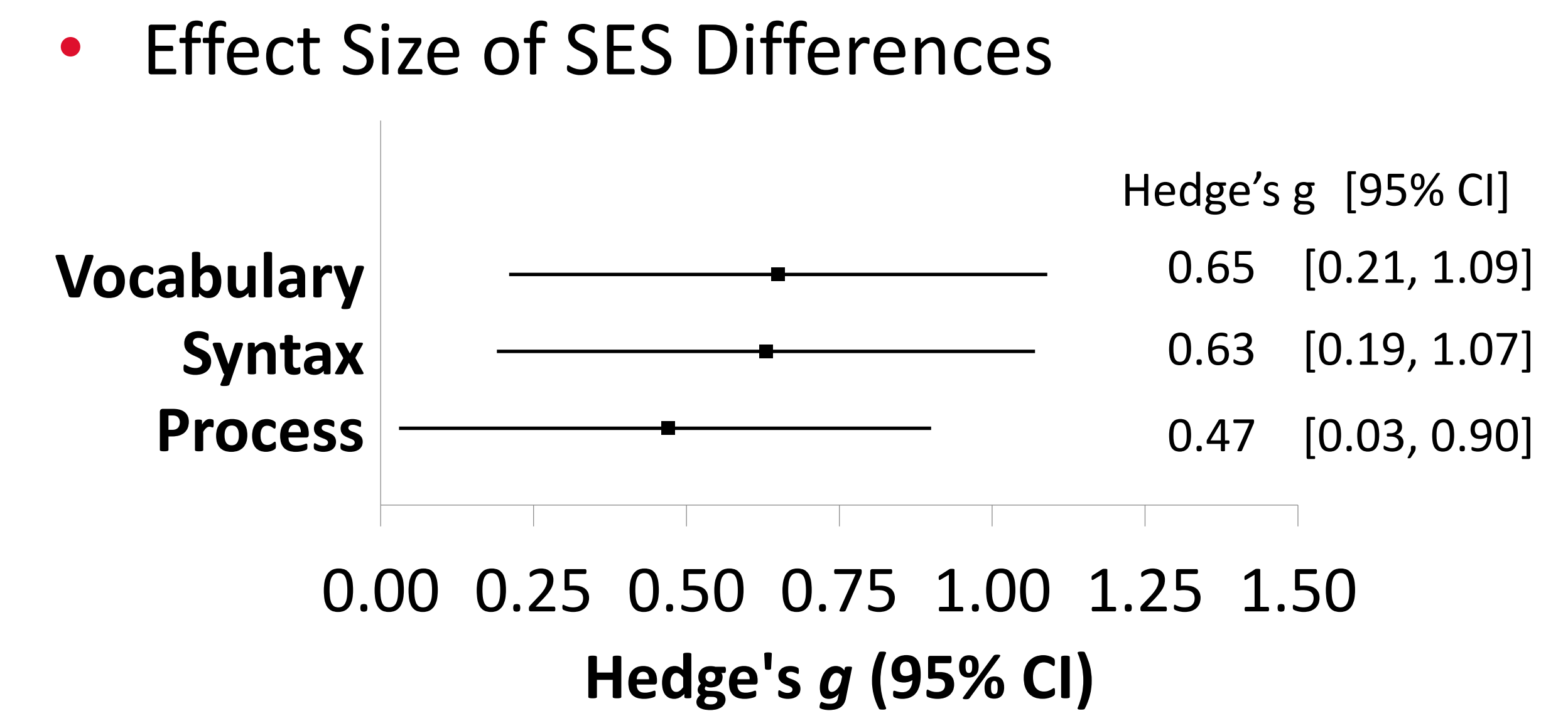
Can you find another tulip?

RESULTS

- MANCOVA with factors Gender, SES, and covariate age
 - No gender effects
 - SES differences on Vocabulary, Syntax, and Process ($ps < .01$)



RESULTS (CONT.)



DISCUSSION

- Magnitude of SES differences is smaller at age 2 on Baby QUILS vs. age 3-5 on QUILS™ for Vocabulary (Hedge's $g = 1.06$), Syntax (Hedge's $g = 0.93$), and Process (Hedge's $g = 0.94$) (Levine et al., in press).
 - Consistent with widening SES gap in language production (Hart & Risley, 1995; Vasilyeva et al., 2008).
- Language interventions may be more effective if they:
 - Begin earlier, when gap is narrower.
 - Consider language system as a whole.
- Baby QUILS could revolutionize early language assessment and inform interventions aiming to mitigate SES disparities.

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