



# The cost of bilingualism: Speed of L1 lexical retrieval affected by L2 proficiency level

Eve Higby<sup>1,2,3</sup>, Georgia Caldart<sup>4</sup>, Loraine K. Obler<sup>1,2,3</sup>



<sup>1</sup>The Graduate Center of the City University of New York, <sup>2</sup>Boston University School of Medicine, <sup>3</sup>Boston VA Healthcare Systems, <sup>4</sup>Barnard College, Columbia University

## Introduction

- **Bilinguals are slower to name pictures** in their L1 than monolinguals (Ivanova & Costa, 2008; Sadat, Martin, Alario, & Costa, 2012)
- Increased naming latencies are thought to be due to **competition from L2 words** that are automatically co-activated during lexical retrieval.
- We investigated whether **degree of L2 proficiency affects L1 naming latencies** and whether **knowledge of the L2 translation equivalent** resulted in longer naming latencies.

### Research questions:

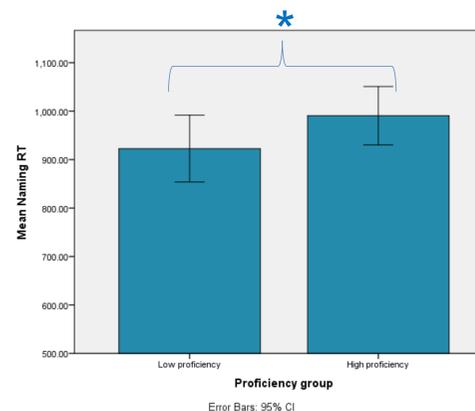
1. Are high-proficiency bilinguals slower at naming pictures in L1 than low-proficiency bilinguals?
2. Are L1 naming latencies longer for pictures that participants know the L2 translation equivalent for compared to pictures for which they have no knowledge of the English label?

## L2 proficiency Descriptives

	Min.	Max.	Mean
School level	2 (Low Int.)	5 (Adv.)	3.91 (Int.)
Self-rating (mean)	1.83	5.67	4.44
Can-Do (mean)	1.72	4.61	3.57
Vocabulary	21.4%	75.4%	50.1%
MTELP	33.3%	97.8%	73.9%

Repeated Meas. ANOVA

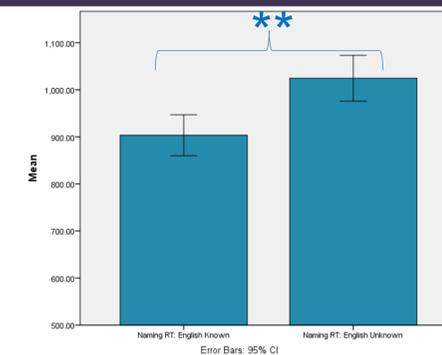
**Effect of L2 proficiency**  
High-proficiency bilinguals had longer L1 naming latencies than low-proficiency bilinguals ( $p = .04$ )



## Results

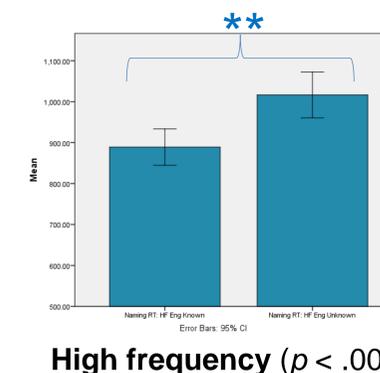
### Effect of L2 word knowledge

L1 naming RTs for pictures whose names were **known** in English were **faster** than naming RTs for pictures whose names were **not known** in English ( $p < .001$ )

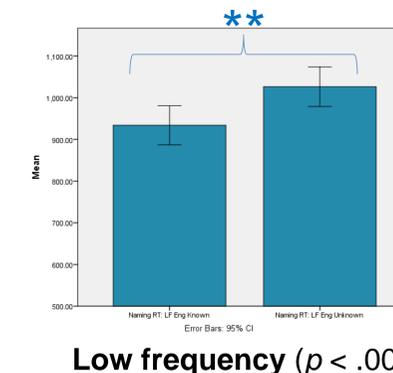


### Control for L1 lexical frequency

Same pattern observed for both high- and low-frequency words



High frequency ( $p < .001$ )



Low frequency ( $p < .001$ )

## Method

### Participants

- 42 Brazilian Portuguese-English bilinguals
- Ages 18-37 ( $m = 26.1$ ); 30 females
- Residence in NYC: 2 weeks-18 months ( $m = 4.4$  months)

### English Proficiency Measures

- *School Level*: Current placement in an ESL program
- *Self-rating*: Likert scale of 1-7 for six language skills
- *Vocabulary*: English names for images in picture naming task
- *Michigan Test of English Language Proficiency*: 45 auditory questions probing grammar
- *Can-Do Questionnaire*: Self-rated ability on a scale of 1-5 for 18 statements of functional communication

### Lexical Retrieval Task

- *Picture naming*: 140 black-and-white line drawings (from International Picture Naming Project), instructions emphasized speed

### Proficiency Composite

- Average of standardized scores on 5 measures
- Proficiency groups (High/Low) based on median split

## Conclusions

- **High-proficiency bilinguals were slower** in L1 than low-proficiency bilinguals, which is consistent with previous studies.
- Individual L2 word knowledge did NOT affect L1 naming latencies, suggesting that **cross-linguistic lexical competition may not be the source** of increased latencies for high-proficiency bilinguals.
- Knowledge of L2 phonological forms may facilitate retrieval of L1 form rather than hinder it.
- Recent use of L2 form (from living in L2 environment) may have selectively enhanced L1 form through shared features.

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