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# **L1-English L2-Spanish code-switching:** *Investigating bilingual language behavior*



# Code-switching

Bilingual phenomenon commonly defined as the fluid alternation between languages during conversation (Poplack, 1980)

- Today's talk focuses on intra-sentential code-switching (CS)

Common findings from CS research:

- Not bilingual deficiency or language detrition
- Rule-governed phenomenon

- (1) a. *Ese hombre* ordered a glass of water.  
b. \* *Él* ordered a glass of water.

*‘That guy* ordered a glass of water.’  
*‘He* ordered a glass of water.’

# Code-switching

Wide body of research concerning the structural constraints on linguistic CS

However, the CS of L2 bilinguals in particular has received limited attention

- Either:
  - L2 bilinguals are excluded, focusing solely on native bilinguals
  - L2 bilinguals are lumped together under the umbrella “bilingual”

**What about the CS of L2 bilinguals?**

**1**

introduction

# L2 Code-switching

Why should we be interested in the CS of L2 speakers?

- As with native bilinguals, L2 CS is not a linguistic deficiency
- Issues of proficiency and/or language dominance are tied to CS patterns (Valdés, 1976; Zentella, 1981, 1997; among others)
  - Not known whether these issues are independent of acquisition
- Exhibit a “poverty of the stimulus” with regard to CS (Chomsky, 1980)

**“[I]n the context of the second language classroom [...] learners receive no evidence, positive or negative, which could guide them in determining the appropriate code-switching patterns.”**

**(Toribio, 2001, p. 219)**

# Previous Research

Toribio (2001)

- Investigation of the Functional Head Constraint (Belazi et al., 1994)
  - Ungrammatical stimuli were functional switches like an auxiliary, modal, negation, etc.
- Proficiency of the L2 bilingual was key for CS acceptability to align with the predictions of the framework
  - Advanced learners less likely to accept ungrammatical switches
  - Beginners relied on translation

# Previous Research

Giancaspro (2015)

- Investigation comparing the Functional Head Constraint to the Constraint Free approach (MacSwan, 2010, 2015)
  - Stimuli were auxiliary switches or subject-predicate switches
- CS acceptability aligned with the Constraint Free approach; however, proficiency was not central
  - Advanced, intermediate and beginner L2 bilinguals behaved similarly
  - Rated ungrammatical switches lower than grammatical switches across the board
  - Proficiency via DELE, whereas Toribio (2001) defined it via course level

# Looking Forward

Evidence suggests that L2 bilinguals can acquire native-like intuitions

- Proficiency can play a role

Key factor to consider:

- Neither of the previous studies looks at the data according to bilingual language behavior
  - Are they exposed to and/or participate in CS? Does that play a role?

**Can L1-English L2-Spanish bilinguals exhibit native-like acceptability judgments regarding intra-sentential CS?**

**Does proficiency play a role?**

**Does reported bilingual language behavior play a role?**

# Participants

US L1-English L2-Spanish bilinguals ( $N = 175$ )

- Learned English since birth in a natural context
- Learned Spanish later in a school setting ( $M = 11.0$  years)
  - Excluded anyone who would be considered trilingual (or more)
- Between 18 and 33 years old ( $M = 20.0$  years)

# Participants

Divided into groups based on reported bilingual language behavior

- Cannot simply ask: *Are you a code-switcher?*
- Series of indirect questions:
  - Is there someone (or multiple people) you speak both English and Spanish with?
  - When speaking with this person (or people), do you ever use both languages in the same conversation?
  - When speaking with this person (or people), do you ever use both languages in the same sentence?
  - What is an example of something you or the other person could possibly say where both Spanish and English are used in the same sentence?

# Participants

|  | Speak both with? | Both in same conversation? | Both in same sentence? | Example                                |
|--|------------------|----------------------------|------------------------|--|
| No CS ( $N = 46$ )                               | <b>NO</b>        | —                          | —                      | —                                      |
|  | <b>YES</b>       | <b>NO</b>                  | —                      | —                                      |
| Inter-sentential CS only ( $N = 25$ )            | <b>YES</b>       | <b>YES</b>                 | <b>NO</b>              | —                                      |
| Translation/gap intra-sentential CS ( $N = 31$ ) | <b>YES</b>       | <b>YES</b>                 | <b>YES</b>             | “¿Cómo se dice wallet?”                |
| True intra-sentential CS ( $N = 25$ )            | <b>YES</b>       | <b>YES</b>                 | <b>YES</b>             | “The printer dice que no tiene papel.” |
| Unclear intra-sentential CS ( $N = 13$ )         | <b>YES</b>       | <b>YES</b>                 | <b>YES</b>             | “We talk about cute boys in Spanish.”  |

# Participants

|  | Speak both with? | Both in same conversation? | Both in same sentence? | Example                                |
|--|------------------|----------------------------|------------------------|--|
| No CS ( $N = 46$ )                               | <b>NO</b>        | —                          | —                      | —                                      |
|  | <b>YES</b>       | <b>NO</b>                  | —                      | —                                      |
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# Participants

Subsequently divided into groups based on Spanish proficiency score via the modified DELE (Montrul & Slabakova, 2003)

- 40-50 (out of 50): L2-Advanced ( $N = 17$ )
- 30-39 (out of 50): L2-Intermediate ( $N = 67$ )
- 0-29 (out of 50): L2-Low ( $N = 91$ )

# Participants

|                                     | Advanced     | Intermediate  | Low           |
|-------------------------------------|--------------|---------------|---------------|
| No CS                               | <i>N</i> = 6 | <i>N</i> = 15 | <i>N</i> = 25 |
| Inter-sentential CS only            | <i>N</i> = 1 | <i>N</i> = 14 | <i>N</i> = 10 |
| Translation/gap intra-sentential CS | <i>N</i> = 2 | <i>N</i> = 13 | <i>N</i> = 16 |
| True intra-sentential CS            | <i>N</i> = 8 | <i>N</i> = 22 | <i>N</i> = 30 |
| Unclear intra-sentential CS         | —            | <i>N</i> = 3  | <i>N</i> = 10 |

# Task

Written acceptability judgment task (AJT) online via Qualtrics

- Spanish-English code-switched sentences ( $N = 54$ )
- Monolingual blocks of Spanish ( $N = 27$ ) and English ( $N = 27$ )
- 7-point Likert scale
  - ‘How acceptable is this sentence?’ / ‘¿Qué le parece esta oración?’
  - 1 = ‘Completely unacceptable’ / ‘Completamente inaceptable’
  - 7 = ‘Completely acceptable’ / ‘Completamente aceptable’

Preceded by language background questionnaire and training

AJT blocks separated by proficiency measures:

- CS AJT → Spanish Test → Spanish AJT → English Test → English AJT

# Code-switched Target Stimuli

## Auxiliary stimuli

- \* *haber* / *have* + V switch ( $N = 6$ )
- ? *estar* / *be* + V switch ( $N = 6$ )
- V (no auxiliary) switch ( $N = 6$ )

## Pronoun stimuli

- \* Weak pronoun switch ( $N = 6$ )
- Strong pronoun switch ( $N = 6$ )
- Lexical Determiner Phrase (DP) switch ( $N = 6$ )

Half Spanish-to-English, half English-to-Spanish

# Code-switched Target Stimuli

## Auxiliary stimuli

- \* *haber* / *have* + V switch ( $N = 6$ )
- ? *estar* / *be* + V switch ( $N = 6$ )
- V (no auxiliary) switch ( $N = 6$ )

## Pronoun stimuli

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- Lexical Determiner Phrase (DP) switch ( $N = 6$ )

Half Spanish-to-English, half English-to-Spanish

TARGET  
TARGET  
CONTROL

TARGET  
TARGET  
CONTROL

## CODE-SWITCHED AUXILIARY STIMULI

3

- (2) a. \* *Su hermano **ha trained*** at the gym every day.  
b. ? *Su hermano **está training*** at the gym right now.  
c. *Su hermano **trains*** at the gym regularly.

*‘His brother **has trained** at the gym every day.’*

*‘His brother **is training** at the gym right now.’*

*‘His brother **trains** at the gym regularly.’*

methods

## CODE-SWITCHED PRONOUN STIMULI

3

- (3) a. \* **He** *pidió una cerveza.*  
b. **Lisa and him** *pidieron dos copas de vino.*  
c. **That guy** *pidió un vaso de agua.*  
*‘He ordered a beer.’*  
*‘Lisa and him ordered two glasses of wine.’*  
*‘That guy ordered a glass of water.’*

methods

# Monolingual Comparison Stimuli

## Auxiliary stimuli

- *haber* / *have* + V ( $N = 6$ )
- *estar* / *be* + V ( $N = 6$ )
- V (no auxiliary) ( $N = 6$ )

## Pronoun stimuli

- Weak pronoun ( $N = 6$ )
- Strong pronoun ( $N = 6$ )
- Lexical Determiner (DP) ( $N = 6$ )

Half Spanish only, half English only

## MONOLINGUAL COMPARISON STIMULI

3

- (4) a. Her brother **has trained** at the gym right now.
- b. Her brother **is training** at the gym every day.
- c. Her brother **trains** at the gym regularly.
- (5) a. **He** ordered a beer.
- b. **Lisa and him** ordered two glasses of wine.
- c. **That guy** ordered a glass of water.

methods

# Filler Stimuli

## Code-switched stimuli

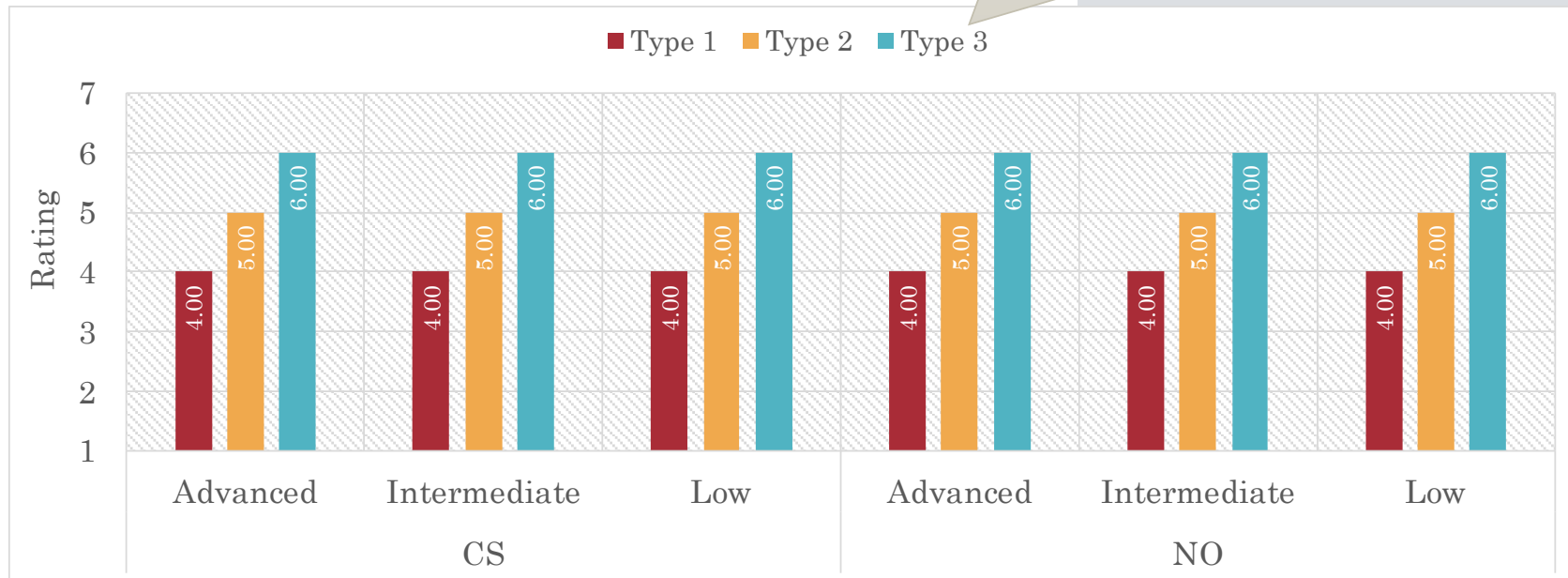
- Complex sentence switch ( $N = 6$ )
- Subject-predicate switch ( $N = 6$ )
- \* Direct object switch ( $N = 6$ )

## Monolingual stimuli

- English and Spanish: Complex sentence switch ( $N = 6$ )
- \* English: That-trace violation / Adjective violation ( $N = 6$ )
- \* Spanish: Negative violation / Adverb violation ( $N = 6$ )

# Chart Guide

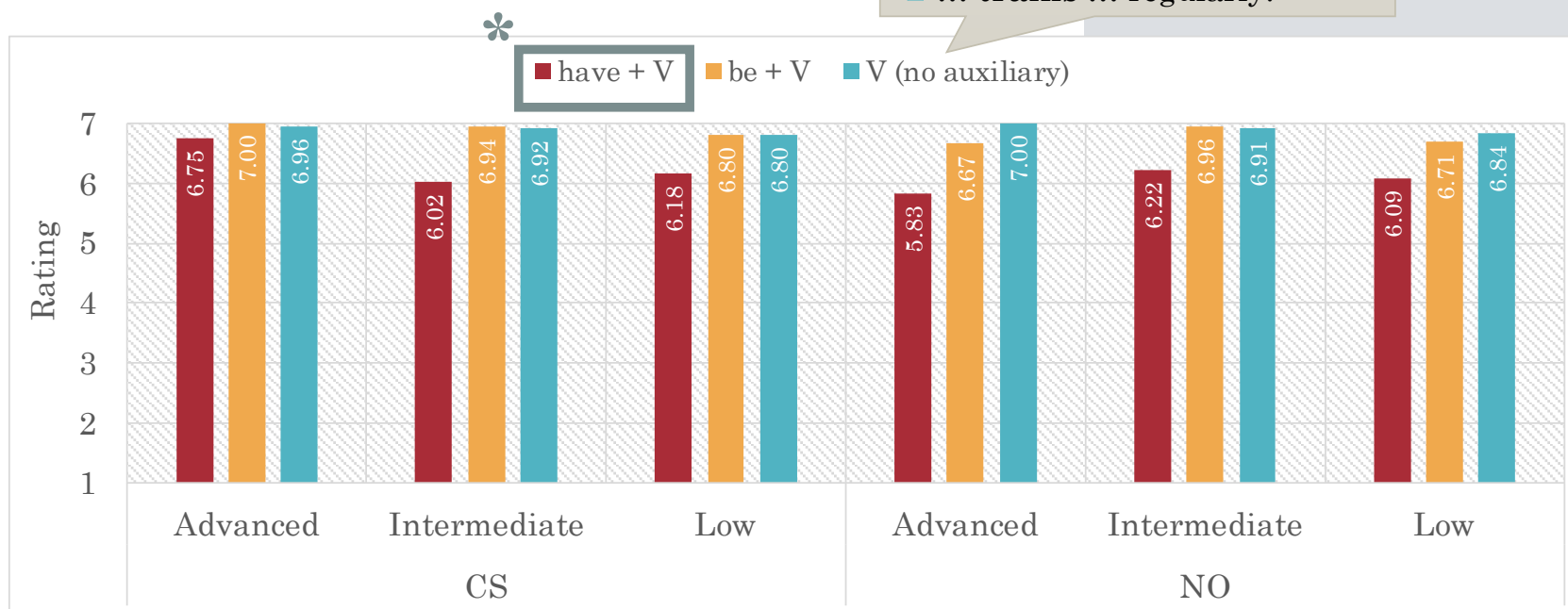
- Target Stimulus 1 Example
- Target Stimulus 2 Example
- Control Stimulus Example



- Target Stimulus 1 Example Translation
- Target Stimulus 2 Example Translation
- Control Stimulus Example Translation

# Monolingual English Auxiliary Stimuli

His brother \_\_\_\_ at the gym \_\_\_\_ .  
☐ ... **has trained** ... every day.  
☐ ... **is training** ... right now.  
☐ ... **trains** ... regularly.

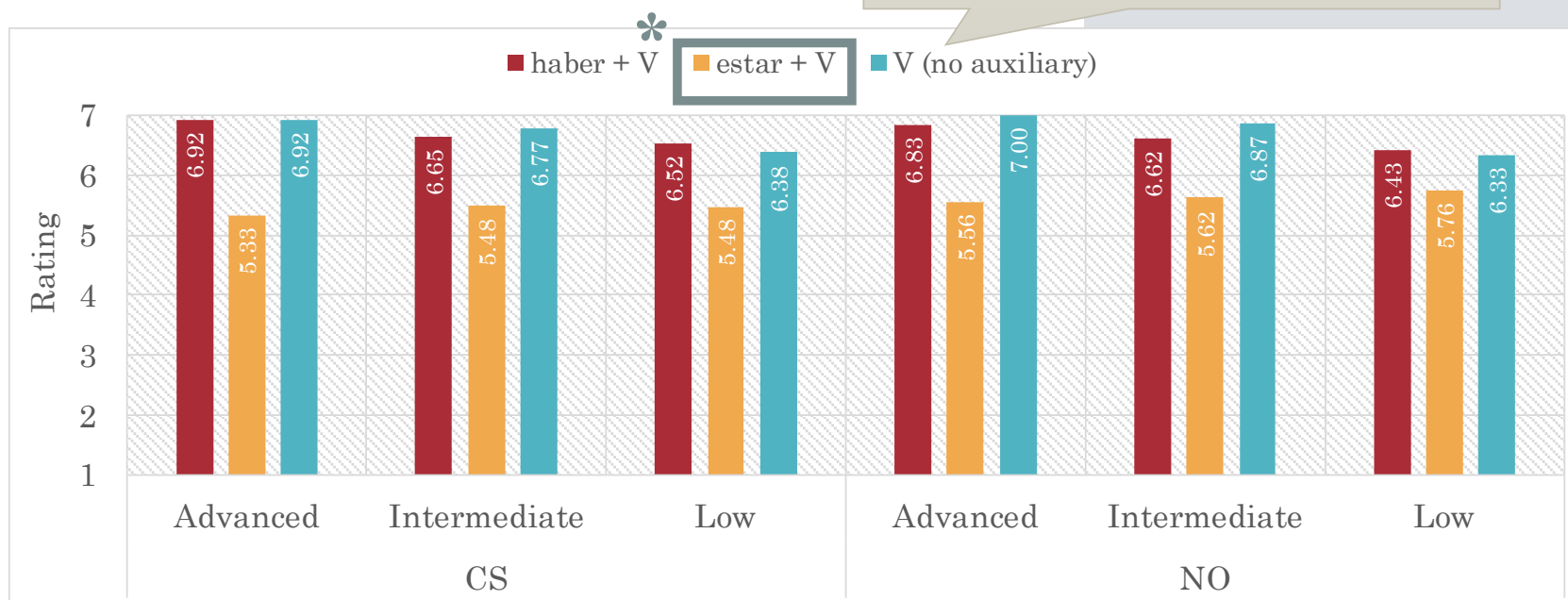


4

results

# Monolingual Spanish Auxiliary Stimuli

Tus vecinos \_\_\_\_ en ese restaurante \_\_\_\_ .  
☐ ... **han comido** ... varias veces.  
☐ ... **están comiendo** ... ahora mismo.  
☐ ... **comen** ... todas las semanas.

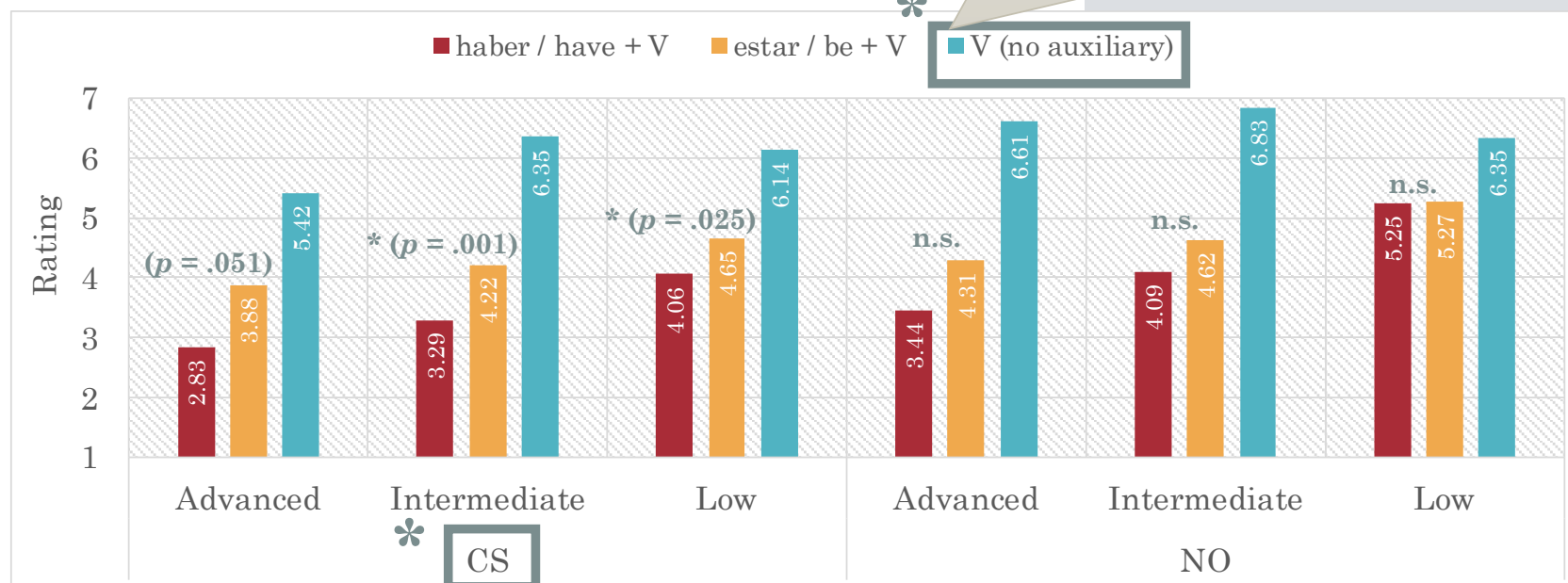


Your neighbors \_\_\_\_ in that restaurant \_\_\_\_ .  
☐ ... have eaten ... many times.  
☐ ... are eating ... right now.  
☐ ... eat ... every week.

# Code-switched Auxiliary Stimuli

## Proficiency\*SentenceType

*Su hermano* \_\_\_\_ at the gym \_\_\_\_ .  
 ... **ha trained** ... every day.  
 ... **está training** ... right now.  
 ... **trains** ... regularly.



*His/her/their brother* \_\_\_\_ at the gym \_\_\_\_ .  
 ... **has trained** ... every day.  
 ... **is training** ... right now.  
 ... **trains** ... regularly.

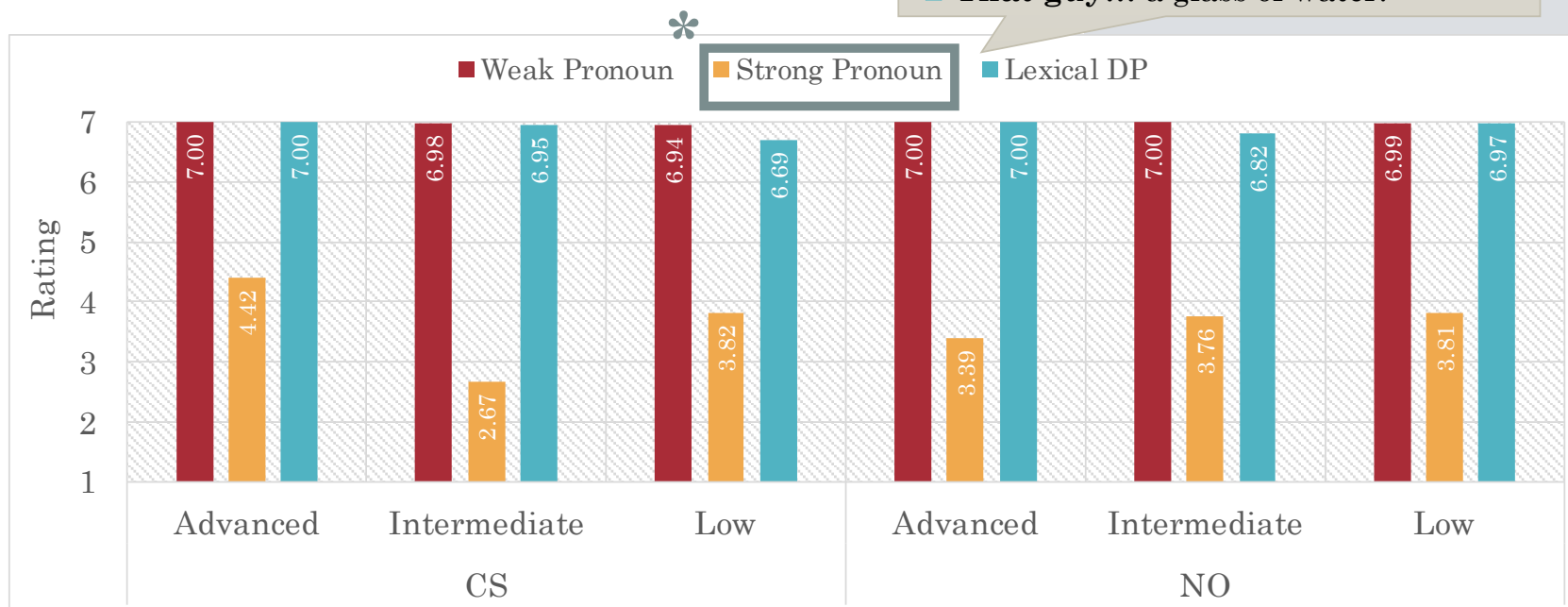
# Monolingual English Pronoun Stimuli

\_\_\_ ordered \_\_\_ .

□ He ... a beer.

□ Lisa and him ... two glasses of wine.

□ That guy... a glass of water.

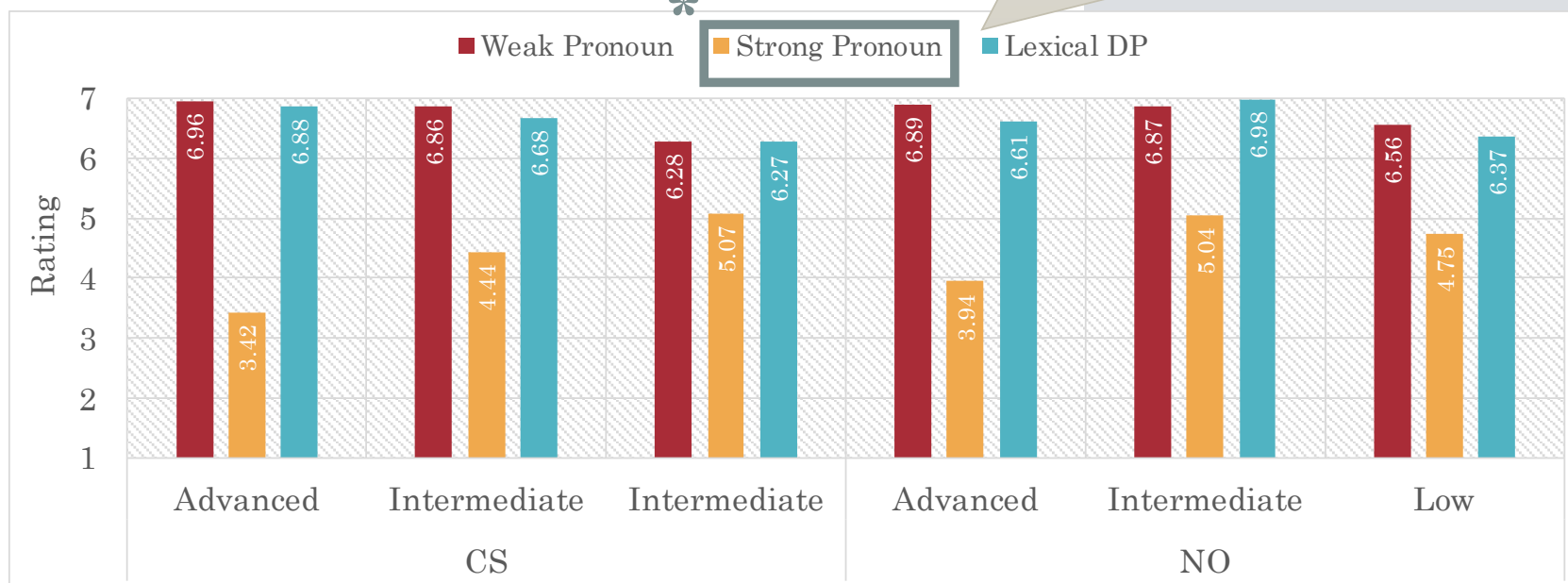


4

results

# Monolingual Spanish Pronoun Stimuli

\_\_\_ conoció a \_\_\_ .  
 □ Él ... nuestra abuela.  
 □ Susana y él ... nuestro tío.  
 □ Ese chico ... nuestro primo.



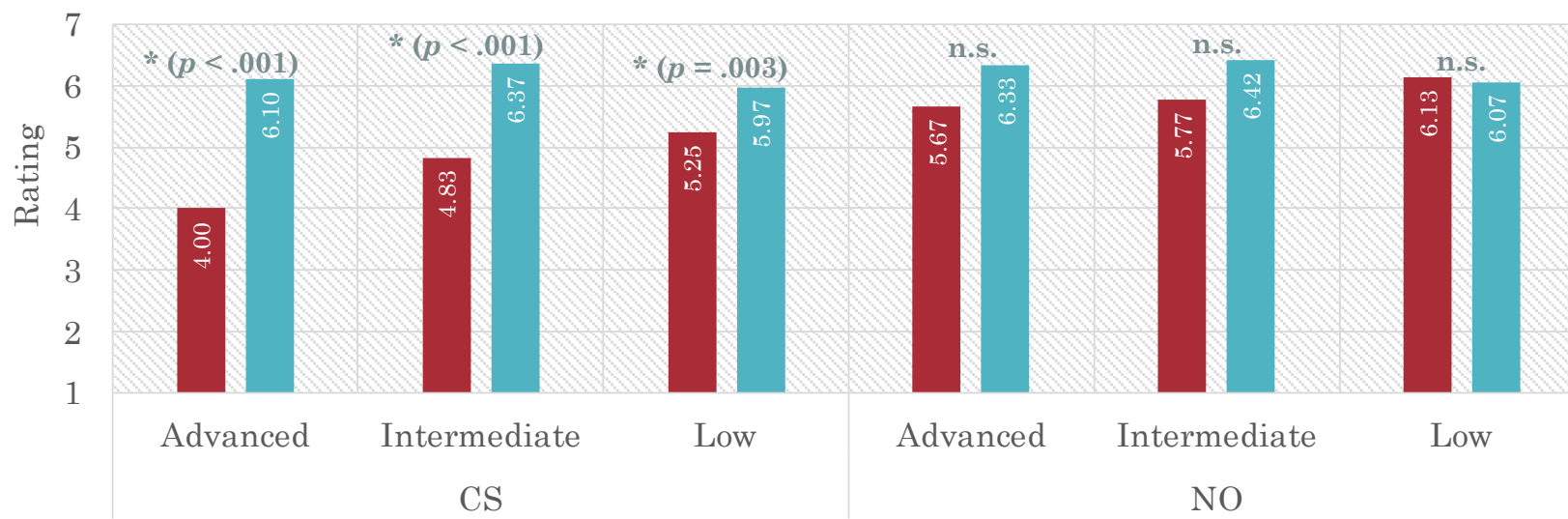
\_\_\_ met \_\_\_ .  
 □ He ... our grandmother.  
 □ Susana and him ... our uncle.  
 □ That boy ... our cousin.

# Code-switched Pronoun Stimuli

Proficiency\*SentenceType

CS\*SentenceType

■ Weak Pronoun ■ Lexical DP



\_\_\_ pidió / pidieron \_\_\_ .

□ He ... una cerveza.

□ Lisa and him ... dos copas de vino.

□ That guy... un vaso de agua.

\_\_\_ ordered \_\_\_ .

□ He ... a beer.

□ Lisa and him ... two glasses of wine.

□ That guy ... a glass of water.

**Can L1-English L2-Spanish bilinguals exhibit native-like acceptability judgments regarding intra-sentential CS? *Yes***

**Does proficiency play a role? *Yes***

**Does reported bilingual language behavior play a role? *Yes***

# Summary

L1-English L2-Spanish bilinguals can show native-like CS intuitions

- Not relying on translation
- +Proficiency +CS = Consistent trend of rating ungrammatical switches less acceptable than their grammatical counterparts
- Not structure dependent
- Nonetheless...
  - Degree of distinction varied
  - “Unacceptable” forms at the middle of the scale

# Next Steps

Recruiting more advanced L2 bilinguals

Analysis of native bilingual comparison

- Help define what is “native-like” (i.e., where on the scale should the unacceptable forms be)
- Help shine more light on the issue of proficiency

More fine-tuned exploration of how L2 bilinguals engage with CS

# Wrap-up

Does not eliminate the poverty of the stimulus argument for L2 CS

- Simply shows that the notion of L2 bilinguals as having neither positive nor negative feedback cannot always be assumed
- Some L2 bilinguals do receive positive feedback at least
- That positive feedback could contribute to their more native-like intuitions

**¡Gracias!**

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