What are you looking at? Effects of English-Spanish Bilingualism on attention to and labeling of motion events.

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Background & Aims

- Spanish is a predominantly <u>verb-framed</u> language: verbs encode the **path** of a motion event (*"Ella <u>entro</u> a la casa"*).
- English is considered to be a <u>satellite-framed</u> language: verbs encode the **manner** of a motion event ("*She <u>ran</u> into the house*").
- Previous research has shown that *English* monolinguals attend to the manner of motion in dynamic events, while *Spanish* monolinguals attend to path of motion in dynamic events (Maguire et al., 2010).
- Monolinguals also interpret novel verb labels (NVL's) as referent to path or manner, depending on the verb framing of their language (Maguire et al., 2010).
- Moreover, native speakers of verb-framed languages tend to produce more manner verbs during spontaneous narration, and native speakers of satellite-framed languages tend to produce more path verbs during spontaneous narration (Slobin, 2004).
- The present study seeks to elucidate:1) What English-Spanish bilinguals attend to in dynamic motion events and 2) What path and manner verb production looks like in English-Spanish bilinguals.

Participants

- 83 English-Spanish bilingual undergraduates (57 females, *M age*= 22,77 SD=6.269). Spanish was the native language of 79.5% of our sample. English was the dominant language for 69.9% of our sample.
- 31 participants (20 female) took part in the English condition of the Spontaneous Narration Task.

Novel Verb Eye-tracking Procedure

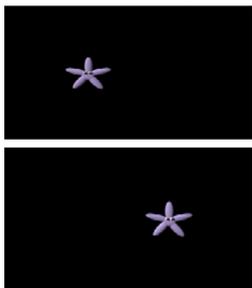### 1) Introduction Phase
Intro to stimuli (12s).

2) Familiarization Phase
Path & Manner simultaneously + Novel verb label (12s).

Figure 1. *"Look, it's my friend Starry. Do you see Starry?..."*
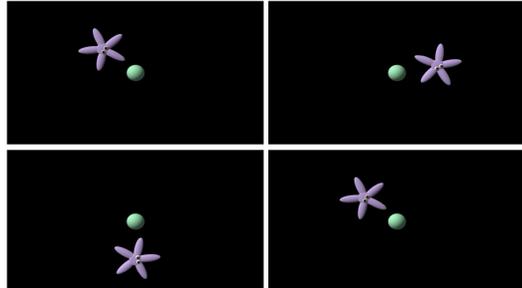
Figure 2: *Novel Verb:* "Blicking" or "Gupiando"
Path: Around the green ball   *Manner:* Spinning

3) Test Phases
(12s each)

3a) Test Trial 1
Familiar path, novel manner   Familiar manner, novel path
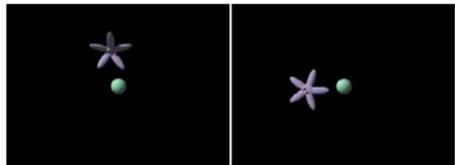
Figure 3. *"Let's look for blicking… Can you point to Starry blicking?"*

3b) Test Trial 2
Familiar path, novel manner   Familiar manner, novel path
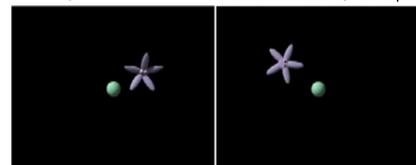
Figure 4. *"Let's look for glorping. Glorping. Can you point to Starry glorping?"*

3c) Test Trial 3
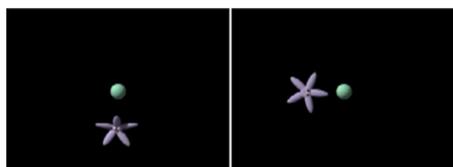Familiar path, novel manner   Familiar manner, novel path

Figure 5. *"Let's look for blicking. Blicking. Let's find Starry blicking."*

Figures 1 - 5 from Maguire et al., 2010.

Procedure

English Condition

1) Participants completed a language proficiency questionnaire (LEAP-Q; Marian, Blumenfeld, & Kaushanskaya, 2007) with directions in English.

2) Participants were primed in English (listened to "Frog, Where Are You?" stories in English) or received no priming.

3) Participants took part in a NVL eye-tracking procedure using a Tobii X60 eye-tracker. Preferential Looking Paradigm used at test.

4) Participants were asked to narrate the illustrated events of "*Frog Where Are You*?" and "*Frog Goes To Dinner*" (Mayer, 1969;1974) in English.

Language Proficiency
Language Priming vs. No Priming
NVL Eye-Tracking Test
Spontaneous Narration Task

Spanish Condition

1) Participants completed a language proficiency questionnaire (LEAP-Q; Marian, Blumenfeld, & Kaushanskaya, 2007) with directions in Spanish.

2) Participants were primed in Spanish (listened to "Frog, Where Are You?" stories in Spanish) or received no priming.

3) Participants took part in a novel verb eye-tracking procedure using a Tobii X60 eye-tracker. Preferential Looking Paradigm used at test.

4) Participants were asked to narrate the illustrated events of "*Frog Where Are You*?" and "*Frog Goes To Dinner*" (Mayer, 1969;1974) in Spanish.
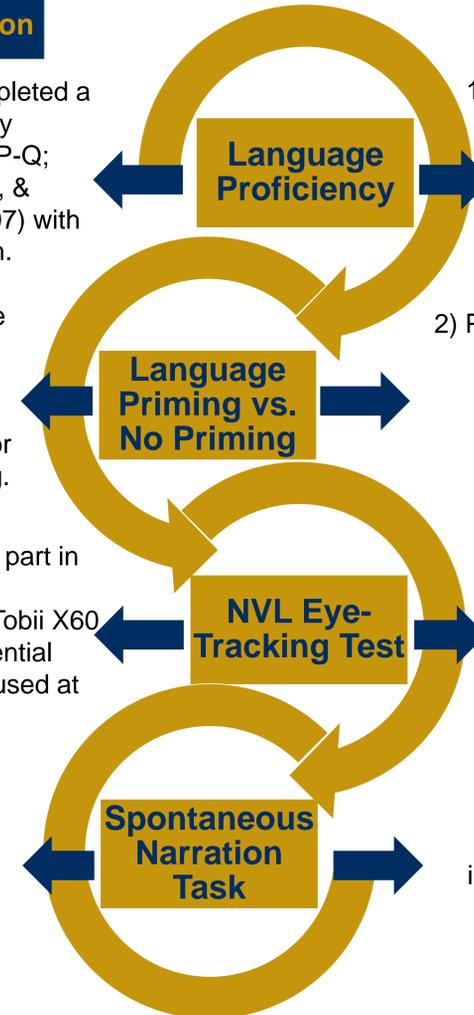
Results & Discussion
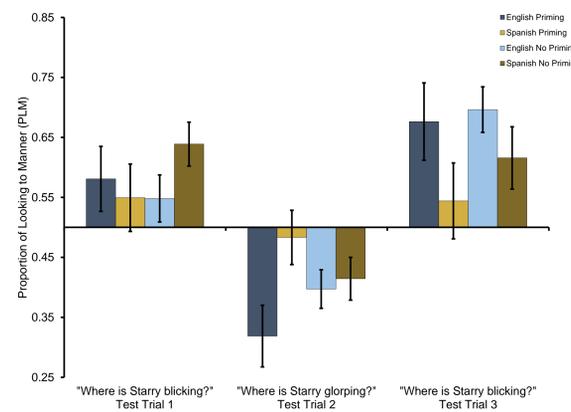
- Preliminary analyses revealed no main effects of age of English acquisition nor language dominance on participants' PLM scores.

- A repeated-measures ANOVA, with trial type as a within-subjects variable (*Test Trial 1, Test Trial 2, Test Trial 3*), and language condition (*English, Spanish*) and priming (*Priming, No Priming*) as between subjects variables, revealed a significant quadratic trend of trial type (*Test Trial 1, Test Trial 2, Test Trial 3*): $F_{(1,80)} = 28.55$, $p < .001$.

- Pearson correlation revealed a trend towards a significant relation between participants' age of English acquisition and the proportion of manner verbs they produced in the spontaneous narration task, $r = -.33$, $p = .065$ ($N = 33$; narratives that have been transcribed and coded).
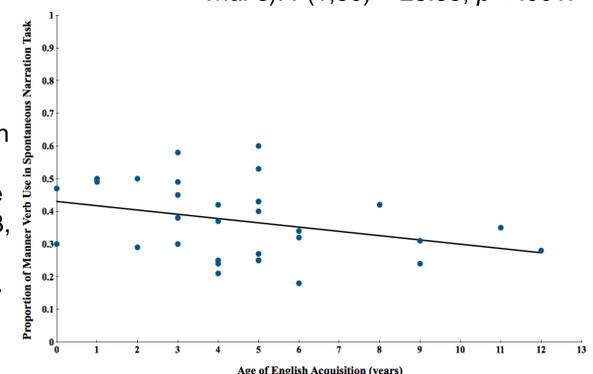
- Future analyses will relate participant performance in NVL Eye-tracking Task to their performance in Spontaneous Narration Task.
- Research on the cognitive implications of bilingualism throughout the life span is important towards building a comprehensive theory of language development.

Acknowledgements

References

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- Mayer M. (1969). *Frog, where are you?* New York: Dial Books for Young Readers.
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