L2 Listeners Show Anticipatory Looks to Upcoming Discourse References

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Do L2 listeners have proactive biases (expectations) about who will be mentioned next in a discourse?

- Native-language processing: Incrementally updated, proactive biases about upcoming information at all levels of linguistic representation, including discourse (e.g., Van Berkum et al., 2007; Rohde & Horton, 2014)
- L2 processing: Mixed evidence for lexical and syntactic anticipation (e.g., Foucart et al., 2014; Rotem et al., 2016; Kaan, 2014)
- L2 referential processing: Reduced use of discourse-level cues and potentially greater reliance on sentence-level information (Cheng & Almor, 2016; Grüter et al., 2016; Roberts et al., 2008)

None of these studies have used methodologies capable of capturing proactive biases before a referential expression is encountered.

Materials and Design

- Linguistic stimuli: 2-sentence items, manipulating Aspect in the context, and pronoun Reference in the continuation; broad focusintonation
- Visual World Paradigm (SMI RED, 250Hz; 3 AOs (Fig. 1): Source (Donald), Goal (Melissa), Theme (drink)
- 5 items/condition (Latin square) = 20 experimental items; 40 non-transfer fillers

Participants

- L1 English (N = 54), mean age: 23 years (18-49)
- L2 English (N = 33), mean age: 28 years (18-46): first exposure to English M = 11 yrs (3-21); various L1s (19 Chinese, 4 Japanese, 2 Spanish, 2 Indonesian, 8 other)
  - Versant English Test (Pearson, 2011; www.versanttest.com), overall score (range 20-80): M = 60 (39-80); corresponds to CEFR range of A2-C2 (median & mode = B2)
  - LexTALe English (Limohr & Broersma, 2012, www.lextale.com): accuracy M = 71% (SD = 16); Pearson correlation between Versant and LexTALe: r(bis) = .78, p < .001
- Overall performance on independent task assessing understanding of grammatical aspect in English (see Grüter et al., 2016, for task)

Results

Event structure and pronoun interpretation

(1) Emily___brought/was bringing a drink to Melissa. ___She _____

Native speakers:

- General bias for Goal reference following transfer-of-possession events (Stevenson et al., 1994)
- More Source continuations following imperfective vs. perfective aspect (English: Kehler et al., 2008; Japanese: Ueno & Kehler, 2010; Korean: Kim et al., 2013); ERPs show enhanced integration difficulty for Source-referencing following perfective vs. imperfective aspect (Ferretti et al., 2009)

L2 learners:

- No aspect effect on coreference for Japanese and Korean learners of English, despite reliable association of perfective/imperfective with completed/incomplete events (Grüter et al., 2016; Schafer et al., 2015)

Reduced Ability to Generate Expectations ‘RAGE’ in discourse

3 Predictions:

- Following a transfer-of-possession event with perfective (vs imperfective) aspect and prior to the encounter of a referential expression, 1) Native speakers will look to the Goal more than to the Source; 2) L2 learners’ looks will not be modulated by aspect.

If L2 learners have no proactive referential biases, 3) they will look at the Source and Goal equally until the linguistic signal disambiguates reference.

Acknowledgments: Many thanks to Amanda Blake, Amber Camp, Victoria Lee, Wenli Ling, Ivana Maton, Eric Stephans, and Malo Tahakahi for assistance with various aspects of this experiment. This research is supported by the National Science Foundation (BCS 1215490 to T. Grüter & A. Schafer).

Conclusions

- Aspect modulated native speakers’ looks (prediction 1); the effect is small and diffuse over time.
- Aspect did not modulate L2 learners’ looks (prediction 2); given the small effect in the L1 group, this should be interpreted with caution.
- Both groups showed a proactive overall Goal bias (prediction 3A), consistent with the semantics of transfer-of-possession verbs. (This bias to NP2 was not found in non-transfer filler items.)

L2s appear to create discourse expectations based on verb semantics, but not grammatical aspect. This may indicate differential weighting of sentence- and discourse-level cues in L2 vs L1 processing.