Pragmatic cues to deception survive translation

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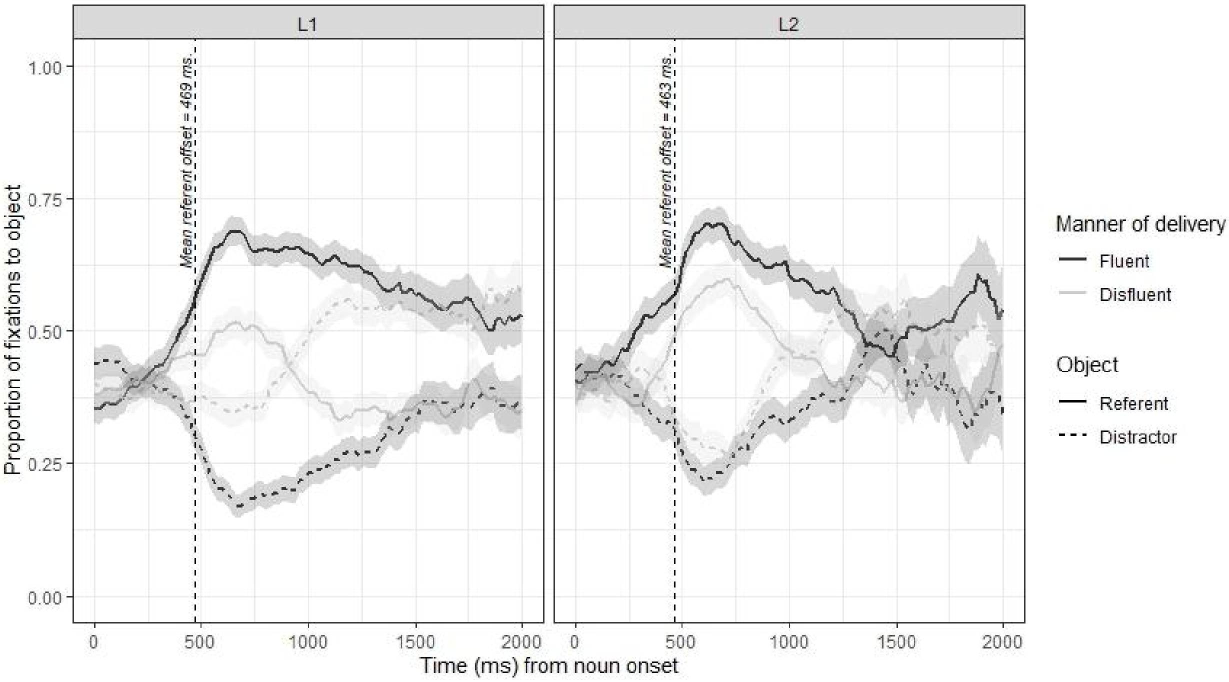
Listeners commonly associate disfluencies such as filled pauses with deception (e.g., Arciuli et al., 2010; Loy et al., 2017, 2018). As pervasive as this bias is, listeners appear to consider to some extent alternative reasons for the speaker to be disfluent: Eye-tracking data shows a delay in the emergence of this bias when such reasons are given (e.g., a speaker being distracted, King et al., 2018) - what might be taken as evidence of speaker modelling (Barr & Seyfeddinipur, 2010). However, this integration of who speaks with how they sound may be challenging under cognitively costly conditions, such as second language (L2) processing (Segalowitz & Hulstijn, 2005). Here, we explore whether and how L2 listeners of a language integrate different cues to interpret filled pauses pragmatically. To do so, we extended Loy et al.'s (2017) eye-tracking treasure-hunt task to a sample of L2 English participants (different L1s, residing in the UK, average LoR = 1.3 years). In the original study, L1 English participants heard a potentially deceitful English-speaking speaker refer either fluently or disfluently to a treasure hidden behind one of two items depicted on a screen (a referent and a distractor) and they had to click on the item they thought hid the treasure. In the present study, we additionally manipulated the speaker's linguistic background: Half of our participants heard an L1 British English speaker, and the other half heard an L2 English speaker (L1: Spanish).

Twenty pairs of instructions (each with a fluent and a disfluent version) were recorded as critical stimuli. We recorded critical fluent utterances in their entirety ("The treasure is behind the [referent]"). To create their disfluent counterpart, a prolonged article followed by a filled pause from a disfluent utterance was cross-spliced into the fluent utterances ("The treasure is behind thee, uh [referent]"). Additional 40 fillers included disfluent and fluent utterances. Each of the 60 utterances was paired with two (referent and distractor) line drawings.

Preliminary analyses in a sample of 50 (planned study size: 64) L2 participants confirmed the disfluency-as-deception bias: Participants' distribution of object clicked revealed that following a disfluent utterance, listeners were more likely to select the distractor as the location of the treasure, regardless of the speaker's nativeness. Visual inspection of the timecourse this bias showed that L1 disfluencies led to more fixations on the distractor while their L2 counterpart did not initially bias participants' eye-movements towards it. However, preliminary analysis via Linear Mixed Models in an 800 ms. post-target onset window (following Loy et al., 2017) did not corroborate this.

This suggests that L2 listeners consistently interpret filled pauses as cues for deception. Considering objects clicked, our participants neither attributed L2 disfluencies to other processes (e.g. lexical retrieval difficulties associated with L2 production, Bosker et al., 2014) nor rated the speaker as less trustworthy than its L1 counterpart, contrary to previous studies (e.g., Lev-Ari & Keysar, 2010; Hanzlíková & Skarnitzl, 2017). Moreover, the timecourse of the emergence of this bias reflected this lack of speaker modulation. Taking these results together, we propose that, at least in this context, the disfluency-as-deception bias operates following stereotypes about how deception sounds - rather than by considering the speaker's production system. Importantly, this stereotype can guide the pragmatic interpretation of filled pauses in L2 processing and be integrated early in the comprehension process.

Figure 1. Mean proportion of fixations to referents and distractors for the L1 (left) and L2 (right) speaker by manner of delivery of the utterance (fluent/disfluent). Proportions were calculated based on the sum of fixations towards either object for each 20-ms time bin from target onset to 2,000 post target-onset. Shaded areas represent +- 1 standard error of the mean.



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