

## Regarde le toad: Grammatical gender cueing in code-switched determiner phrases

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Speakers can use grammatical cues to anticipate upcoming words. For instance, monolingual French speakers can correctly predict a gendered target once a feminine or masculine determiner (a gender cue) is heard (Dahan et al., 2000). However, the only known study examining anticipatory processes with bilingual code-switchers suggests that their use of grammatical gender cues differs from monolingual speakers (Valdés Kroff et al., 2017). Notably, Spanish-English bilinguals used only the feminine gender cue (*la*) to anticipate upcoming nouns in code-switched determiner phrases. As such, the current project examines how French-English bilinguals utilize gender cues to predict upcoming code-switched nouns (e.g., “*la* pumpkin”) and whether this cueing is related to the participants’ self-reported code-switching habits (questionnaires adapted from Byers-Heinlein, 2013; Rodriguez-Fornells et al., 2012).

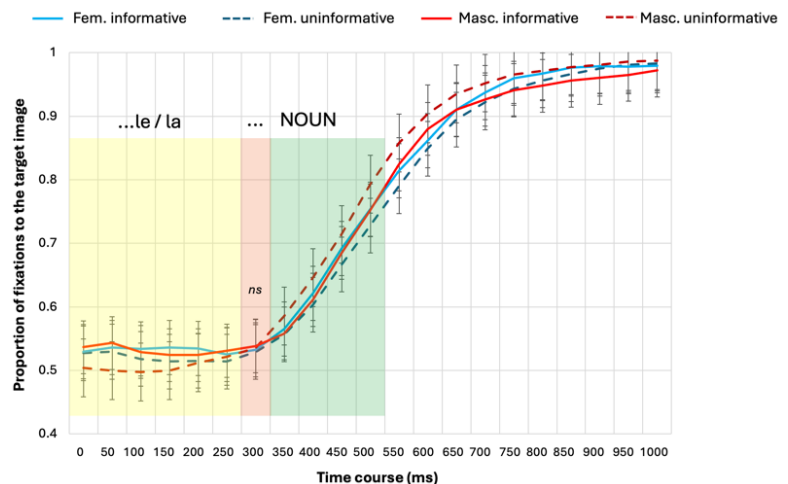
Though data collection is ongoing, thirty-two French-English bilinguals ( $M=19.6$  years, 17-27 years; 26 women, 6 men) were included in a preliminary analysis. Participants were highly proficient native or early speakers of French and English, with no advanced knowledge of another language. The participants completed a two-picture Visual World Paradigm while their dominant eye was tracked. The participants heard the carrier phrase “*Cliquez sur*” followed by a gendered definite determiner (“*le*” or “*la*”), a short silence, and an English noun. The determiner gender always matched the translation equivalent of the English noun (e.g., “*Cliquez sur le<sub>M</sub> [...] finger*”, where *doigt* is masculine). The target image appeared with a phonological competitor of opposite gender in informative trials (e.g., “*le* foot” [*pied<sub>M</sub>*] and “*la* fence” [*clôture<sub>F</sub>*]), or same gender in uninformative trials (“*le* candy” [*bonbon<sub>M</sub>*] and “*le* kite” [*cerf-volant<sub>M</sub>*]).

Preliminary 2 x 2 repeated-measures ANOVAs (Gender x Informativeness) were performed on three bin-averaged time-windows (TWs): the determiner (TW1: 0-250 ms), the prenominal silence (TW2: 250-300 ms), and the beginning of the noun (TW3: 300-500 ms). In TW1, informative gender-cued targets were fixated near-significantly more than targets with an uninformative cue ( $F=3.95$ ,  $p=.056$ ). Pearson’s partial correlations revealed trends in which frequent code-switching was positively related to fixations to masculine informative trials ( $r=.33$ ,  $p=.102$ ) and negatively related to feminine uninformative trials ( $r \geq -.29$ ,  $p<.15$ ). TW3 yielded a Gender by Informativeness interaction ( $F=4.70$ ,  $p=.038$ ): masculine targets with an uninformative cue were fixated more than feminine targets with an uninformative cue ( $t=2.68$ ,  $p=.057$ ), especially among participants who code-switched more often ( $r \geq -.33$ ,  $p<.10$ ).

Our preliminary results indicate (contra to Valdés Kroff et al., 2017) that French-English bilinguals use feminine and masculine grammatical gender cues similarly to anticipate upcoming nouns. This anticipatory ability was somewhat heightened among frequent code-switchers. Once the noun was encountered, targets in masculine-masculine trials were fixated more than targets in feminine-feminine trials, particularly among frequent code-switchers. This finding supports the idea that masculine grammatical gender is easier to process, as it is an unmarked default in French (see Atkinson, 2015).

We aim to reach the desired sample size ( $n=100$ ) by the spring and to perform more complete analyses (according to a [pre-registration](#)) before the conference.

Figure 1: Preliminary eye-tracking results. Time-windows are highlighted.



## References:

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