

# Examining the predictive role of Differential Object Marking in Spanish-Catalan bilinguals

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There is evidence that prediction promotes preactivation and, thus, makes processing easier facilitates processing (Kamide et al., 2003, Trueswell et al., 1994 for thematic roles; Lozano-Argüelles & Sagarra, 2021 for prosodic cues, i.a.). The phenomenon of Differential Object Marking (DOM) has been widely investigated in different areas of linguistics (formal linguistics, language contact, etc.), but few have explored its role in processing and fewer its role as an anticipatory cue. To our knowledge only one study showed its role with Spanish native speakers (Andringa & Curcic, 2016) and one with a DOM-artificial language (Andringa & Curcic, 2015). In addition, anticipation processes among bilingual speakers have received less attention (but see Desideri & Bonifacci, 2018; Foucart et al., 2014). The present study is novel for examining DOM in bilingual anticipatory (or predictive) processing with bilinguals with different profiles.

Spanish and Catalan, two typologically close languages in contact, share the DOM marker ‘a’, but present different distributions. In Spanish, DOM can mark all [+animate] objects (*Veo a la mujer* ‘I see DOM the woman’), but not [–animate] objects (\**Veo a la mesa* ‘I see DOM the table’). In standard Catalan, only [+animate] personal pronouns can always be marked (*Et veig a tu* ‘I see DOM you’ vs. *Veig Ø la dona* ‘I see the woman’). However, in Catalan, some speakers (especially Spanish-dominant speakers) can mark [+animate] objects due to the influence of Spanish, but not [–animate] objects (Perpiñán, 2018; Puig-Mayenco et al., 2018).

Given that both languages mark [+animate] objects (at a different extent), but not [–animate] objects, we explore to what extent DOM is a reliable anticipatory cue of the animacy of direct objects in Catalan and in Spanish in different profiles of Catalan-Spanish bilinguals. Three groups of bilingual speakers (25 Catalan-dominants, 21 balanced, 28 Spanish-dominants), grouped depending on their result in the Bilingual Language Profile questionnaire (Birdsong et al., 2012), performed two sessions (1 in Spanish, 1 in Catalan) of a Visual World Paradigm eye-tracking task with printed words using a Tobii Pro T60XL. Participants heard aural transitive sentence stimuli while looking at 2 words on the screen. After that, they were asked to respond an aural question that assessed accuracy. With a Latin Square design, the task had 2 conditions ( $k=8$ ): animacy of the direct object ([+animate, +DOM] or [–animate, –DOM]) and animacy of the screen words (different animacy, as in (1a, 2a), or same animacy, as in (1b, 2b). Gender, semantics and number of syllables were controlled, so the only way to anticipate the direct object relied only on the presence or absence of DOM in the aural stimuli. Based on Andringa & Curcic (2016), our prediction was that participants would only anticipate the object in the different animacy conditions, where only one word was grammatically possible. Regarding language dominance, the prediction was that Catalan-dominants would anticipate less than Spanish-dominants, because their dominant language (Catalan) does not mark any of the presented objects.

GAMMs models were run with the proportion of looks in the time window of interest (before the determiner and before the direct object; marked with | in the example) as the dependent variable. Focusing on the different animacy conditions, contrary to our predictions, in **Spanish** when there is DOM, Spanish-dominants anticipate the inanimate object, whereas Catalan-dominants anticipate the animate one; balanced bilinguals do not show a clear pattern. When there is no DOM, the three groups anticipate the inanimate objects. In **Catalan**,

results show that when there is DOM, Catalan-dominants do not anticipate the animacy of the direct object, whereas Spanish-dominants do anticipate it; balanced bilinguals do not show a clear pattern. Again, when there is no DOM the three groups anticipate the inanimate object. Surprisingly, the effect of DOM as an anticipatory cue for [+animate] objects is shown only in the non-dominant language, and it seems to prevail over thematic roles and animacy. We discuss that thematic roles play a role in anticipation (Kamide et al., 2003), but modulated by animacy, since inanimate objects receive higher proportion of looks in different conditions, possibly because objects are usually themes, which are frequently inanimate elements. In addition, our results suggest that Catalan-Spanish bilinguals have DOM in their Catalan and Spanish grammars, even if standard Catalan presents this marker to a lesser extent.

## Examples in Spanish

### (1) [+DOM, ANIMATE]

Las pianistas escuchan | **a la melódica** | **solista** durante el concierto en la terraza.  
(‘The pianists listen to the melodic soloist during the concert on the terrace’)

- a. solista – trompeta (‘soloist – trumpet’)      DIFFERENT ANIMACY [ANIMATE, INANIMATE]
- b. solista – soprano (‘soloist – soprano’)      SAME ANIMACY [ANIMATE, ANIMATE]

### (2) [–DOM, INANIMATE]

Las pianistas escuchan | **la melódica** | **trompeta** durante el concierto en la terraza.  
(‘The pianists listen to the melodic trumpet during the concert on the terrace’)

- a. solista – trompeta (‘soloist – trumpet’)      DIFFERENT ANIMACY [ANIMATE, INANIMATE]
- b. trompeta – guitarra (‘trumpet – guitar’)      SAME ANIMACY, [INANIMATE, INIMATE]

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