Open Library of Humanities

Divergence and avoidance in the production of DOM in Romanian and Spanish among Romanian-speaking L2 speakers of Spanish

Julio César López Otero, University of Houston, jlopezotero@uh.edu

Adina Camelia Bleotu, University of Bucharest; University of Vienna, adina.bleotu@lls.unibuc.ro; adina.camelia.bleotu@univie.ac.at

This study investigates bidirectional crosslinguistic influence (BCLI) among L1 Romanian L2 Spanish speakers, focusing on differential object marking (DOM) in both languages. While Romanian and Spanish exhibit similar DOM systems, they vary in the factors influencing object marking. The research involved highly proficient Romanian-Spanish bilinguals, Spanish native speakers, and Romanian monolinguals, analyzing transitive structures in narratives. Results from a narrative task in both Spanish and Romanian suggest that Romanian-Spanish bilinguals employ different strategies than Romanian monolinguals in Romanian. Nevertheless, this group of bilinguals presents transitive strategies similar to those displayed by Spanish monolinguals in their Spanish narratives. In other words, bilinguals show reduced use of DOM in Romanian compared to their monolingual counterparts, but no differences compared to Spanish monolinguals, potentially indicating L1 attrition rather than BCLI. Additionally, the comparison between the findings presented in this study, gathered via narrative tasks, and the findings obtained from the same group of bilinguals with the help of more controlled production tasks and acceptability judgment tasks reveals that, in semi-spontaneous production, bilinguals tend to employ avoidance strategies, while, in controlled production tasks (i.e., EPT), they exhibit ungrammatical DOM usage in Romanian, possibly influenced by Spanish. Overall, this study sheds light on L1 attrition dynamics in Romanian-Spanish bilinguals, a less-explored language pair compared to other languages in contact with Spanish.

1 Introduction

The present study examines both the acquisition of Spanish Differential Object Marking (DOM) and the potential attrition of Romanian DOM in native speakers of Romanian who learned Spanish as an L2 after puberty and have resided in Spain for around 10 years. This dynamic process is described with the term bidirectional cross-linguistic influence (BCLI) or transfer (Pavlenko & Jarvis 2002). However, cross-linguistic influence can be observed in more than divergences from the monolingual norm: avoidance strategies are developed in order to cope with complex structures that may present signs of attrition or that may not have been acquired yet (Schmid 2004; Schmid & De Bot 2004; Schmid et al. 2013).

Previous studies on the acquisition of DOM in an L2 by speakers who speak an L1 with DOM indicate that cross-linguistic influence from the L1 plays a role in their acquisition of DOM in their L2 (Montrul & Gürel 2015; Montrul 2019; López Otero 2020; 2022). Several studies have examined the acquisition of DOM in bilinguals who speak languages featuring DOM: Spanish and Turkish (Montrul & Gürel 2015), Farsi-Spanish (Judy & Iverson 2020), and Catalan-Spanish (Guijarro-Fuentes & Marinis 2009; Benito Galdeano 2017; Puig-Mayenco et al. 2017; 2018; Perpiñán 2018; Odria & Pineda 2023; Bel & Benito Galdeano 2024). Additionally, a robust body of research has investigated the acquisition of DOM in bilinguals speaking one language featuring DOM and another language without DOM, especially among English-Spanish bilinguals (Montrul & Bowles 2009; Montrul 2010; Hur 2020; 2021; Arechabaleta Regulez & Montrul 2023; Thane 2024a, 2024b), among others. An overall comparison between the findings from studies examining languages pairs in which both languages present DOM versus language pairs in which the dominant language does not feature DOM reveals that L1 speakers of languages presenting DOM have knowledge of DOM in their L2 at beginner and intermediate stages, which has been discussed as an example of facilitative transfer (Montrul & Gürel 2015; Montrul 2019). On the other hand, when the dominant language of the speaker does not feature DOM, knowledge of DOM in the non-dominant language is acquired at more advanced levels of proficiency. Fewer studies have looked at the maintenance of Romanian in a language contact situation (see Montrul & Bateman 2020a; 2020b). Finally, to our knowledge, only one study has examined the acquisition and maintenance of both Romanian and Spanish DOM systems among Romanian-Spanish bilinguals (López Otero 2022). Nevertheless, all these studies have focused on controlled tasks and do not allow the exploration of possible avoidance strategies that bilinguals may have developed. This paper aims to fill in this gap by examining DOM in both Romanian and Spanish in L1 Romanian L2 Spanish bilinguals with the use of a narrative task.

The current paper is organized as follows: Section 2 discusses the literature on DOM in Spanish and Romanian as well as previous studies on the acquisition of Spanish DOM. Section 3 presents the research questions and a description of the methods and analysis. Section 4 presents the results. Section 5 provides a discussion of the findings. Section 6 formulates a conclusion of the current study.

2 Differential Object Marking

Spanish, like over 300 other languages such as Romanian, Hindi, and Turkish, exhibits overt case-marking (such as *He visto a María* 'I saw DOM Mary'*)* of certain direct objects. This selective marking is referred to as Differential Object Marking (DOM). In this process, semantically prominent objects are marked to distinguish them from subjects through overt markers (Aissen 2003). Differential object marking has been investigated in languages around the world (Bossong 1991; Aissen 2003), including Romance languages such as Spanish and Romanian (Torrego 1998; Cornilescu 2000; 2006; 2020; Farkas & von Heusinger 2003; Leonetti 2004; 2008; Mardale 2008; 2010; Tigău 2010; 2011; López 2012; Ciovârnache & Avram 2013; Ormazabal & Romero 2019; Irimia 2020a,b, 2023; Irimia & Guardiano 2024; a. o.). Across languages, and particularly in Spanish and Romanian, DOM can be sensitive to different features (e.g., animacy, referential stability, specificity, discourse prominence), and it can also take different forms: consisting only of marking, usually homophonous with prepositions, or a combination of said marking and the doubling of the object by means of a clitic. These differences may prove challenging for speakers in a language contact situation where they have to handle two DOM systems which are different in rather subtle ways. We here investigate DOM in two languages with sensitivity to different features and forms: Romanian has a DOM system (hereinafter also referred to as PE-marking) sensitive to referential stability, animacy, specificity and discourse factors, while Spanish has a DOM system (hereinafter referred to as A-marking) mostly sensitive to animacy. Additionally, Romanian DOM often features clitic doubling, while Spanish DOM does not, with some exceptions (Leonetti 2008). The focus of this work is to examine the acquisition and maintenance of the DOM systems in Romanian and Spanish among L1 Romanian speakers who live in Spain and have acquired Spanish.

2.1 DOM in Romanian

DOM in Romanian is sensitive to a variety of features: animacy, specificity, discourse prominence, referential stability. Since sensitivity to animacy can be overridden by specificity, discourse prominence, and referential stability in various contexts, one could argue the Romanian DOM system is not primarily triggered by animacy but rather by factors related to discourse-pragmatics (Ticio & Avram 2015). Animate and specific entities are generally DOM marked with clitic doubling and PE-marking (Farkas 1978; Dobrovie-Sorin 1994; Cornilescu 2000; Farkas & von Heusinger 2003; Mardale 2008; 2010; von Heusinger & Onea 2008; Ciovârnache & Avram 2013; Tigău 2010; 2011; Irimia 2020a, 2020b, 2023; Hill & Mardale 2021; Irimia & Guardiano 2024), homophonous with a preposition, as in (1):

(1)   Maria   a   văzut -o   pe   fată.
          Maria   has   seen   CL.3SG.F DOM girl
          'Maria saw the girl.'

Nouns occurring after PE-marking take a bare form unless they belong to a special class of nouns usually referring to a specific role (*mama* 'mom', *tata* 'dad', *şef* 'boss', a. o., Hill 2013) (2a). It is important to note that the interpretation of the bare noun is nevertheless definite. In cases where the nouns are followed by an adjective or determiners including demonstratives and possessives, among others (Dobrovie-Sorin 1994; Mardale 2008; von Heusinger & Chiriacescu 2009) (2b), the nouns present an enclitic definite article (2b).

(2) a. Maria a văzut -o   pe   mam-a.
         Maria has seen CL.3SG.F DOM   mom-the. DEF.ART.SG.F
         'Maria saw mom.'

     b. Maria a văzut -o   pe   fat-a   blond-ă.
         Maria has seen CL.3SG.F DOM   girl-the.DEF.ART.SG.F blonde-SG.F
         'Maria saw the blonde girl.'

Animacy also plays a role in DOM in Romanian. Animate objects are often PE-marked. In contrast, inanimate objects are usually not PE-marked. Nevertheless, inanimate objects can be PE-marked if they are interpreted as *specific* (Cornilescu 2000; Mardale 2008; Ţigău 2010; 2011; Irimia 2020a, b, 2023), e.g., if they are dislocated (4a) or if they are demonstratives under ellipsis (4b).

(3) a. *Maria a văzut -o   pe   lalea.
         Maria   has seen CL.3SG.F DOM   tulip
         'Maria saw the tulip.'

     b. Maria a văzut   lalea-ua.
         Maria has seen   tulip-the.DEF.ART.SG.F
         'Maria saw the tulip.'

(4) a. Ce   carte ai   citit?
         What book have.2SG read
         'What book did you read'?

     b. Am   citit* (-o   pe)   aceasta.
         have-1SG   read   (CL.3SG.F   DOM)   this.SG.F
         'I read this one.' (referring to a book)

Specific interpretations can result from DOM of inanimates, making the object prominent in the discourse. In (5a), where the object occurs in its default postverbal position, the rose, which is PE-marked and clitic doubled, is perceived as semantically upgraded to some animate entity. This effect can be further enhanced if, for instance, in (5b), the object *pe trandafir* 'PE rose' is dislocated from its default postverbal position in (5a) to the left of the sentence:

(5) a. Albin-a   l-   a   lăsat **pe** **trandafir** la urmă.
       bee-the.DEF.ART.SG.F   CL.3SG.M have.3SG left   DOM   rose.SG.M   at end
       'The bee left the rose for the end.'

   b. **Pe**   **trandafir,** albin-a   l-   a   lăsat la urmă.[1]
       DOM   rose.SG.M   bee-the.DEF.ART.SG.F   CL.3SG.M   have.3SG   left   at end
       'The bee, left the rose for the end.'

In addition to animacy, the distribution of DOM in Romanian is sensitive to *referential stability* (Farkas & von Heusinger 2003), defined as how the specificity of the referent varies with discourse properties. Farkas & von Heusinger (2003) propose a Referentiality stability scale, according to which the more referentially stable an object is, the more likely it will be marked (6).

(6)   Referentiality stability scale (Farkas & van Heusinger 2003):
        Proper nouns, definite pronouns > definite DPs > partitives > indefinite DPs

Animacy and referential stability combine, giving rise to multiple constraints or preferences. Consequently, DOM is obligatory with proper names and definite pronouns, optional with animate definite DPs, partitives and indefinite DPs, and generally not allowed with inanimate definite DPs, partitives and indefinite DPs. Thus, for animate DPs, partitives and indefinite DPs, speakers either leave the direct object unmarked (7a) or use both PE-marking and clitic doubling (7b):

(7) a. Maria a văzut femeia   înaltă.
       Maria   has seen   woman-the.DEF.ART.SG.F   tall-SG.F
       'Maria saw the tall woman.'

   b. Maria a văzut -o   pe   femeia   înaltă.
       Maria   has seen   CL.3SG.F   DOM   woman-the.DEF.ART.SG.F   tall.-SG.F
       'Maria saw the tall woman.'

In the case of inanimate DPs, DOM and clitic doubling are usually not permitted, except for some cases where specificity takes precedence (see 4) or where the object is a personal pronoun or a relative pronoun, i.e., items which are prominent in Farkas and von Heusinger's (2003) referential stability scale. Additionally, DOM can also mark demonstratives in an ellipsis context,[2] implying

---

[1] As suggested by a reviewer, the presence of a prosodic break is marked by means of a comma, thus highlighting the special status of the dislocated animate object.

[2] As a reviewer pointed out, demonstratives alone do not require DOM. (i) is perfectly acceptable in Romanian.

   (i)   Am   văzut asta.
         have.1st.SG   seen this.F.SG
         'I have seen this.'

the presence of the previously mentioned noun that is resumed under ellipsis, as in (8). In (8), the referent of the elliptical demonstrative can be either animate (8a) or inanimate (8b):

(8)   a.   Acele   prezentatoare   de televiziune sunt greu   de văzut pe stradă,
                those   presenters.PL.F   of television are   difficult to see   on street
                dar astăzi Mihai a   văzut *(-o   pe)   aceasta   [+animate]
                but today Mihai has seen   (CL.3SG.F DOM) this-SG.F
                'Those TV presenters are difficult to see on the street, but Mihai has seen this one.'

        b.   Acele   cămăși   sunt foarte greu   de găsit, dar Mihai a   găsit
                these shirts.PL.F   are   very   difficult to find, but Mihai has found
                *(-o   pe)   aceea.   [-animate]
                (CL.3SG.F DOM)   this-SG.F
                'These shirts are difficult to find, but Mihai has found that one.'

While proper names and personal pronouns require clitic doubling, there seems to be some variation regarding clitic doubling in combination with PE-marking in animate definite DPs, with higher registers showing more clitic doubling. Avram and Zafiu (2017) and Avram (2019) provide experimental evidence from acceptability judgment tasks that there are currently two parallel DOM systems in contemporary Romanian, manifested in participants of the same age (19–21 years old): in optional contexts, *conservative* speakers allow both single *pe* and *pe* + accusative clitic as DOM, whereas *innovative* speakers only accept *pe* by itself as DOM (see **Table 1**).

		DOM types	
		single *pe*	*pe* + accusative clitic
		Am desenat pe copil have drawn DOM child 'I drew the child.'	L- am desenat pe copil CL.3SG.M have drawn DOM child 'I drew the child.'
Conservative speakers		yes	yes
Innovative speakers		yes	no

Table 1: DOM systems in contemporary Romanian (from Avram et al. 2023).

2.2 DOM in Spanish

DOM in Spanish, on the other hand, is mainly triggered by animacy (Bossong 1991; Torrego 1998; Aissen 2003; Leonetti 2004; 2008; a. o.), unlike DOM in Romanian, which is triggered by discourse-pragmatic factors such as specificity, discourse prominence, and referential stability,

as we have seen above. Animate objects are usually A-marked in Spanish (9a), as opposed to inanimate objects (9b). Moreover, definiteness seems to play a less important role than animacy, since indefinite human objects can be marked too, under certain conditions (9c) (Leonetti 2004; 2008). Several authors argue that specificity plays a role as well (see Brugè & Brugger 1996; Torrego 1998; 1999; Leonetti 2004). For instance, the object *una secretaria* 'a secretary' in (9c) is interpreted as specific when marked but as non-specific when left unmarked.

(9)   a. El   niño   ve   a   la   mujer.   [+ animate, + definite]
            the boy.SG.M sees DOM the woman.SG.F
            'The boy sees the woman.'

        b. El   niño   ve   la   caja.   [− animate, + definite]
            the boy.SG.M sees the box.SG.F
            'The boy sees the box.'

        c. La doctora   busca   (a)   una   secretaria.   [+ animate, − definite]
            the doctor.SG.F looks for (DOM) a   secretary.SG.F
            'The doctor looks for a secretary.'

The contrast between Romanian and Spanish DOM regarding which feature is their main trigger leads to several mismatches in their distribution. For instance, while in Romanian personal and demonstrative pronouns are more prominent on the referential scale and DOM-marked regardless of animacy, in Spanish, animate objects are usually marked. This difference results in demonstrative pronouns being marked in Romanian in ellipsis contexts (10a) yet their marking in Spanish remains sensitive to animacy features (10b):

(10)   a. A   cumpărat -o   pe   aceasta   (referring to a book)
            has bought   CL.3SG.F DOM   this.SG.F
            'He bought this one.'

        b. Él compró Ø   este   (referring to a book)
            he bought Ø   this.SG.M
            'He bought this one'

In addition to their distribution, DOM in Spanish is syntactically simpler than in Romanian: while DOM is often accompanied by clitic doubling in Romanian, at least for conservative speakers, in Spanish this is not the case unless the object is a personal pronoun, with some exceptions stemming from regional variations (e.g., Leonetti 2007; Sánchez & Zdrojewski 2013; Rinke et al. 2023). The participants in the present study have acquired Spanish in monolingual regions of Spain, where, to our knowledge, clitic doubling does not co-occur with DOM unless the object is a personal pronoun. In summary, Romanian and Spanish display different DOM systems: despite both of them being sensitive to animacy, Romanian DOM is mostly driven by discourse-pragmatics factors such as referential stability or discourse prominence (Farkas & von

Heusinger 2003; Tigău 2010; Ticio & Avram 2015), while Spanish DOM is mainly triggered by animacy. Additionally, Romanian DOM usually presents clitic doubling while Spanish DOM does not. In our study, we explore the acquisition and maintenance of DOM in both Romanian and Spanish among Romanian-Spanish bilinguals by considering alternative strategies to express transitive structures.

2.3 DOM in Romanian in contact with other languages

2.3.1 Is DOM in Romanian maintained or does it undergo attrition in contact with other languages?

Previous research has examined DOM in Romanian in contact with other languages, particularly English, French, and, to a lesser extent, Spanish. Montrul et al. (2015) looked at DOM in heritage speakers of Romanian in the United States and compared them to Romanian-dominant baselines in both Romania and the United States. Results showed that heritage speakers tend to find sentences featuring PE-marking combined with clitic doubling as well as sentences without PE-marking more acceptable than the baseline groups. The authors discuss that the first-generation adult immigrants from Romania in the United States do not show signs of attrition regarding their knowledge of Romanian DOM despite having lived in the United States between 4 and 20 years. Further evidence in a similar direction comes from production data from Montrul & Bateman (2020a, b), who administered production and comprehension tasks to groups of participants similar to the ones in Montrul et al. (2015). As in Montrul et al. (2015), the authors did not find signs of attrition among the first-generation immigrants, who had been living in the United States between 4 and 20 years with an average of 9.2 years of residence. Nevertheless, divergences were observed in the use of DOM among heritage speakers. Specifically, heritage speakers of Romanian omitted clitic doubling in DOM and, to a lesser degree, PE-marking. This divergence was found more prevalent in simultaneous heritage bilinguals than in sequential heritage bilinguals. The authors argue that DOM is vulnerable to erosion in heritage Romanian despite the first-generation group, who represents the main source of input for the heritage speakers, not presenting divergences with the dominant speakers in Romania. Montrul & Bateman (2020b) claim that their findings are consistent with the Differential Access Model (Pérez-Cortés et al. 2019) for heritage grammars, according to which heritage bilinguals experience difficulties when accessing particular grammatical elements, leading to differential ways to access representations and access values during production and comprehension processes.

Recently, Avram et al. (2023) investigated DOM in adult and child heritage Romanian in a French-speaking environment and DOM in adult and child Romanian with the help of narrative tasks, particularly a *frog story*, as in previous studies on L1 and 2L1 Romanian (Buja 2008; Teodorescu 2017; Tomescu 2018). They found that DOM is still in place with adult first-generation immigrants: speakers preferred innovative uses of DOM with single PE-marking over

PE-marking and clitic doubling. However, in the case of heritage children, the authors found that children aged 7 through 10 produced fewer instances of DOM, despite also showing grammatical use of both single PE-marking and PE-marking with clitic doubling. In particular, PE-marking with clitic doubling was underused by heritage children, which could be accounted for by the syntactic complexity of clitic doubling. The authors interpret this underuse as a first indication of possible attrition.

As far as Spanish is concerned, previous studies have examined the maintenance of DOM in Romanian in contact with Spanish among first-generation immigrants in monolingual regions of Spain. López Otero (2022) found bidirectional cross-linguistic influence (Pavlenko & Jarvis 2002) in a group of first-generation Romanian immigrants in Spain in comparison with baselines in Spain and Romania. Specifically, bidirectional cross-linguistic influence was mostly found in their marking of demonstrative pronouns, which receive DOM categorically in Romanian, yet their marking is sensitive to animacy in Spanish. Results are consistent with previous research in that clitic doubling omission was more frequent than omitting both PE-marking and clitic doubling, particularly when marking pronoun DPs (e.g., 'Am citit pe aceasta' *I have read this one*). The author argues that the bilingual first-generation immigrants may be at initial stages of L1 attrition and frames his findings within Lardiere's (2009) Feature Reassembly Hypothesis and Sánchez's (2019) Bilingual Alignments Hypothesis, according to which bilingual syntactic representations can be the result of permeable bilingual alignments, which are memory storage devices containing information from different language components.

From an SLA perspective, Montrul (2019) investigates the acquisition of DOM in Spanish among a cohort of Romanian-speaking L2 learners of Spanish who were taught the language in a classroom setting in Romania. The study involved the administration of written production, comprehension, and acceptability tasks. The findings indicate no significant differences between the responses of the L2 learners and those of a control group of native speakers of Spanish. Montrul (2019) interprets these results in line with Lardiere's (2009) Feature Reassembly Hypothesis. Specifically, the author contends that the Romanian-speaking L2 learners of Spanish are successful at acquiring the feature specification and distribution of DOM in Spanish. These findings suggest that speaking an L1 featuring DOM can play a facilitative role in acquiring DOM in the L2 (Montrul & Gürel 2015).

In summary, research on the maintenance of DOM among Romanian speakers living in language contact situations is scarce, particularly in contact with other languages featuring DOM, such as Spanish. Additionally, previous studies provide experimental data on only one language of the language pair spoken by the participants. The present study investigates both Romanian and Spanish, a pair of languages belonging to the same family and featuring very similar DOM systems, in order to tap into the processes involved in the acquisition of DOM in L2 Spanish and the maintenance of DOM in L1 Romanian. Specifically, this study builds on López Otero's (2020;

2022) works by analyzing the narrative tasks that the participants completed in addition to controlled production tasks and acceptability judgement tasks. For the present study, we adopt Schmid's (2011) definition of attrition, which states that L1 attrition occurs when speakers lose access to the features/structures previously acquired (Schmid 2011).

2.3.2 Extralinguistic factors impacting language acquisition and maintenance: lexical access and patterns of language use

Lexical access is defined as a speaker's ability to retrieve lexical items from their lexicon. In bilingualism studies, lexical access becomes crucial, as bilingual individuals often face challenges due to both languages being activated simultaneously in the mind, leading to competition between lexical items (Abutalebi & Green 2007; Bialystok et al. 2008a, 2008b; Kroll et al. 2014). Gollan et al. (2011) proposed the Frequency-Lag Hypothesis, highlighting differences in lexical access between production and comprehension in bilinguals. The relationship between lexical access and overall language proficiency has been documented among different types of bilinguals (Montrul & Foote 2014; Hur 2020; Wiener and Tokowicz 2021; Macbeth et al. 2022; López Otero & Jimenez 2022; López Otero 2023; Jimenez et al. 2024; López Otero et al. 2024). In the present study, we assess lexical access using the Multilingual Naming Test (MiNT) (Gollan et al. 2012), which has demonstrated strong correlations with both self-reported and objective measures of language proficiency (Bedore et al. 2012; Gollan et al. 2012; Sheng et al. 2014; Treffers-Daller & Korybski 2015).

Some studies explore patterns of language to help us gauge the impact of current language practices. Bedore et al. (2012) discovered that in bilingual preschool children, current language use patterns accounted for more variance in language dominance than age of first exposure. Kastenbaum et al. (2019) also found that language exposure patterns significantly influenced performance on lexical access tasks in adults. Continued language practice has been identified as a key factor influencing high bilingual proficiency, regardless of age of acquisition (De Carli et al. 2015). Furthermore, Giancaspro (2019) found that Spanish proficiency among heritage speakers was a stronger predictor of monolingual-like use of the subjunctive than their age of acquisition of English. Similarly, López Otero, Cuza and Jiao (2023) found an effect of patterns of Spanish language use and exposure on the use of CLLD structures among Spanish heritage speakers in Brazil. Finally, López Otero, Hur and Goldin (2024) found effects of heritage language use in the maintenance of the knowledge of clitic placement among English-dominant heritage speakers of Spanish: those heritage speakers who reported using Spanish in fewer contexts exhibited stronger signs of crosslinguistic influence from English than their counterparts who reported using more Spanish across several contexts. We utilize the Language Experience and Proficiency Questionnaire (LEAP-Q) (Marian et al. 2007) to collect information on extralinguistic variables

shaping the Romanian-Spanish bilinguals' language experiences and patterns of language use and use these as a proxy for overall language activation, which can account for variability in second language speakers and bilinguals (Paradis 1993; 1996; Putnam & Sánchez 2013).

3 Current study

3.1 Motivation and Research Questions

The present study explores whether there exist signs of L1 attrition and bidirectional cross-linguistic influence among first-generation Romanian immigrants in Spain, who engage with both Romanian and Spanish in their daily lives. This language pair is of particular interest due to both languages exhibiting DOM, unlike commonly studied language pairs such as Spanish and Romanian in contact with English. By examining narratives (in line with Montrul and Bateman 2020b and Avram et al. 2023) in both languages, we aim to extend previous findings from controlled tasks like elicited production and acceptability judgments (López Otero 2020; 2022), furthering our understanding of bilingual lexical access and language use patterns. The narratives are intended to provide a more naturalistic insight into the participants' productive knowledge of DOM in their two languages.

Additionally, we collect participants' information on lexical access and patterns of language use in order to explore within-group differences among the bilinguals. Lexical access is assessed using the Multilingual Naming Test (MiNT) (Gollan et al., 2012). Lexical access reflects the ability of bilingual individuals to retrieve lexical items efficiently, despite competition from simultaneous language activation. Studies have shown this metric to correlate strongly with both subjective and objective measures of language proficiency (Bedore et al., 2012; Gollan et al., 2012). Patterns of language use and extralinguistic factors, known to influence bilingual language maintenance, are evaluated using the Language Experience and Proficiency Questionnaire (LEAP-Q) (Marian et al., 2007). This tool collects data on language experiences and contextual usage, enabling us to measure language activation as a proxy for bilingual variability (Paradis, 1993; 1996; Putnam & Sánchez, 2013). Additionally, factors such as age of arrival and length of residence are examined to understand their impact on L1 attrition and L2 acquisition. In light of this, we posit the following research questions, each subdivided into two subquestions.

RQ1: DOM in L2 Spanish:

   (i) What transitive strategies do Romanian-speaking L2 speakers of Spanish present in their oral production in Spanish?

   (ii) Are their transitive strategies in Spanish, particularly their use of DOM, shaped by extralinguistic variables?

Hypothesis 1a: We hypothesize that the Romanian-speaking L2 speakers of Spanish show use of transitive strategies in Spanish similar to the native Spanish speakers', which would be congruent with a target-like acquisition of DOM in Spanish. Romanian-speaking L2 speakers of Spanish have acquired the animacy-driven nature of DOM in Spanish and their production is similar to that of monolingual Spanish speakers, in line with previous studies on the facilitative role of speaking an L1 featuring DOM (Montrul 2019; Montrul & Gürel 2015).

Hypothesis 1b: Nevertheless, the lack of activation for comprehension or production of Spanish may lead to variability in the L2 speakers' A-marking use (Paradis 1993; 1996; Putnam & Sánchez 2013). Specifically, we expect the lack of activation of Spanish to result in at least some Romanian-Spanish bilinguals marking inanimate objects, particularly if they are ranked high in the referential stability scale (López Otero 2020; 2022).

RQ2: DOM in L1 Romanian:

(i) What transitive strategies do Romanian-speaking L2 speakers of Spanish present in their oral production in Romanian?

(ii) Are their transitive strategies in Romanian, particularly their use of DOM, modulated by extralinguistic variables?

Hypothesis 2a: We hypothesize that the Romanian-speaking L2 speakers of Spanish show use of transitive strategies in Romanian similar to those of monolingual Romanian speakers, which would signal a target-like maintenance of DOM in Romanian, their native language. Following previous studies on the maintenance of Romanian as a home language in non-Romanian-speaking societies (Montrul & Bateman 2020a, b), we expect DOM in Romanian to remain comparable to that in Romanian monolingual populations.

Hypothesis 2b: However, the lack of activation for comprehension or production of Romanian may lead to variability in their use of PE-marking (Putnam & Sánchez 2013; López Otero 2020; 2022). Specifically, we expect the lack of activation of Romanian to result in at least some Romanian-Spanish bilinguals simplifying PE-marking in Romanian given its syntactic complexity by abandoning clitic doubling and favoring an animacy-driven distribution of their DOM due to cross-linguistic influence from Spanish, in line with previous findings (López Otero 2020; 2022).

3.2 Participants

A total of 58 subjects distributed across three groups participated in the study: 18 L1 Romanian L2 Spanish bilinguals residing in Spain (hereinafter bilinguals), 17 Spanish native speakers residing in Spain (hereinafter Spanish monolinguals, SM) and 23 Romanian monolingual native speakers living in Romania (henceforth Romanian monolinguals, RM). By means of a background questionnaire, the Language Experience and Proficiency Questionnaire (LEAP-Q) (Marian et al.

2007), we gathered information on the participants' language background, their L2 acquisition process and their language patterns of use and exposure. The bilinguals (age range = 21–49; M = 30.89, SD = 8.04) (n = 18; female = 16) started learning Spanish after puberty (age of arrival and of onset of acquisition range = 15–37, M = 20.72, SD = 6.75) in a naturalistic setting in Spain (years of residence range = 6–17, M = 10.16, SD = 3.01). No cut-off point was initially established for participation in this study; nevertheless, previous studies on L1 attrition have established 6 years of residence (Tsimpli et al. 2004; Cairncross et al. 2023) or even 10 years (Schmid 2007) in the L2-speaking society. Additionally, none of the participants reported having studied Spanish in a classroom setting. Instead, some reported having learned other languages at school: English, French, and German. All participants reported that Spanish was their L2, and that their native and dominant language was Romanian. Their self-assessment results indicate that their overall Spanish skills are highly proficient (M = 9.01/10, SD = 0.65). When looking at specific language skills, results remain similar (speaking: M = 8.19, SD = 0.86; listening: M = 9.39, SD = 0.78; reading: M = 9.44, SD = 0.78). Their MiNT results suggest they are balanced bilinguals (range = 46–64/67; M = 57.28; SD = 3.97 for Spanish) (range = 52–65/67; M = 59.39; SD = 3.69 for Romanian). Their DELE results did not present much variability (range = 41–48/50; M = 45.83; SD = 2.01). A linear regression failed to find a correlation between the DELE and the MiNT (p = 0.9). This suggests that their DELE results do not present enough variability to capture nuances among this group of end-state L2 speakers, whereas the MiNT, which presents wider ranges in its results, might. Section 3.3. provides details on the DELE and the MiNT.

Their pattern of language use is consistent: most bilinguals (13/18) reported using Spanish more frequently than Romanian in their daily life. Specifically, some bilinguals (5/18) used Spanish more than 80% of the time. Three bilinguals, on the other hand, reported using both Spanish and Romanian equally, while only two bilinguals used more Romanian than Spanish, which they reported using only 40% of the time. More Romanian was used at home, with all bilinguals reporting using Romanian with their families while only one participant reported using both Romanian and Spanish at home. In addition, four participants reported using some Romanian and Spanish code-mixing.

Their sociolinguistic profile is also consistent: most bilinguals (15/18) were originally from Bucharest and Southeastern Romania while three participants came from different regions: two from Transylvania and one from Oltenia. All bilinguals resided in a monolingual Spanish-speaking region in Southern Spain. All participants had completed more than obligatory education: 11 had a university degree while 7 had completed technical/professional education.

The monolingual groups also featured consistent profiles: 17 SMs (age range = 19–50; M = 27.65; SD = 8.72) (female = 8) participated in the study. They were born and lived in the same monolingual Southern Spanish region as where the bilinguals were living. They had

never lived abroad, and their knowledge of foreign languages was limited. Their MiNT results were slightly more accurate than the bilinguals' (M = 62.94/67; SD = 2.16 for the SMs vs. M = 57.28/67; SD = 3.97 for the bilinguals). As opposed to the bilinguals, the majority of the SMs did not hold university degrees: only 6 SMs had graduated university while 11 had completed secondary education.

A group of 23 RMs (age range = 19–31; M = 21.67; SD = 3.11) (female = 22) participated in the study. They were college students living in Bucharest, the same region that most of the bilinguals were originally from. Like the SMs, they had never lived abroad and, although they all reported having studied English at school, Romanian was their dominant language. The RMs scored slightly higher than the bilinguals in the MiNT (M = 63.43/67; SD = 1.59 for the RMs vs. M = 59.39/67; SD = 3.69 for the bilinguals).

3.3 Tasks and procedures

The current study is part of a larger project including several tasks: two screening tasks (LEAP-Q, discussed above, and the Diploma de Español como Lengua Extranjera) and three experimental tasks (a Narrative Task, an Elicited Production Task and an Acceptability Judgment Task, presented to participants in the mentioned order). Among these experimental tasks, the current study relies solely on the narrative task. While the monolingual groups completed the narrative task only in their languages, bilinguals completed them in Spanish first and then in Romanian to avoid priming effects from their reportedly dominant language, Romanian, into Spanish, their non-dominant L2.

Diploma de Español como Lengua Extranjera (DELE). As in other versions of this test (e.g., Duffield & White 1999; Montrul & Slabakova 2003), its goal is to determine overall Spanish proficiency by assessing morphosyntactic and lexical knowledge via 50 multiple-choice questions (Cuza et al. 2013). This instrument is an adaptation of a vocabulary task from the MLA Foreign Language Test and a cloze test from the *Diploma de Español como Lengua Extranjera* (DELE) focusing on morphosyntax and lexicon. It is commonly referred to as the DELE by researchers in the field, yet it differs significantly from the DELE administered by the Instituto Cervantes, which includes sections on speaking, listening, reading and writing in addition to grammar. In our study, we use the term *DELE* to refer specifically to the adapted version described. Only the bilingual group completed the DELE, and they all scored 40 or more.

Multilingual Naming Test (MiNT). The goal of this test is to measure the participants' lexical knowledge. The MiNT consists of 68 images of increasing difficulty presented individually. Participants are asked to identify and name the objects depicted in the images. The slide depicting the items "mortar" and "pestle" was considered one single item, resulting in the maximum MiNT score in this study being 67. The bilinguals completed the MiNT in Spanish and then in Romanian, while the monolingual groups completed it in their native languages.

Narrative Task. This task aimed to elicit semi-spontaneous use of DOM. Participants were asked to narrate the story depicted in the wordless children's book *One Frog Too Many (A Boy, a Dog, and a Frog)* (Mayer & Mayer 2003). Gathering narrative data from "frog story" narratives, which feature a high number of animal characters, is consistent with previous studies on the acquisition of DOM in Romanian bilinguals (Avram et al. 2023). Participants completed the task first in Spanish, their non-dominant language, followed by their dominant language, Romanian.

3.4 Data coding and statistical analysis

For the present study, we examined the participants' transitive structures and coded them after classifying them into several categories. In Romanian, these categories are (a) PE-marking with clitic doubling, (b) PE-marking by itself, (c) unmarked determiner phrase, (d) accusative clitic, and (e) clitic dislocation (right/left dislocation). See (11) and (12) for examples of these strategies as used by Romanian speakers. Based on a reviewer's advice, we excluded any structures involving clitic dislocation from the category "PE-marking with clitic doubling" to more accurately identify genuine instances of DOM and clitic doubling. Clitic dislocation was instead treated as a separate, distinct category. While clitic doubling and clitic dislocation may seem similar superficially, they are syntactic phenomena of a different nature, as argued by a rich body of studies (e.g. Cinque 1990; Iatridou 1991; Anagnostopoulou 1994; 1997; 2005; Hill & Mardale 2021; a. o.). Clitic doubling keeps the canonical word order intact, using the clitic to emphasize or clarify the direct or indirect object, while clitic dislocation involves the co-occurrence of a clitic with a phrase that appears in a non-standard position (to the left or to the right of the clause), for purposes of topicalization or emphasis. Importantly, their distributional restrictions are different: doubled objects have the intonation and distribution of arguments, whereas dislocated objects have the intonation and distribution of peripheral elements. Notably, in Romanian, clitic doubling is subject to Kayne (1994)'s Generalization (i.e. it takes place only with marked DPs, i.e. DPs marked by DOM), while clitic resumption under dislocation takes place with any type of DP object.[3] Prosody-wise, the dislocated phrase is set off from the rest of the sentence with an intonational break, while the clitic doubled object is not preceded by such a break. Additionally, other strategies used by the bilinguals included missing objects and clitic

---

[3] Dislocated unmarked definites can be resumed by a clitic, as shown in (i), while clitic doubling on an unmarked definite is ungrammatical, as shown in (ii). We have chosen to illustrate the contrast between the two structures through parallel examples we created ourselves, given that no participant produced a sentence involving clitic resumption of a dislocated unmarked definite.

(i)   Copilul,   mama   l-   a   îmbrăţişat.
child- the.DEF.ART.SG.M   mother-the.DEF.ART.SG.F   CL.3SG.M.ACC   has   hugged
'As for the child, the mother hugged him.'

(ii)   *Mama   l-   a   îmbrăţişat   copilul.
mother-the.DEF.ART.SG.F   CL.3SG.M.ACC   has   hugged   child- the.DEF.ART.SG.M

doubling without PE-marking, as shown in (13a) and (13b), respectively. We also coded the participants' uses of transitive structures by attending to the animacy features of their referent: human, non-human animate, and inanimate.

(11)   Sample transitive strategies in Romanian produced by bilinguals:

   a.   PE-marking + CD:

   Băiat-ul   a   pedepsit   -o   pe
   boy-the.DEF.ART.SG.M   has   punished   -CL.3SG.F.ACC   DOM
   broasc-a   cea   mare.
   frog-the.DEF.ART.SG.F   DEM.ART.SG.F   big
   'The boy punished the big frog.'

   b.   PE-marking:

   Brosc-uț-a   cea   mare   muşcă pe   cea
   frog-DIM-the.DEF.ART.SG.F   DEM.ART   big.SG.F bites   DOM DEM.ART.SG.F
   mic-ă.[4]
   small.SG.F
   'The big frog is biting the small one.'

   c.   Unmarked DP:

   Brosc-uț-a   cea   mare împinge broasc-a.
   frog-DIM-the.DEF.ART.SG.F   DEM-ART   big   pushes   frog-the.DEF.ART.SG.F
   cea   mic-uț-ă   pe pământ
   DEM.ART.SG.F tiny-DIM-SG.F   on earth
   'The big frog pushes the tiny frog to the ground.'

   d.   Accusative clitic:

   Copil-ul   o   ceartă.
   child-the.DEF.ART.SG.M   CL.3SG.F.ACC   scolds
   'The boy scolds it.' (referring to a frog)

   e.   Clitic dislocation
   Right dislocation

   Brosc-uț-a   cea   mare   o   împinge
   frog-DIM-the.DEF.ART.SG.F   DEM.ART.SG.F big-SG.F CL.3SG.F.ACC pushes
   afară din barcă, pe   cea   mic- ă.
   out   of   boat   DOM DEM.ART.SG.F small-SG.F
   'The big frog pushes it out of the boat, the small one.'

---

[4] As noted by a reviewer, this example involves an ellipsis configuration, and it is worth mentioning that, in the absence of a clear context, the nominal under ellipsis could also refer to an inanimate entity. However, in this story context, it has a clear animate reference (the small frog).

(12)   Sample transitive strategies in Romanian produced by RMs:

    a.   PE-marking + CD:

       Băieţ-el-ul   din nou o   ceartă pe

       boy-DIM-the.DEF.ART.SG.M of   new CL.3SG.F.ACC scolds DOM

       broasc-a   cea   mare.

       frog-the.DEF.ART.SG.F DEM.ART.SG.F big

       'The boy scolds the big frog again.'

    b.   PE-marking:

       Brosc-uţ-a   cea   mare aruncă din   barcă   pe

       frog-DIM-the.DEF.ART.SG.F DEM.ART.SG.F big   throws from boat   DOM

       cea   mic-ă.

       DEM.ART.SG.F small-SG.F.

       'The big frog throws the small one out of the boat.'

    c.   Unmarked DP:

       Băieţ-el-ul   salvează brosc-uţ-a   mai   mic-ă.

       boy.DIM.the.DEF.ART.SG.M saves   frog-DIM-the.SG.F   more small.SG.F

       'The boy saves the smaller frog.'

    d.   Accusative clitic:

       Băiat-ul   o   pedepseşte.

       boy-the.DEF.ART.SG.M CL.3SG.F.ACC   punishes

       'The boy punishes it.' (referring to a frog)

    e.   Clitic dislocation

       Right dislocation:

       Băiat-ul   începe să o   caute prin   iaz,   pe

       boy-the.DEF.ART.SG.M starts SĂ CL.3SG.F.ACC look   through pond DOM

       brosc-uţ-a   cea   mic-ă.

       frog-DIM.-the.DEF.ART.SG.F DEM.ART.SG.F small-SG.F.

       'The boy started looking for it in the pond, for the small frog.'

       Left dislocation:

       Pe   broscoi-ul   cel   nesuferit, îl

       DOM frog-the.DEF.ART.SG.M DEM.ART.SG.M unbearable CL.3SG.M.ACC

       lasă   acolo.

       leaves there

       'As for the terrible frog, he leaves it there.'

(13)   a.   Missing object:

       Încercau să   consoleze celelalte animale.

       tried   SUB console   the other animals

       'The other animals were trying to console.' (referring to the frog)

b. CD without PE-marking:

broasc-a   cea   mare o   privea un pic
frog-the.DEF.ART.SG.F DEM-ART big CL.3SG.F.ACC looked a little
suspectă broscuţa   mică.
suspicious frog-DIM-the.DEF.ART.SG.F small-SG.F
'The big frog was looking suspiciously at the small frog.'

Note that the structure in (13b), i.e. clitic doubling of unmarked objects, is not a strategy found in Spanish. While its presence might seem to contradict the high proficiency of bilinguals in Spanish, it should be noted that this type of structure appears in only one single speaker, and very rarely (just twice). Overall, bilinguals prefer other strategies.

On the other hand, in Spanish, the participants' transitive strategies were categorized into the same major classes Romanian structures were categorized into: (a) A-marking with clitic doubling, (b) A-marking by itself,[5] (c) unmarked determiner phrase, (d) accusative clitic, and (e) clitic dislocation. We found no strategies in Spanish corresponding to the two additional classes observed only rarely among Romanian bilinguals (missing object and clitic doubling without PE-marking). As with the Romanian data, we also coded the participants' uses of transitive structures by attending to the animacy features of their referent: human, non-human animate, and inanimate. See (14) and (15) for examples of these strategies as used by Spanish speakers.

(14) Sample transitive strategies in Spanish produced by bilinguals:

a. A-marking + CD:

La   riñó a   la   ranita.
CL.3SG.F.ACC scolded DOM the.DEF.ART.SG.F frog.DIM
'(He/she/it/they) scolded the frog.'

b. A-marking:

Mira otra vez a   la   rana.
looks again DOM the.DEF.ART.SG.F frog
'(He/she/it/they) looks at the frog again.'

c. Unmarked DP:

Tiró la   rana pequeña al   agua.
threw the.DEF.ART.SG.F frog small   to-the water
'(He/she/it/they) threw the small frog to the water.'

d. Accusative clitic:

Todos la   aceptan.
all.PL.M CL.3SG.F.ACC accept
'They all accept it.' (referring to a frog)

---

[5] We take A-marking to be the Spanish equivalent of PE-marking in Romanian.

(15) Sample transitive strategies in Spanish produced by SMs:

    a. A-marking + CD:

       La rana le muerde al sapo.

       The frog CL.3SG bites DOM.the toad

       'The frog bites the toad.'

    b. A-marking:

       Castigó a la rana grande.

       punished DOM the frog big

       '(He/she/it/they) punished the big frog.'

    c. Unmarked DP:

       El niño cogió la rana.

       the boy grabbed the frog

       'The boy grabbed the frog.'

    d. Accusative clitic:

       Estaban todos buscándola.

       were all.PL.M searching-CL.3SG.F.ACC

       'They all were searching for it.' (referring to a frog)

The participants' transitive strategies were the dependent variable in the statistical analyses of the present study whereas independent variables included the categorical variables group (bilinguals, SMs, RMs) and language (Romanian, Spanish) as well as the continuous variables age of onset of acquisition of Spanish, productive vocabulary knowledge, age in years, and years spent in Spain. Before running any statistical analyses, the categorical variables were sum coded, and the continuous variables were standardized.

In addition to descriptive statistics, a series of mixed-effects multinomial logistic regressions (MEMLR) and one generalized linear mixed model (GLMM) were performed to analyze our data. Specifically, sixteen MEMLRs were performed using the *mblogit* function in the *mclogit* package (Elff 2021) in R (R Core Team 2021) with transitive strategy type (PE-marking + CD, PE-marking, Unmarked DP, Clitic) as the dependent variable. Their independent variables, on the other hand, were different in every MEMLR: MEMLR1 included group (bilingual vs. RM) as dependent variable and focused on Romanian language data, MEMLR2 included group (bilingual vs. SM) as dependent variable and focused on Spanish language data, and MEMLR3 included language (Romanian vs. Spanish) and focused on bilingual data only in order to explore the effects of language on the transitive strategy choices among the bilinguals. The remaining MEMLRs focused on either the Spanish or the Romanian data from the bilinguals and explored whether their transitive strategies were shaped by extralinguistic predictors. The Spanish data were analyzed by examining predictors including age of onset of acquisition

of Spanish (MEMLR_SP_4), age in years (MEMLR_SP_5), years spent in Spain (MEMLR_SP_6), amount of Spanish spoken daily (MEMLR_SP_7), productive vocabulary knowledge in Spanish or Spanish MiNT score (MEMLR_SP_8), and exposure to Spanish through reading (MEMLR_SP_9). The Romanian data were explored by investigating the role of similar predictors: age of onset of acquisition of Spanish (MEMLR_RO_4), age in years (MEMLR_RO_5), years spent in Spain (MEMLR_RO_6), amount of Romanian spoken daily (MEMLR_RO_7), productive vocabulary knowledge in Romanian or Romanian MiNT score (MEMLR_RO_8), and exposure to Spanish through reading (MEMLR_RO_9). An additional regression (MEMLR_RO_10) explored whether the strategies observed in the Romanian language dataset, particularly the use of PE-marking, PE-marking with CD and unmarked objects, were predicted by animacy (animate vs. inanimate), definiteness (definite vs. indefinite), specificity (specific vs. non-specific) or group (bilingual vs. RM). All these MEMLRs included participant as a random factor. Finally, a GLMM (GLMM1) was performed using the *glmer* function in the lme4 package (Bates, Kliegl, Vasishth & Baayen 2015) in order to explore variability in the use of clitic doubling in combination with PE-marking. This GLMM included response (PE-marking + CD or PE-marking) as dependent variable, and context (obligatory vs. optional) and group (bilingual vs. RM) as independent variables. The dependent variable was coded as '0' versus '1' while the independent variables were sum coded ('–0.5' vs. '0.5'). The dataset for this GLMM focused on the instances in which bilinguals and RMs produced the strategies under examination (i.e., PE-marking + CD or PE-marking). Two additional GLMMs explored the effects of animacy, definiteness, specificity and group in the use of DOM (1 = marking; 0 = non-marking). In these GLMMs, participant was also included as a random factor, interactions were explored, and nested model comparisons were assessed in order to find the best fit model. Appendices A and B include the R code used to analyze the data as well as their output.

4 Results

4.1 Romanian results

The Romanian data included 409 instances of transitive structures produced by the bilinguals ($n = 165$) and the RMs ($n = 242$). Twenty of those were excluded because they featured clitic dislocations, clitic doubling yet no PE-marking or they presented a null object (see 12e, 13a and 13b above). Additionally, the RMs produced two passive constructions, which were not included in the analysis. Among animate objects, only thirteen objects referred to humans (precisely the boy in the story) while all the others referred to animals. The resulting 387 instances were organized into categories according to transitive structures, lexico-semantic nature of the object to which they referred, and whether they were produced by bilinguals or RMs. **Tables 2, 3** and **4** below include the counts and proportions of the use of transitive strategies in Romanian among these two groups.

	Bilinguals	RMs
Clitic doubling and DOM	3 (37.5%)	1 (20%)
Unmarked noun/DP	1 (12.5%)	1 (20%)
Clitic	4 (50%)	3 (60%)
Total	8 (100%)	5 (100%)

Table 2: Transitive strategies (human objects) in Romanian across groups: count of instances and proportions.

	Bilinguals	RMs
Clitic doubling and DOM	20 (18.87%)	71 (36.98%)
DOM (without CD)	8 (7.55%)	3 (1.56%)
Unmarked noun/DP	17 (16.04%)	55 (28.65%)
Clitic	61 (57.55%)	63 (32.81%)
Total	106 (100%)	192 (100%)

Table 3: Transitive strategies (non-human animate objects) in Romanian across groups: count of instances and proportions.

	Bilinguals	RMs
Unmarked noun/DP	34 (79.07%)	30 (90.91%)
Clitic	9 (20.93%)	3 (9.09%)
Total	43 (100%)	33 (100%)

Table 4: Transitive strategies (inanimate objects) in Romanian across groups: count of instances and proportions.

Table 2 indicates that the number of human objects is negligeable. **Table 3** suggests that the transitive strategies employed by the two groups differ: the proportions indicate that RMs produce more PE-marking combined with clitic doubling as well as more unmarked nouns/ DPs, whereas bilinguals used more clitics. Finally, **Table 4** shows that both groups use the same strategies to refer to inanimate objects. MEMLR1 explored whether the two groups of Romanian

speakers differ in their distribution of transitive strategies when referring to non-human animate objects. 'Clitic' was the intercept of this regression as it is the only strategy unrelated to the distribution of PE-marking. **Table 5** below shows the results yielded by MEMLR1:

		(Intercept)	Group
Coefficients	DOM (with CD)	–0.5805303	–1.3120369
	DOM (without CD)	–2.4355837	0.6620377
	Unmarked noun/DP	–0.7695102	–1.1159267
Standard error	DOM (with CD)	0.2061313	0.4122627
	DOM (without CD)	0.3416312	0.6832623
	Unmarked noun/DP	0.2075893	0.4151787
Zwald	DOM (with CD)	–2.8163128	–3.1825266
	DOM (without CD)	–7.1292785	0.9689363
	Unmarked noun/DP	–3.7068867	–2.6878228
P-value	DOM (with CD)	0.004857834	0.001459961 ***
	DOM (without CD)	<0.0000000001	0.3325769
	Unmarked noun/DP	0.0002098228	0.007191956 ***

Table 5: Results of MEMLR1, exploring between-group differences in their Romanian narrative transitivity strategies referring to non-human animate objects.

These results indicate that the two groups differ in the transitive strategies that they produce. Specifically, bilinguals are less likely to produce PE-marking combined with clitic doubling and unmarked nouns/DPs than their Romanian-speaking monolingual counterparts. These results confirm the tendencies observed in the descriptive statistics in **Table 2**.

GLMM2 and MEMLR_RO_10 examined the effects of animacy, definiteness, specificity and group on the use of PE-marking. GLMM2 included PE-marking versus unmarked noun/DP as dependent variable whereas MEMLR_RO_10 included PE-marking by itself, PE-marking with CD and unmarked noun/DP as dependent variable. MEMLR_RO_10 found that bilinguals are more likely to use DOM without CD than the RMs, in line with the results yielded by MEMLR1. GLMM2 failed to find significant effects.

With the goal of examining the alternance between noun objects, whether marked or not, and clitics, we analyzed the use of clitics regarding distance from their antecedents. We coded if clitics referred to an antecedent in the same sentence (coded as "0"), in the previous sentence (coded as "1") and so forth. Only animate objects were examined as our focus was to explore alternative strategies to the use of DOM. **Table 6** below shows the distribution of clitics across different degrees of distances from their antecedent in both groups.

Distance	Bilinguals	RMs
0 (same sentence)	25 (39.68%)	38 (57.58%)
1 (previous sentence)	29 (46.03%)	22 (33.33%)
2 (two sentences prior)	10 (15.87%)	6 (9.09%)
Total	63 (100%)	66 (100%)

Table 6: Distribution of clitics across degrees of distance from their antecedent in the Romanian spoken by the bilinguals and the RMs.

Table 6 above shows that the bilinguals produce clitics presenting a longer distance from their antecedents than the RMs. It could be argued that RMs prefer referring to the antecedent by using either a marked or an unmarked full DP object. The bilinguals, on the other hand, feature clitics farther away from their antecedent, arguably to avoid the syntactic complexity of DOM.

4.2 Spanish results

The Spanish language data included 396 instances of transitive structures produced by the bilinguals ($n = 200$) and the RMs ($n = 196$). Seventeen of those were excluded because their interpretations were relational (e.g., *Él ya tenía una rana* 'he already had a frog'; see Tippets 2010): seven of those were produced by the bilinguals and ten of them were produced by the SMs. None of them included DOM. Additionally, one bilingual speaker produced a passive construction, and a monolingual speaker produced a dislocated clitic in combination with a marked non-human animate object. Both structures were excluded from further analysis. **Tables 7, 8** and **9** show the resulting 377 instances of transitive strategies included in the analyses, which were organized into the same four categories used to analyze the Romanian dataset.

MEMLR2 explored whether the two groups differ in their distribution of transitive strategies when referring to non-human animate objects. 'Clitic' was the intercept of this regression as it is the only strategy unrelated to the distribution of A-marking. Also, due to the low number in the 'Clitic doubling and DOM' category, this category was combined with the 'DOM' category. **Table 10** below shows the results yielded by MEMLR2:

	Bilinguals	SMs
DOM	1 (33.33%)	0 (0%)
Clitic	2 (66.67%)	1 (100%)
Total	3 (100%)	1 (100%)

Table 7: Transitive strategies (human objects) in Spanish across groups: count of instances and proportions.

	Bilinguals	SMs
Clitic doubling and DOM	5 (3.91%)	1 (0.70%)
DOM	41 (32.03%)	53 (37.32%)
Unmarked noun/DP	10 (7.81%)	11 (7.75%)
Clitic	72 (56.25%)	77 (54.23%)
Total	128 (100%)	142 (100%)

Table 8: Transitive strategies (non-human animate objects) in Spanish across groups: count of instances and proportions.

	Bilinguals	SMs
Unmarked noun/DP	51 (87.93%)	37 (82.22%)
Clitic	7 (12.07%)	8 (17.78%)
Total	58 (100%)	45 (100%)

Table 9: Transitive strategies (inanimate objects) in Spanish across groups: count of instances and proportions.

		(Intercept)	Group
Coefficients	DOM	–0.420580189	–0.083689757
	Unmarked noun/DP	–1.968086762	–0.008144905
Standard error	DOM	0.1582037	0.3164073
	Unmarked noun/DP	0.2483630	0.4967260

(Contd.)

		(Intercept)	Group
Zwald	DOM	–2.65847312	–0.26450006
	Unmarked noun/DP	–7.92423484	0.01639718
P-value	DOM	0.0078495610	0.7913946
	Unmarked noun/DP	<0.0000000001	0.9869175

Table 10: Results of MEMLR2, exploring between-group differences in their Spanish narrative transitivity strategies referring to non-human animate objects.

These results indicate that the two groups use these strategies at similar rates. The lack of significant group effects confirms the tendencies observed in the descriptive statistics.

GLMM3 examined the effects of animacy, definiteness, specificity and group on the use of PE-marking. GLMM3 included A-marking versus unmarked noun/DP as dependent variable. GLMM3 found that definiteness plays a role in the use of DOM in both groups of Spanish speakers (β = 2.59; SE = 1.16; z = 2.23; p = 0.03); in particular, definite objects receive more DOM than indefinite objects.

As with the Romanian data, we analyzed the use of clitics regarding distance from their antecedents following the same coding. **Table 11** below shows the distribution of clitics across different degrees of distances from their antecedent in both groups.

As with the Romanian data, **Table 11** shows that the bilinguals produce clitics featuring a longer distance from their antecedents than the SMs. One could argue that SMs prefer strategies other than clitics when the distance to the antecedent increases whereas the bilinguals might rely on clitic production as an avoidance strategy regarding the syntactic complexity of DOM.

Distance	Bilinguals	SMs
0 (same sentence)	24 (32.43%)	36 (46.15%)
1 (previous sentence)	38 (51.35%)	40 (51.28%)
2 (two sentences prior)	11 (11.86%)	2 (2.56%)
4 (four sentences prior)	1 (1.35%)	0 (0%)
Total	74 (100%)	78 (100%)

Table 11: Distribution of clitics across degrees of distance from their antecedent in the Spanish spoken by the bilinguals and the SMs.

4.3 Variability within the bilingual group

This section focuses on exploring predictors that may shape the variability found within the bilingual group, specifically within their Romanian production as no differences were found between their Spanish and the production of the SMs. MEMLR3, nevertheless, explored the effects of language on the bilinguals by examining the strategies that they used in both Spanish and Romanian to refer to non-human animate objects. For this analysis, DOM uses, with or without clitic doubling, were grouped into a single category. Counts and proportions of these strategies can be seen in **Table 12** below.

	Romanian	Spanish
DOM (with or without CD)	28 (26.41%)	46 (35.94%)
Unmarked noun/DP	17 (16.04%)	10 (7.81%)
Clitic	61 (57.55%)	72 (56.25%)
Total	106 (100%)	128 (100%)

Table 12: Transitive strategies in Romanian versus Spanish among the bilinguals: count of instances and proportions.

In both languages, bilinguals favored the use of clitics, followed by DOM and finally by unmarked nouns or DPs. This similarity across languages was confirmed by the results yielded by MEMLR3, which did not find significant effects of language.

The remaining MEMLRs focus on either the Spanish or the Romanian data from the bilinguals only and explore whether their transitive strategies were shaped by extralinguistic predictors, containing information gathered with the LEAP-Q or the MiNT. For the Spanish data, MEMLR_SP_4 examined the role of age of onset of acquisition of Spanish (range = 15–37; M = 20.72; SD = 2.57) yet failed to find significant age of acquisition of Spanish effects on the bilinguals' production of transitive strategies in Spanish. MEMLR_SP_5 explored the effects of age in years (range = 21–49; M = 30.89; SD = 8.04) on the bilinguals' transitive strategies in Spanish, but no effects were found either. MEMLR_SP_6 focused on years spent living in Spain (range = 7–14; M = 9.61; SD = 2.57); however, no significant effects were detected. MEMLR_SP_7, which focused on how often bilinguals speak Spanish daily (range = 40–90/100; M = 63.61; SD = 15.89), did not find significant effects. The only predictor containing data from a source different than the LEAP-Q was productive vocabulary knowledge in Spanish or Spanish MiNT score. MEMLR_SP_8 explored the role of productive vocabulary knowledge in Spanish (or Spanish MiNT score: M = 57.28/67; SD = 3.97) on the bilinguals' transitive strategies in Spanish and failed to find significant effects. Finally, MEMLR_SP_9 examined the role of exposure to Spanish through reading (range = 3–10/10; M = 8.47; SD = 2.21) and said strategies and also failed to find effects.

For the Romanian dataset, MEMLR_RO_4 investigated age of onset of acquisition of Spanish effects (range = 15–37; M = 20.72; SD = 2.57) on their transitive strategies in Romanian, but no significant effects of age of Spanish acquisition were found. MEMLR_RO_5 explored the influence of participants' ages in years (range = 21–49; M = 30.89; SD = 8.04) on their transitive strategies in Romanian, yet no significant effects were observed. MEMLR_RO_6 examined the role of years of residence in Spain (range = 7–14; M = 9.61; SD = 2.57), but no significant effects were detected. MEMLR_RO_7, focusing on the frequency of Romanian spoken daily (range = 10–60/100; M = 33.33; SD = 16.00), did not reveal significant effects either. MEMLR_RO_8 investigated the impact of productive vocabulary knowledge in Romanian (or Romanian MiNT score: M = 59.39/67; SD = 3.69) on the bilinguals' use of transitive strategies in Romanian, but likewise found no significant effects. Finally, MEMLR_RO_9 examined the role of exposure to Spanish through reading (range = 3–10/10; M = 8.47; SD = 2.21) and said strategies and also failed to find any effects.

Finally, a GLMM was performed to explore variability in the use of clitic doubling in combination with PE-marking in the bilinguals' Romanian in comparison with the RMs'. This GLMM included response (PE-marking + CD or PE-marking) as dependent variable, and context (obligatory vs. optional) and group (bilingual vs. RM) as independent variables. For the purpose of consistency, this analysis focused only on non-human animate objects. **Table 13** below shows the counts and proportions of the uses of PE-marking with and without CD across contexts and groups.

Group	Context	Strategy	Counts and proportions
RMs	Obligatory	PE-marking	1 (1.35%)
		CD + PE-marking	38 (51.35%)
	Optional	PE-marking	2 (2.70%)
		CD + PE-marking	33 (44.59%)
Total in RMs			74 (100%)
Bilinguals	Obligatory	PE-marking	4 (14.29%)
		CD + PE-marking	7 (25.00%)
	Optional	PE-marking	4 (14.29%)
		CD + PE-marking	13 (46.43%)
Total in bilinguals			28 (100%)

Table 13: Use of PE-marking with and without CD across contexts and groups.

The raw data shows that the bilinguals use PE-marking without clitic doubling more frequently than the RMs (14.29% and 14.29% versus 1.35% and 2.70% for obligatory and optional contexts, respectively). Nevertheless, the GLMM did not find effects of context, group or an interaction between these predictors.

It is noteworthy to mention that not all the 32 instances of DOM that the bilinguals produced were grammatical: for example, divergences were found regarding gender agreement between the clitic doubling and the marked direct object (see 16), regarding the form of *pe* (see 17) or regarding the use of the definite article (see 18). Appendix C includes the 32 instances of PE-marking (with and without DOM) produced by the bilinguals along with the rest of the transitive strategies examined in this study.

(17) Gender disagreement:
Broasc-a *cel pe care l- a avut
frog-the.DEF.ART.SG.F DEM.ART.SG.M DOM who CL.3SG.M.ACC has had
'The frog that (he/she/it/they) had.'

(18) *de* instead of *pe*:
nu l- a ascultat *de copil
not CL.3SG.M.ACC has listened of child
'(He/she/it/they) did not listen to the child.'

(19) Determiner added to the noun in addition to clitic doubling and PE-marking:
Cățel-ul încearcă să îl îmbune pe
dog-the.DEF.ART.SG.M tries SUB CL.3SG.M.ACC appease DOM
*băieț-el-ul.
boy-DIM-the.DEF.ART.SG.M
'The dog tries to appease the boy.'

4.4 Summary

Results show that the bilinguals' transitive strategies in Spanish are consistent with those produced by the SMs; however, the picture is different in their native language: while RMs produce transitive strategies in a more distributed fashion, bilinguals produce fewer PE-marking and unmarked nouns and DPs and favor clitics. Additional observations indicated that the bilinguals use more clitics than the comparison groups when the clitics present a longer distance from the antecedent to which they refer. When comparing the transitive strategies produced by the bilinguals in their two languages, no significant differences were found. Additional analyses explored the role of extralinguistic factors as well as of productive vocabulary knowledge in both Spanish and Romanian; nevertheless, no effects were found. Finally, an analysis focusing on clitic doubling across contexts and groups was not able to pinpoint significant predictors. All R codes and outputs for all models are included in Appendices A and B.

5 Discussion

The current study investigated the acquisition of Spanish DOM and explores the potential attrition of Romanian DOM in native Romanian speakers who acquired Spanish as an L2 after puberty and have lived in Spain for approximately 10 years. Divergences from both the L1 and the L2 monolingual patterns are referred to as bidirectional crosslinguistic influence (BCLI) (Pavlenko & Jarvis 2002). Some of these divergences are the result of avoiding complex or yet-to-be-acquired structures (Schmid 2004; Schmid & De Bot 2004; Schmid et al. 2013). We analyzed production data gathered through narrative tasks, aligning with the approaches of Montrul & Bateman (2020b) and Avram et al. (2023). By examining narratives in both Spanish and Romanian, we sought to complement previous findings derived from controlled tasks such as elicited production tasks and acceptability judgment tasks (López Otero 2020; 2022).

Our RQ1 focused on Spanish and their acquisition as an L2 by the bilingual group. Specifically, we inquired about the transitive strategies used by the bilinguals in Spanish and whether these strategies were predicted by extralinguistic variables. We hypothesized that the bilinguals have acquired the animacy-driven nature of DOM in Spanish and that their productive knowledge is similar to that of the SMs, in line with previous studies investigating the acquisition of DOM in Spanish among L1 speakers of languages featuring DOM systems (Montrul & Gürel 2015; Montrul 2019). We also argued that the lack of activation for production or production of Spanish may lead to variability in the L2 speakers' use of DOM (Paradis 1993; 1996; Putnam & Sánchez 2013).

Results show that the distributions of transitive strategies in the bilinguals' and the SMs' production are not different. Additionally, the optionality in the use of DOM with non-human animate objects precludes us from determining the ungrammaticality of any use or non-use of DOM preceding objects referring to animals among the bilinguals. Indeed, both the bilinguals and the SMs produce instances of DOM use and non-use preceding animate objects (e.g., Bilingual4: *dejan A la rana grande* 'they leave the big frog'; Bilingual7: *para salvar Ø la rana pequeña* 'in order to save the small frong'; SM34: *mirando mal A la rana* 'by looking at the frog badly'; SM32: *el niño cogió Ø la rana* 'the boy took the frog'). These results indicate that the bilinguals are at an end-state of acquisition stage regarding their transitive strategies in their L2 Spanish. These findings are consistent with previous literature documenting the facilitative role of speaking an L1 featuring DOM when learning DOM in an L2 (Montrul & Gürel 2015; Montrul 2019). These findings confirm our H1a. However, a descriptive analysis indicated that the bilinguals use more clitics than the SMs when referring to antecedents mentioned two or more sentences prior. Finally, the lack of significant effects of extralinguistic factors on the distribution of transitive strategies among the bilinguals may be the result of the group's homogeneity as they all appear to have acquired the distribution of Spanish DOM, and their language backgrounds are similar: all of the bilinguals are L2 speakers who moved to Spain and started speaking Spanish after puberty and have lived in a monolingual region of Spain for around 10 years.

Our RQ2 focused on the maintenance of Romanian, the bilinguals' L1. Specifically, we investigated the use of transitive structures in Romanian among the bilinguals and whether these structures were predicted by extralinguistic variables. We hypothesized that the bilinguals maintain knowledge of DOM in their L1, in line with previous works on the maintenance of Romanian as a home language in non-Romanian-speaking societies (Montrul & Bateman 2020a, b). Specifically, we expected the use of DOM among the bilinguals to remain similar to that of Romanian monolingual populations. However, we hypothesized that potential between-group differences may be accounted for by different levels of activation of Romanian (Putnam & Sánchez 2013), which can be operationalized by examining their extralinguistic variables, including lexical access, age of arrival to Spain, length of residence in Spain, and patterns of language use, including amount of exposure to Spanish via reading. We argued that variability in the bilinguals' maintenance of Romanian transitive strategies would be observed in the simplification of DOM in Romanian, which would lead to the abandonment of clitic doubling, and in the use of DOM following an animacy-driven distribution as the result of crosslinguistic influence from Spanish (López Otero 2020; 2022).

Results from the Romanian language dataset indicate that the distribution of transitive strategies in the bilinguals is different from that shown by the RMs. In particular, bilinguals use fewer instances of PE-marking combined with clitic doubling and of unmarked DPs, relying on accusative clitics as their more frequent transitive strategy. As with the Spanish language data, a descriptive analysis also suggested that the bilinguals use more clitics than the RMs when referring to antecedents mentioned two or more sentences prior. Overall, these findings indicate that the bilinguals may be avoiding PE-marking in their L1 due to syntactic complexity. Further analyses investigated between-group differences in the use of clitic doubling with PE-marking in Romanian, yet, despite overall numbers showing more instances of PE-marking without clitic doubling produced by the bilinguals, no significant differences were found. This reduced use of DOM among the bilinguals suggests that the bilinguals may be experiencing L1 attrition. These signs of early attrition in the DOM of L1 Romanian speakers contrast with previous studies on the acquisition and maintenance of DOM in L1 Romanian (Montrul & Bateman 2020a, b). This difference arguably stems from the fact that the Romanian speakers in Montrul and Bateman (2020a, b) live in a society where the dominant language does not feature DOM, which may preclude them from experiencing crosslinguistic influence from another DOM system. These findings refute our H2a, which stated that no differences between the bilinguals and the RMs would be observed. Additionally, no extralinguistic factors were determined to be predictors of the bilinguals' distribution of transitive strategies. As we did for the Spanish language results, we argue that the homogeneity found within the group may account for the lack of effects on within-group variability.

In light of these findings, we cannot claim that the bilinguals are experiencing BCLI in their languages; instead, their Spanish is at an end-state of acquisition stage while their Romanian may be showing signs of early attrition. If we complement the findings of the present study with those from the two studies that examine knowledge of DOM in Spanish and Romanian in the same group of bilinguals (López Otero 2020; 2022), we can determine that their receptive grammatical knowledge in Romanian, investigated with the use of an AJT, does not show signs of attrition. On the other hand, their production of DOM in an EPT was found to present signs of L1 attrition, as DOM was omitted when preceding demonstrative pronouns, which are categorically marked in Romanian. These asymmetrical findings are consistent with proposals on language acquisition and maintenance in bilingual populations (Putnam & Sánchez 2013): while receptive grammatical knowledge may remain stable, online production is more prone to present variability and patterns divergent from the monolingual baseline (Ellis 2005a, 2005b; Geeslin & Gudmestad 2008; Shiu et al. 2018; Hur 2020; 2021; López Otero 2020; 2022). The findings in this study are in line with previous works on DOM in Catalan-Spanish bilinguals, whose use of DOM in Catalan presents variability, some of which could be accounted for by the modality or methodology employed to gather linguistic data (see Puig-Mayenco et al. 2017; Perpiñán 2018).

According to Schmid (2011), attrition is defined as the loss of access to features or structures that were acquired previously, which would lead one to conclude that the group of bilinguals in this study are not experiencing L1 attrition, as their receptive grammatical knowledge is still sensitive to grammaticality. Their production, however, seems to indicate the opposite. In particular, their controlled production, as measured by an EPT, included instances of ungrammatical omissions of DOM in Romanian (López Otero 2022) while their semi-controlled production, which was elicited by a narrative task in the current study, suggests that the bilinguals are avoiding syntactically complex structures in their L1, namely DOM. Nevertheless, no demonstrative pronoun was used in object position by the bilinguals in Romanian in the narratives analyzed in the present study, which precludes us from analyzing L1 attrition in the use of demonstrative pronoun objects in their narratives. Overall, these findings indicate the importance of combining different methodologies when examining language acquisition and maintenance. This view is consistent with previous studies on L1 attrition (Schmid 2004; Schmid & De Bot 2004; Schmid et al. 2013), who argue that avoidance strategies are developed in order to cope with complex structures that may present signs of attrition.

6 Conclusion

The current study sheds light on the acquisition of Spanish DOM and the maintenance of Romanian DOM in Romanian-speaking L2 speakers of Spanish. The analysis of production data derived from narrative tasks revealed that the bilingual group's transitive strategies in Spanish did not differ from those of SMs, suggesting an end-state acquisition stage in their use of DOM

in Spanish. However, in Romanian, the bilinguals displayed a reduced use of DOM compared to RMs, which could be interpreted as evidence of early attrition in their L1.

This work contributes to the study of language maintenance and attrition, as it underscores the importance of employing multiple methodologies to comprehensively understand these phenomena. In particular, the use of semi-controlled production tasks in combination with controlled production tasks and acceptability judgment tasks allows us to pinpoint the source of variability in the bilinguals' knowledge: specifically, in this study, bilinguals avoid syntactically complex structures, whereas results from a controlled production task indicate that the bilinguals produce ungrammatical sentences, while results from an acceptability judgment task indicate that the bilinguals are still sensitive to grammaticality (López Otero 2020; 2022). This asymmetry is consistent with previous proposals on language maintenance (Putnam & Sánchez 2013).

The reduced number of participants in the bilingual group in addition to the homogeneity in their language background may account for the lack of effects of extralinguistic factors on their distribution of transitive strategies. Future studies should include more participants, who could present a wider range of number of years living immersed in the L2, of age of onset of acquisition of the L2 or of overall proficiency. This could offer insights into the process preceding the current study. Similarly, as most of the participants in this study were female, collecting data from a more balanced group in terms of gender may shed light on gender effects on this process.

Data availability

Appendices A, B, and C containing the data and analysis scripts for this study can be found at the following link: https://osf.io/bwqh7/?view_only = 3594e88c804e48adbf0a5810b88c82eb.

Ethics and consent

This study was approved by Rutgers University Institutional Review Board (Protocol #: 17-546M), certifying that the study was performed in accordance with the ethical standards as laid down in the 1964 Declaration of Helsinki and its later amendments. All information provided in the manuscript and in supplementary materials such as raw data sets are stripped of identifying details to protect human subjects' privacy and anonymity.

Acknowledgments

Competing interests

The authors have no competing interests to declare.

References

Abutalebi, Jubin & Green, David. 2007. Bilingual language production: The neurocognition of language representation and control. *Journal of Neurolinguistics* 20(3). 242–275. DOI: https://doi.org/10.1016/j.jneuroling.2006.10.003

Aissen, Judith. 2003. Differential object marking: Iconicity vs. economy. *Natural Language & Linguistic Theory* 21(3). 435–483. DOI: https://doi.org/10.1023/A:1024109008573

Anagnostopoulou, Elena. 1994. Clitic dependencies in Modern Greek. Ph.D. dissertation, University of Salzburg.

Anagnostopoulou, Elena. 1997. Clitic left dislocation and contrastive left dislocation. In Anagnostopoulou, Elena & van Riemsdijk, Henk & Zwarts, Frans (eds.), *Materials on left dislocation*, 151–192. Amsterdam: John Benjamins. DOI: https://doi.org/10.1075/la.14.11ana

Anagnostopoulou, Elena. 2005. Clitic doubling. In Everaert, Martin & van Riemsdijk, Henk (eds.), *The Blackwell companion to syntax*, 519–581. Oxford: Blackwell. DOI: https://doi.org/10.1002/9780470996591.ch14

Arechabaleta Regulez, Begoña & Montrul, Silvina. 2023. Production, acceptability, and online comprehension of Spanish differential object marking by heritage speakers and L2 learners. *Frontiers in Psychology* 14. 1106613. DOI: https://doi.org/10.3389/fpsyg.2023.1106613

Avram, Larisa. 2019. Differential object marking: Language change and language acquisition. Paper presented at *Constructions of Identity 10*. Babes Bolyai University, Cluj, 24–26 October 2019.

Avram, Larisa & Mardale, Alexandru & Soare, Elena. 2023. Differential object marking and diachronic incrementation in child heritage Romanian. *Studies in Linguistics in Honour of Virginia Hill: Romance, Balkan and Beyond. Special issue of Revue Roumaine de Linguistique* 68. 103–116. DOI: https://doi.org/10.59277/RRL.2023.1-2.07

Avram, Larisa & Zafiu, Rodica. 2017. Semantic hierarchies in the diachronic evolution of differential object marking in Romanian. In Dragomirescu, Adina & Nicolae, Alexandru & Stan, Camelia & Zafiu, Rodica (eds.), *Sintaxa ca mod de a fi. Omagiu Gabrielei Pană Dindelegan, la aniversare*, 29–42. Bucharest: Editura Universității din București.

Bates, Douglas & Kliegl, Reinhold & Vasishth, Shravan & Baayen Harald. 2015. Parsimonious mixed models. *arXiv preprint arXiv:1506.04967*.

Bedore, Lisa M. & Peña, Elizabeth D. & Summers, Connie L. & Boerger, Karin M. & Resendiz, Maria D. & Greene, Kai & Bohman, Thomas M. & Gillam, Ronald B. 2012. The measure matters: Language dominance profiles across measures in Spanish–English bilingual children. *Bilingualism: Language and Cognition* 15(3). 616–629. DOI: https://doi.org/10.1017/S1366728912000090

Bel, Aurora & Benito Galdeano, Rut. 2024. Differential Object Marking in structurally complex contexts in Spanish: Evidence from bilingual and monolingual processing. *Languages* 9(6). 211. DOI: https://doi.org/10.3390/languages9060211

Benito Galdeano, Rut. 2017. Differential object marking in Catalan: Contexts of appearance and analysis. Master's thesis, Universitat de Barcelona.

Bialystok, Ellen & Craik, Fergus & Luk, Gigi. 2008a. Cognitive control and lexical access in younger and older bilinguals. *Journal of Experimental Psychology: Learning, Memory, and Cognition* 34(4). 859. DOI: https://doi.org/10.1037/0278-7393.34.4.859

Bialystok, Ellen & Craik, Fergus & Luk, Gigi. 2008b. Lexical access in bilinguals: Effects of vocabulary size and executive control. *Journal of Neurolinguistics* 21(6). 522–538. DOI: https://doi.org/10.1016/j.jneuroling.2007.07.001

Bossong, Georg. 1991. Differential object marking in Romance and beyond. *New Analyses in Romance Linguistics* 69. 143–170. DOI: https://doi.org/10.1075/cilt.69.14bos

Brugè, Laura & Brugger, Gerhard. 1996. On the accusative A in Spanish. *Probus* 8. 1–51. DOI: https://doi.org/10.1515/prbs.1996.8.1.1

Buja, Elena. 2008. *Relating Events in Narrative. A Case Study of Romanian*. Brașov: Editura Universității "Transilvania" din Brașov.

Cairncross, Alex & Vogelzang, Margreet & Tsimpli, Ianthi. 2023. Pseudorelatives, relatives, and L1 attrition: Resilience and vulnerability in parser biases. *International Journal of Bilingualism*, 13670069231198224. DOI: https://doi.org/10.1177/13670069231198224

Cinque, Guglielmo. 1990. *A'-dependencies*. Cambridge, MA: MIT Press.

Ciovârnache, Cristina & Larisa Avram. 2013. Specificity and animacy in the acquisition of differential object marking in Persian as L2. *Revue Roumaine de Linguistique* 58(4). 419–438.

Cornilescu, Alexandra. 2000. Notes on the Interpretation of the Prepositional Accusative in Romanian. *Bucharest Working Papers in Linguistics* 2(2). 91–106.

Cornilescu, Alexandra. 2006. On Clitic Doubling and Parasitic Gaps in Romanian. *Revue Roumaine de Linguistique* LI. 23–42.

Cornilescu, Alexandra. 2020. Ditransitive constructions with differentially marked direct objects in Romanian. In Pineda, Anna & Mateu, Jaume (eds.), *Dative constructions in Romance and beyond*. Berlin: Language Science Press, pp. 117–42.

Cuza, Alejandro & Pérez-Leroux, Ana Teresa & Sánchez, Liliana. 2013. The role of semantic transfer in clitic drop among simultaneous and sequential Chinese-Spanish bilinguals. *Studies in Second Language Acquisition* 35. 93–125. DOI: https://doi.org/10.1017/S0272263112000691

De Carli, Fabrizio & Dessi, Barbara & Mariani, Manuela & Girtler, Nicola & Greco, Alberto & Rodriguez, Guido & Salmon, Laura & Morelli, Mara. 2015. Language use affects proficiency in Italian–Spanish bilinguals irrespective of age of second language acquisition. *Bilingualism: Language and Cognition* 18(2). 324–339. DOI: https://doi.org/10.1017/S1366728914000054

Dobrovie-Sorin, Carmen. 1994. *The syntax of Romanian: Comparative studies in Romance*. Walter de Gruyter. DOI: https://doi.org/10.1515/9783110886597

Elff, Martin. 2021. *Multinomial logit models with or without random effects or overdispersion*. R package version 0.8.7.3. https://CRAN.R-project.org/package=mclogit

Ellis, Rod. 2005a. Measuring implicit and explicit knowledge of a second language. A psychometric study. *Studies in Second Language Acquisition* 27. 141–72. DOI: https://doi.org/10.1017/S0272263105050096

Ellis, Rod. 2005b. Planning and task-based research: Theory and research. In Ellis, Rod (ed.), *Planning and Task-Performance in a Second Language*, 29–42. Amsterdam: John Benjamins. DOI: https://doi.org/10.1075/lllt.11.03ell

Farkas, Donka. 1978. Direct and indirect object reduplication in Romanian. In Farkas, Donka & Jacobseb, Wesley M. & Todrys, Karol W. (eds.), *Papers from the 14th regional meeting of the Chicago Linguistic Society*. Chicago: Chicago Linguistic Society, pp. 88–97.

Farkas, Donka & von Heusinger, Klaus. 2003. Referential stability and differential case marking in Romanian. Paper presented at *XV European Summerschool in Logic, Language and Information (ESSLLI), Workshop Direct Reference and Specificity*. Vienna, August 2003.

Geeslin, Kimberly L. & Gudmestad, Aarnes. 2008. Comparing interview and written elicitation tasks in native and non-native data: Do speakers do what we think they do? In Bruhn de Garavito, Joyce & Valenzuela, Elena (eds.), *Selected proceedings of the 10th Hispanic Linguistics Symposium*, 64–77. Somerville: Cascadilla Proceedings Project.

Giancaspro, David. 2019. The late (r) bird gets the verb? Effects of age of acquisition of English on adult heritage speakers' knowledge of subjunctive mood in Spanish. *Languages* 4(3). 69. DOI: https://doi.org/10.3390/languages4030069

Gollan, Tamar H. & Slattery, Timothy J. & Goldenberg, Diane & Van Assche, Eva & Duyck, Wouter & Rayner, Keith. 2011. Frequency drives lexical access in reading but not in speaking: the frequency-lag hypothesis. *Journal of Experimental Psychology: General* 140(2). 186. DOI: https://doi.org/10.1037/a0022256

Gollan, Tamar H. & Weissberger, Gali H. & Runnqvist, Elin & Montoya, Rosa I. & Cera, Cynthia M. 2012. Self-ratings of spoken language dominance: A Multilingual Naming Test (MINT) and preliminary norms for young and aging Spanish–English bilinguals. *Bilingualism: Language and Cognition* 15(3). 594–615. DOI: https://doi.org/10.1017/S1366728911000332

Guijarro-Fuentes, Pedro & Marinis, Theodoros. 2009. The acquisition of the personal preposition a by Catalan-Spanish and English-Spanish bilinguals. In Collentin, Joseph & García, Maryellen & Lafford, Barbara & Marcos Marín, Francisco (eds.), *Selected proceedings of the 11th Hispanic Linguistics Symposium*, 81–92. Somerville: Cascadilla Proceedings Project.

Hill, Virginia. 2013. The direct object marker in Romanian: A historical perspective. *Australian Journal of Linguistics* 33(2). 140–151. DOI: https://doi.org/10.1080/07268602.2013.814527

Hill, Virginia & Mardale, Alexandru. 2021. *The diachrony of Differential Object Marking in Romanian*. Oxford: Oxford University Press. DOI: https://doi.org/10.1093/oso/9780192898791.001.0001

Hur, Esther. 2020. Verbal lexical frequency and DOM in heritage speakers of Spanish. In Mardale, Alexandru & Montrul, Silvina (eds.), *The acquisition of Differential Object Marking: Trends in language acquisition research*, 207–235. Amsterdam: John Benjamins. DOI: https://doi.org/10.1075/tilar.26.08hur

Hur, Esther. 2021. *The effects of lexical properties of nouns and verbs on L2 and heritage Spanish differential object marking*. Doctoral dissertation, Rutgers University—New Brunswick.

Iatridou, Sabine. 1991. *Clitics and island effects*. MS, MIT.

Irimia, Monica Alexandrina. 2020a. Types of structural objects. Some remarks on differential object marking in Romanian. In Bárány, András & Kalin, Laura (eds.), *Case, agreement and their interactions. New perspectives on Differential Argument Marking*. Berlin: Mouton de Gruyter, pp. 77–126. DOI: https://doi.org/10.1515/9783110666137-003

Irimia, Monica Alexandrina. 2020b. Variation in differential object marking: On some differences between Spanish and Romanian. *Open Linguistics* 6. 424–462. DOI: https://doi.org/10.1515/opli-2020-0110

Irimia, Monica Alexandrina. 2023. Interactions between Differential Object Marking and definiteness in standard and heritage Romanian. *Languages* 8. 63. DOI: https://doi.org/10.3390/languages8010063

Irimia, Monica Alexandrina & Cristina Guardiano. 2024. Balkan Romance and Southern Italo-Romance: Differential Object Marking and its variation. *Languages* 9. 273. DOI: https://doi.org/10.3390/languages9080273

Jimenez, Abril & López Otero, Julio César & DePue, Isabella. 2024. L2 Spanish clitics among Brazilian Portuguese-speaking learners: The predictive role of lexical knowledge. *Glossa: A Journal of General Linguistics* 9(1). DOI: https://doi.org/10.16995/glossa.11036

Judy, Tiffany & Iverson, Michael. 2020. The distribution of Differential Object Marking in L1 and L2 River Plate Spanish. In Mardale, Alexandru & Montrul, Silvina (eds.), *The acquisition of Differential Object Marking trends in language acquisition research*, 133–160. Amsterdam: John Benjamins. DOI: https://doi.org/10.1075/tilar.26.05jud

Kastenbaum, Jessica G. & Bedore, Lisa M. & Peña, Elizabeth D. & Sheng, Li & Mavis, Ilknur & Sebastian-Vaytadden, Rajani & Rangamani, Grama & Vallila-Rohter, Sofia & Kiran, Swathi. 2019. The influence of proficiency and language combination on bilingual lexical access. *Bilingualism: Language and Cognition* 22(2). 300–330. DOI: https://doi.org/10.1017/S1366728918000366

Kayne, Richard. 1994. *The antisymmetry of syntax*. Cambridge, MA: MIT Press.

Kroll, Judith F. & Gollan, Tamar H. & Goldrick, Matthew A. & Ferreira, Victor S. & Miozzo, Michele. 2014. Speech Planning in Two Languages: What Bilinguals Tell Us about Language Production. In Goldrick, Matthew A. & Ferreira, Victor S. & Miozzo, Michele (eds.), *The Oxford Handbook of Language Production*, 165–181. New York: Oxford University Press.

Lardiere, Donna. 2009. Some thoughts on the contrastive analysis of features in second language acquisition. *Second Language Research* 25(2). 173–227. DOI: https://doi.org/10.1177/0267658308100283

Leonetti, Manuel. 2004. Specificity and differential object marking in Spanish. *Catalan Journal of Linguistics* 3. 75–114. DOI: https://doi.org/10.5565/rev/catjl.106

Leonetti, Manuel. 2007. *La duplicación pronominal: gramática, semántica y variación lingüística*. Biblioteca Digital Universidad de Alcalá.

Leonetti, Manuel. 2008. Specificity in clitic doubling and in differential object marking. *Probus* 20. 35–69. DOI: https://doi.org/10.1515/PROBUS.2008.002

López, Luis. 2012. *Indefinite objects: Scrambling, choice functions, and differential marking*. Vol. 63. MIT press. DOI: https://doi.org/10.7551/mitpress/9165.001.0001

López Otero, Julio César. 2020. On the acceptability of the Spanish DOM among Romanian-Spanish bilinguals. In Mardale, Alexandru & Montrul, Silvina (eds.), *The acquisition of Differential Object Marking: Trends in language acquisition research*, 161–181. Amsterdam: John Benjamins. DOI: https://doi.org/10.1075/tilar.26.06lop

López Otero, Julio César. 2022. Bidirectional cross-linguistic influence on DOM in Romanian-Spanish bilinguals. *International Journal of Bilingualism* 26(6). 710–731. DOI: https://doi.org/10.1177/13670069211063606

López Otero, Julio César. 2023. Imperatives in heritage Spanish: Lexical access and lexical frequency effects. *Languages* 8(3). 218. DOI: https://doi.org/10.3390/languages8030218

López Otero, Julio César & Cuza, Alejandro & Jiao, Jian. 2023. Object clitic use and intuition in the Spanish of heritage speakers from Brazil. *Second Language Research* 39(1). 161–183. DOI: https://doi.org/10.1177/02676583211017603

López Otero, Julio César & Hur, Esther & Goldin, Michele. 2024. Syntactic optionality in heritage Spanish: How patterns of exposure and use affect clitic climbing. *International Journal of Bilingualism* 28(3). 531–554. DOI: https://doi.org/10.1177/13670069231170691

López Otero, Julio César & Jimenez, Abril. 2022. Productive vocabulary knowledge predicts acquisition of Spanish DOM in Brazilian Portuguese-speaking learners. *Languages* 7(4). 273. DOI: https://doi.org/10.3390/languages7040273

López Otero, Julio César & Jimenez, Abril & Martínez Vera, Gabriel. 2024. Inflected infinitives in SLA: A study of L1-Brazilian Portuguese–L2-Spanish speakers. *Second Language Research.* 02676583241297543. DOI: https://doi.org/10.1177/02676583241297543

Macbeth, Alessandra & Atagi, Natsuki & Montag, Jessica L. & Bruni, Michelle R. & Chiarello, Christine. 2022. Assessing language background and experiences among heritage bilinguals. *Frontiers in Psychology* 13. 993669. DOI: https://doi.org/10.3389/fpsyg.2022.993669

Mardale, Alexandru. 2008. Microvariation within differential object marking: Data from Romance. *Revue Roumaine de Linguistique* 53(4). 449–467.

Mardale, Alexandru. 2010. Éléments d'analyse du marquage différentiel de l'objet dans les langues romanes. *Faits de Langues—Les Cahiers* 2. 161–197. DOI: https://doi.org/10.1163/19589514-035-036-02-900000008

Marian, Viorica & Blumenfeld, Henrike K. & Kaushanskaya, Margarita. 2007. The Language Experience and Proficiency Questionnaire (LEAP-Q): Assessing language profiles in bilinguals and multilinguals. DOI: https://doi.org/10.1044/1092-4388(2007/067)

Mayer, Mercer & Mayer, Marianna. 2003. *One frog too many (A Boy, a Dog, and a Frog)*. Penguin.

Montrul, Silvina. 2010. Dominant language transfer in adult second language learners and heritage speakers. *Second Language Research* 26(3). 293–327. DOI: https://doi.org/10.1177/0267658310365768

Montrul, Silvina. 2019. The acquisition of differential object marking in Spanish by Romanian speakers. *Revista Española de Lingüística Aplicada/Spanish Journal of Applied Linguistics* 32(1). 185–219. DOI: https://doi.org/10.1075/resla.17040.mon

Montrul, Silvina & Bateman, Nicoleta. 2020a. Vulnerability and stability of Differential Object Marking in Romanian heritage speakers. *Glossa: A Journal of General Linguistics* 5(1). DOI: https://doi.org/10.5334/gjgl.1135

Montrul, Silvina & Bateman, Nicoleta. 2020b. Differential object marking in Romanian as a heritage language. In Mardale, Alexandru & Montrul, Silvina (eds.), *The Acquisition of Differential Object Marking: Trends in Language Acquisition Research*, 283–312. Amsterdam: John Benjamins. DOI: https://doi.org/10.1075/tilar.26.11mon

Montrul, Silvina & Bhatt, Rakesh & Girju, Roxana. 2015. Differential object marking in Spanish, Hindi, and Romanian as heritage languages. *Language,* 564–610. DOI: https://doi.org/10.1353/lan.2015.0035

Montrul, Silvina & Bowles, Melissa. 2009. Back to basics: Incomplete knowledge of Differential Object Marking in Spanish heritage speakers. *Bilingualism: Language and Cognition* 12(3). 363–383. DOI: https://doi.org/10.1017/S1366728909990071

Montrul, Silvina & Gürel, Ayşe. 2015. The acquisition of differential object marking in Spanish by Turkish speakers. *The acquisition of Spanish by speakers of less commonly studies languages,* 281–308. DOI: https://doi.org/10.1075/ihll.3.11mon

Montrul, Silvina & Slabakova, Roumyana. 2003. Competence similarities between native and near-native speakers: An investigation of the preterite-imperfect contrast in Spanish. *Studies in second language acquisition* 25(3). 351–398. DOI: https://doi.org/10.1017/S0272263103000159

Odria, Ane & Pineda, Anna. 2023. A micro-comparative approach to DOM in language-contact environments. In Irima, Monica Alexandria & Mardale, Alexandru (eds.) *Differential Object Marking in Romance: Towards microvariation,* 315–347. Amsterdam: John Benjamins. DOI: https://doi.org/10.1075/la.280.12odr

Ormazabal, Javier & Romero, Juan. 2019. Prolegomena to the study of object relations. *Lingvisticae Investigationes* 42(1). 102–131. DOI: https://doi.org/10.1075/li.00031.orm

Paradis, Michel. 1993. Linguistic, psycholinguistic, and neurolinguistic aspects of "interference" in bilingual speakers: The Activation Threshold Hypothesis. *International Journal of Psycholinguistics* 9. 133–145.

Paradis, Michel. 1996. Selective deficit in one language is not a demonstration of different anatomical representation. Comments on Gomez-Tortosa et al. (1995). *Brain and Language* 54. 170–173. DOI: https://doi.org/10.1006/brln.1996.0065

Pavlenko, Aneta & Jarvis, Scott Jarvis. 2002. Bidirectional transfer. *Applied Linguistics* 23(2). 190–214. DOI: https://doi.org/10.1093/applin/23.2.190

Perpiñán, Sílvia. 2018. On convergence, ongoing language change, and crosslinguistic influence in direct object expression in Catalan–Spanish bilingualism. *Languages* 3(2). 14. DOI: https://doi.org/10.3390/languages3020014

Puig-Mayenco, Eloi & Cunnings, Ian & Bayram, Fatih & Miller, David & Tubau, Susagna & Rothman, Jason. 2018. Language Dominance Affects Bilingual Competence and Processing: Evidence from a bidirectional study of unbalanced Catalan/Spanish bilinguals. *Frontiers in Psychology* 1199. DOI: https://doi.org/10.3389/fpsyg.2018.01199

Puig-Mayenco, Eloi & Miller, David & Rothman, Jason. 2017. Adult Outcomes of Early Child Second Language (L2) Acquisition: Differential Object Marking in the Child L2 Spanish of Catalan Natives. In *BUCLD 41: Proceedings of the 41 annual Boston University Conference on Language Development,* 546–558. Somerville, MA: Cascadilla Press.

Putnam, Michael T. & Sánchez, Liliana. 2013. What's so incomplete about incomplete acquisition?: A prolegomenon to modeling heritage language grammars. *Linguistic Approaches to Bilingualism* 3(4). 478–508. DOI: https://doi.org/10.1075/lab.3.4.04put

R Core Team. 2021. R: A language and environment for statistical computing. *Vienna, Austria: R Foundation for Statistical Computing.*

Rinke, Esther & Lago, Sol & Gattei, Carolina Andrea. 2023. Diachronic change and variation in use: Judgments of clitic doubling in Peninsular vs. Rioplatense Spanish. *Isogloss. Open Journal of Romance Linguistics* 9(1). 1–18. DOI: https://doi.org/10.5565/rev/isogloss.293

Sánchez, Liliana. 2019. Bilingual alignments. *Languages* 4(4). 82. DOI: https://doi.org/10.3390/languages4040082

Sánchez, Liliana & Zdrojewski, Pablo. 2013. Restricciones semánticas y pragmáticas al doblado de clíticos en el español de Buenos Aires y de Lima. *Lingüística* 29(2). 271–320.

Schmid, Monika S. 2004. First language attrition: The methodology revised. *International Journal of Bilingualism* 8(3). 239–255. DOI: https://doi.org/10.1177/13670069040080030501

Schmid, Monika S. 2007. The role of L1 use for L1 attrition. *Language Attrition: Theoretical Perspectives,* 135–153. DOI: https://doi.org/10.1075/sibil.33.10sch

Schmid, Monika S. 2011. *Language Attrition.* Cambridge University Press. DOI: https://doi.org/10.1017/CBO9780511852046

Schmid, Monika S. & De Bot, Kees. 2004. Language attrition. *The Handbook of Applied Linguistics,* 210–234. DOI: https://doi.org/10.1002/9780470757000.ch8

Schmid, Monika S. & Köpke, Barbara & De Bot, Kees. 2013. Language attrition as a complex, non-linear development. *International Journal of Bilingualism* 17(6). 675–682. DOI: https://doi.org/10.1177/1367006912454619

Shiu, Li-Ju & Yalçin, Şebnem & Spada, Nina. 2018. Exploring second language learners' grammaticality judgment performance in relation to task design features. *System* 72. 215–25. DOI: https://doi.org/10.1016/j.system.2017.12.004

Teodorescu, Otilia. 2017. *The acquisition of the subject in child Romanian.* Doctoral dissertation, University of Bucharest.

Thane, Patrick D. 2024a. On the acquisition of differential object marking in child heritage Spanish: Bilingual education, exposure, and age effects (in memory of Phoebe Search). *Languages* 9(1). 26. DOI: https://doi.org/10.3390/languages9010026

Thane, Patrick D. 2024b. Acquiring differential object marking in heritage Spanish: Late childhood to adulthood. *International Journal of Bilingualism,* 13670069241229396. DOI: https://doi.org/10.1177/13670069241229396

Ticio, Emma & Avram, Larisa. 2015. The acquisition of differential object marking in Spanish and Romanian: Semantic scales or semantic features? *Revue Roumaine de Linguistique* 60(4). 383–402

Tigău, Alina-Mihaela. 2010. Towards an account of differential object marking in Romanian. *Bucharest Working Papers in Linguistics* 1. 137–159.

Tigău, Alina-Mihaela. 2011. *Syntax and Semantics of the Direct Object in Romance and Germanic Languages.* Bucharest: Editura Universității din București.

Tippets, Ian Robert. 2010. *Differential Object Marking in Spanish: A quantitative variationist study.* Doctoral dissertation, The Ohio State University.

Tomescu, Veronica. 2018. Clitic overextensions in a bilingual context. In Burada, Marinela & Tatu, Oana & Sinu, Raluca (eds.), *Languages in action: Exploring communication strategies and mechanisms*, 183–203. Newcastle upon Tyne: Cambridge Scholars Publishing.

Torrego, Esther. 1998. *The dependencies of objects* 34. MIT Press. DOI: https://doi.org/10.7551/mitpress/2337.001.0001

Torrego, Esther. 1999. El complemento directo preposicional. In Bosque, Ignacio & Demonte, Violeta (eds.), *Gramática Descriptiva de la Lengua Española, II*, 1779–1805. Madrid: Espasa-Calpe.

Tsimpli, Ianthi & Sorace, Antonella & Heycock, Carolina & Filiaci, Francesca. 2004. First language attrition and syntactic subjects: A study of Greek and Italian near-native speakers of English. *International Journal of Bilingualism* 8(3). 257–277. DOI: https://doi.org/10.1177/13670069040080030601

von Heusinger, Klaus & Chiriacescu, Sofiana. 2009. Definite "bare" nouns and pe-marking in Romanian. *Arbeitspapier* 124. 63.

von Heusinger, Klaus & Onea, Edgar. 2008. Triggering and blocking effects in the development of DOM in Romanian. *Probus* 20. 67–110. DOI: https://doi.org/10.1515/PROBUS.2008.003

Wiener, Seth & Tokowicz, Natasha. 2021. Language proficiency is only part of the story: Lexical access in heritage and non-heritage bilinguals. *Second Language Research* 37(4). 681–695. DOI: https://doi.org/10.1177/0267658319877666