The acquisition of differential object marking in 2L1 Romanian

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Abstract. This paper charts the acquisition route of differential object marking (DOM) in Romanian by Hungarian-Romanian simultaneous bilinguals (2L1). The main finding is that these 2L1 children acquire the properties of the DOM system similarly to monolinguals. The only difference targets descriptive DPs, with which marking is constrained by discourse-pragmatics. During the early stages, the 2L1 children undermark these DPs in comparison with age-matched monolinguals. Data from 'frog story' narratives of 4-year-old bilinguals reveal an increase in DOM use with these DPs. The results show that the vulnerability is selective and that it is overcome early. We tentatively account for our findings in terms of the syntax of DOM in Romanian and of positive cross-linguistic interference effects from Hungarian.

1. Introduction

Differential object marking (DOM) is an umbrella term for case-marking of a subset of direct objects constrained by semantic and/or discourse pragmatic features (animacy, affectedness, telicity, definiteness, specificity, topicality) (Bossong 1991, 1998, Aissen 2003, von Heusinger et al. 2008). It often involves optionality (e.g. in Persian, DOM is syntactically optional with indefinite objects; in Romanian, it is syntactically optional with both definite and indefinite lexical DPs). In several languages, it also interacts with clitic doubling (e.g. Romanian, Spanish). But, in spite of the complexity of DOM systems, a growing number of longitudinal studies have been providing evidence that in L1 acquisition DOM emerges early (at approximately age 2) and it is used in a target-like fashion (above 90% accuracy in obligatory contexts) by age 3 (Ketrez 1999, 2015, Rodríguez-Mondoñedo 2008, Argus 2015, Dabašinskienė 2015, Hržica & al. 2015, Ticio & Avram 2015, Uziel-Karl 2015). The picture which emerges from simultaneous bilingual acquisition studies, however, is rather different: later emergence of DOM than in L1 acquisition and higher omission rates (Montrul & Sánchez Walker 2013, Ticio 2015). At first sight, such results are surprising under the assumption that the acquisition process in 2L1 is qualitatively similar to the one in L1 (Meisel 1989, 1994, Paradis & Genesee 1996, de Houwer 2009, among many others). If DOM is acquired early in L1, one would expect simultaneous bilinguals to be equally successful. But similar acquisition does not necessarily exclude the existence of cross-linguistic effects (Müller & Hulk 2000, 2001, Sorace 2004, Sorace & Filiaci 2006, Tsimpli & Sorace 2006) or differences with respect to vulnerable domains. Structures at the interface between syntax and discourse pragmatics have been shown to be vulnerable in 2L1 (Sorace 2004, Tsimpli & Sorace 2006, Sorace & Filiaci 2006). As DOM is, at least in some languages, a phenomenon at the interface between syntax, semantics and discourse pragmatics (see Montrul 2011 for a discussion on DOM as an interface phenomenon), the results reported in previous studies are no longer surprising.

The few available studies on the acquisition of DOM by children in a simultaneous bilingual context investigated DOM in Spanish in a Spanish-English context (Montrul & Sánchez Walker 2013, Ticio 2015, Ortiz Vergara 2013; but see also Parodis & Avram 2018 for an overview of studies on the acquisition of DOM across learning contexts). Given that the availability and the nature of cross-linguistic effects are determined by language specific properties, extending the analysis to other language pairs could shed light on the acquisition of DOM by simultaneous bilingual children. This is precisely the goal of this small-scale study. It extends the investigation to the emergence and the acquisition of DOM in 2L1 Romanian in a Hungarian-Romanian context, a language pair for which, as far as we know, the acquisition of DOM has not been investigated before. Previous 2L1 studies focused on DOM either in spontaneous speech, on the basis of longitudinal data (Ticio 2015), or on elicited production data (Montrul & Sánchez Walker 2013, Ortiz Vergara 2013). In the present study, we use longitudinal data and a corpus of narratives.

The remainder of the paper is organized as follows. In Section 2 we summarize previous studies on the early acquisition of DOM by simultaneous bilingual children. Section 3 offers a brief description of the DOM system of Romanian, with focus on the data that are directly relevant to the present study. It also compares Romanian to Hungarian from the perspective of direct object marking. Section 4 presents the study of the emergence and acquisition of DOM in 2L1 Romanian on the basis of longitudinal data and of a corpus of 'frog story' narratives. The 2L1 data are compared to monolingual data as well as to data of 2L1 Romanian in two different contexts: Hutsul Ukrainian - Romanian and Lipovan Russian - Romanian. The main findings are summarized in Section 5.

2. Previous studies on DOM in 2L1

In spite of the impressive number of studies on adult learning of DOM (Guijarro-Fuentes & Marinis 2007, 2009, Montrul & Bowles 2009, Killam 2011, Guijarro-Fuentes 2012, Martoccio 2012, Ciovârnache & Avram 2013, Montrul & al. 2015, Avram & al. 2016, Nediger & al. 2016a, 2016b, Arechabaleta Regulez 2016, Ponnet & al. 2016, Avram & Ciovârnache 2017) there is little research on the emergence and the early acquisition of DOM in a simultaneous bilingual context. In this section we summarize the main findings reported in these few studies and the proposed accounts.

Montrul (2011) examined the use of the Spanish marker a in narratives by simultaneous and sequential Spanish-English bilinguals (age range 6-11 years), which she compared to the results of a group of Spanish monolinguals. In Spanish, [+animate; +specific] direct objects are differentially marked with a, homophonous with the Dative case marker. Other factors also interact with DOM in this language: the aspectual properties of the predicate, the affectedness of the direct object, the animacy of the subject (Torrego 1998, Rodríguez- Mondonedo 2007). But most L1 and 2L1 acquisition studies, Montrul (2011) included, focused mainly on animacy and specificity. In Montrul's (2011) study the accuracy rate was very high with the monolinguals, but it was lower and subject to individual variation with the bilingual children. Overall, the accuracy score of the simultaneous bilinguals was lower than the score of the sequential bilinguals. No overgeneralization of a was attested.

Similar results are reported in Montrul & Sánchez-Walker (2013), who investigated the use of DOM by school-age bilingual heritage speakers of Spanish (age range 6-17 years) on the basis of two tasks: a picture description task and a story retelling task. The simultaneous bilinguals (mean age 10.1 years) scored a low accuracy rate in both tasks. In the story retelling task they omitted the marker *a* at a rate of approximately 30%, whereas age-matched monolinguals omitted DOM at the low rate of 2%. In the picture description task, the bilinguals were approximately 40% accurate with animate objects, while the monolinguals' marking rate was of 84%. Ortiz Vergara (2013) conducted a small-scale experimental study on the use of DOM in matrix sentences (through a question and answer task) and in clitic left dislocation structures (through a sentence completion task). Spanish-English simultaneous bilingual children (heritage speakers of Spanish living in the United States) took part in the study. In matrix contexts, the 7-year-olds obtained very low target levels of use (35%) but the 9-year-olds gave a higher rate of target responses (80%). In the sentence completion task, which tested DOM in clitic left dislocation structures, the younger group did not use a with animate specific objects across the board. The target response rate was very low with the older group (11%). No overgeneralizations of a to inanimate objects were found.

Ticio (2015) offers the only study we know of which documents the *emergence* of DOM in 2L1 Spanish. Her analysis relies on data from 7 longitudinal corpora of Spanish-English simultaneous bilingual children (age range 1;1 – 3;6), which she compares to the results for L1 Spanish reported in Rodríguez-Mondoñedo (2008). The emergence age for the differential marker *a* in 2L1 is subject to individual variation: it is attested early, at 1;9, in the Leo corpus, but only after age 3 in the Simon corpus. The omission rate is higher than in L1 (74.6% in 2L1 vs. 30% in L1). The two groups also differ with respect to error types. The monolinguals make

fewer errors, but the inventory includes both omissions of *a* with animate objects and overgeneralizations of *a* to inanimate objects (Rodríguez-Mondoñedo 2008). In the 2L1 corpora only 2 overgeneralizations of *a* to inanimate objects are attested. In the bilingual corpora early marking applies mainly with pronouns and proper names, which are inherently specified as [+ person] / [+ individuation].

The picture which emerges from these studies is very similar: in 2L1 Spanish DOM emerges later than in L1, the omission rate with animate specific direct objects is significantly higher and it is still attested after age 10, but there is also individual variation. The number of overgeneralization errors (DOM with inanimate objects) is relatively low. These findings have been accounted for in terms of reduced input conditions, transfer from English and structural complexity.

The results of various other studies which analyzed the use of a by adult heritage speakers of Spanish reveal that DOM may present prolonged vulnerability (Montrul 2004, Montrul & Bowles 2009, Montrul & al. 2015, Montrul 2016). Omission rates of the marker a in required contexts do not decrease in time.¹ DOM is also eroded in the grammar of adult heritage speakers of Hindi and Romanian, but the degree of attrition is not as severe as in Spanish (Montrul et al. 2015). This difference highlights the role of

¹ But see Ortiz Vergara (2013), where a significant difference in DOM use between the 7and the 9-year-old participants is reported.

language specific properties, indicating that DOM might not be equally difficult in all simultaneous bilingual contexts.

3. DOM in Romanian bilingual acquisition

3.1 DOM in Romanian

Romanian has an overt differential object marker, *pe*, which precedes the direct object. The use of *pe* is constrained by animacy (Farkas 1978, Dobrovie-Sorin 1994, Farkas & von Heusinger 2003, Mardale 2007, Tigău 2011, Pană Dindelegan 2013). This is illustrated in (1), where only the [+ human] proper name *Ion* allows *pe*-marking, and in (2), where marking is excluded with an inanimate descriptive DP:

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    (1) *(Îl) vizitam *(pe) Ion/ (*pe) Berlinul.
    CL.ACC.3SG.M visited PE Ion/ PE Berlin:the
    'I visited Ion/Berlin.'
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(2) *Vizitam* (**pe*) *satul bunicilor vara*. visited PE village:the grand-parent:GEN.PL summer:the

'I visited my grandparents' village in the summer.'

Pe-marking of inanimate direct objects is not completely excluded, though. With definite pronouns, the animacy constraint weakens (3a). In comparative structures, DOM is used with both animate and inanimate DPs (Pană Dindelegan 2013):

- (3) a. L- am desenat *(pe) ăla de acolo.
 CL.ACC.3SG.M have drawn PE that of there
 'I have drawn the one over there.'
 - b. O tratează ca */? (pe) o prietenă.
 CL.ACC 3SG.F treats as PE a friend
 'They treat her as if she were a friend.'
 - c. Au aruncat hainele ca */?(pe) nişte have thrown clothes:the as PE some zdrenţe.
 rags
 'They have thrown the clothes away as if they were rags.' (from Avram & Zafiu 2017a)

But otherwise, DOM with inanimate objects is infrequent, it occurs mainly in the spoken language and, when it does, it has an upgrading effect (the entity denoted by the marked direct object is treated as animate or topical) (Mardale 2008, Pană Dindelegan 2013).

(4) L- am sters pe "şi".
CL.ACC.3SG.M have wiped PE and
'I have wiped off the "and".'

(from Pană Dindelegan 2013: 130)

DOM is obligatory with animate proper names (see 1 above) and definite pronouns (see 5).

(5) *(Îl) vizitam uneori şi *(pe) el.
CL.ACC.3SG.M visited sometimes and PE him
'I sometimes visited him as well.'

In the contexts in which pe is obligatory, clitic doubling is also obligatory², i.e. with definite pronouns and proper names the object must be both pe-marked and doubled by a clitic. This property has been interpreted in terms of Kayne's generalization (Dobrovie-Sorin 1994). After assigning case to the clitic, the verb can no longer assign case to the DP in post-verbal

² With the exception of bare quantifiers.

position. On this view, the obligatory use of *pe* with proper names and definite pronouns is a syntactic phenomenon.

With definite and indefinite descriptive DPs, the use of *pe* is (syntactically) optional. Marked indefinite DPs are interpreted as specific.

- (6) a. Am desenat pe copil³/copilul.
 have drawn PE child/child:the
 'I have drawn the child.'
 - b. Am desenat (pe) un copil.
 have drawn PE a child
 'I have drawn a child.'

For some speakers, these descriptive DPs do not require obligatory clitic doubling; but when they co-occur with a clitic, the use of *pe* is obligatory:

(7) O caut *(pe) o studentă. CL.ACC.3SG.F look PE a student 'I am looking for a student.'

³ In Romanian, the nominal complement of prepositions (with the exception of cu 'with') cannot occur with the definite article.

In the presence of a clitic, the use of *pe* is obligatory even with bare plurals (8a), which are otherwise incompatible with DOM (8b) because they lack determined reference (Mardale 2007):

- (8) a. Îi ştiu eu *(pe) studenți !
 CL.ACC.3PL.M know I PE students
 'I know students.'
 - b. Cunosc (*pe) studenţi.
 know PE students
 'I know students.'

For other speakers, however, *pe*-marked objects, irrespective of DPtype, are licit only if clitic doubled. In contemporary Romanian there are two competing grammars. The more conservative one allows both single *pe* (as in 6) and *pe*-marked objects which are clitic doubled (as in 8a). The other grammar, which reflects a recent change, accepts *pe*-marked objects only if they are clitic doubled (Avram & Zafiu 2017b). This change is best seen in the comparative analysis of the same texts published in the 1960s-1990s and after 2000, presented in Klimkowski (2017); single *pe* structures in the former have been replaced by *pe*-marked objects doubled by a clitic in the latter. This is in line with the preference for clitic doubling noticed in several studies (Dobrovie-Sorin 1990, Chiriacescu & von Heusinger 2009, David 2015) as well as with Bossong's view that in Romanian DOM is, actually, clitic doubling, a Balkan phenomenon (Bossong 1998:222).

The use of DOM with definite and indefinite descriptive DPs, however, is not truly optional; with these DPs, *pe* signals topicality, discourse prominence (Chiriacescu & von Heusinger 2010), accessibility of the marked object (Chiriacescu 2009). Descriptive DPs tend to be *pe*-marked when they signal that "subsequent information about the referent will follow" (Chiriacescu & von Heusinger 2010).

Summing up, in Romanian *pe*-marking is constrained by animacy and DP-type. It is obligatory with proper names and definite pronouns, with which clitic doubling is also obligatory. With descriptive DPs, irrespective of definiteness, DOM is syntactically optional but it is constrained by discourse pragmatics. With these DPs, for some speakers, clitic doubling is optional. But in the presence of a clitic, the use of *pe* is obligatory with these DPs as well. For other speakers, *pe*-marking obligatorily triggers clitic doubling.

3.2 DOM in Hungarian?

According to Bossong (1998:242) every language in the Uralic family has DOM, but marking is on the verb: "in written and standardized forms of the Ugric languages, the marking is only differential in the verb conjugations." In Hungarian, the choice of the verb conjugation is determined by definiteness, which might be an instantiation of DOM on the verb. There are two verbal paradigms: objective or definite (9a) and subjective or indefinite (9b).

- (9) a. Lát-ott egy film-et.
 see-PST-3SG a film-ACC
 '(S)he saw a film.'
 b. Lát-t-a a film-et.
 - see-PST-DEF-3SG the film-ACC '(S)he saw the film.'

The definite paradigm is realized by the addition of an agreement marker triggered by the definiteness feature on the object. Verb conjugation is definite when the direct object is definite, e.g. with proper names, DPs with a definite determiner, possessive noun phrases, reflexive and reciprocal pronouns, 3rd person pronouns (É.Kiss 2004, Coppock & Wechsler 2010, Bárány 2012).

(10) Néz -i -0 a film-et.
watch-DEF-3SG a film-ACC
'(S)he is watching the film.'

Verb conjugation is subjective/indefinite when the direct object is indefinite

(bare nouns, numerals, certain quantifiers) as well as with 1st and 2nd person direct objects (É.Kiss 2004, Coppock & Wechsler 2010):

(11) Néz-0 egy film-et.
watch-3SG a film-ACC
'(S)he is watching a film.'

However, several recent studies argue against an analysis of definiteness marking in terms of DOM (Haspelmath 2008, Bárány 2012, Rocquet 2013), considering that the 'marked' conjugation has a structural and not a semantic trigger (Bárány 2012). According to this view, the two conjugations are purely formal, with no reference to semantic specificity, topicality, or animacy. Definiteness/lack of definiteness does not uniformly trigger the subjective/objective conjugation. For example, some universal quantifiers trigger the subjective conjugation (e.g. *mindenki* 'everyone') and some the objective conjugation (e.g. *mindegyik* 'every one'). All direct objects are uniformly case-marked by -t (Bárány 2012, Coppock & Wechsler 2010). The distinct conjugation paradigms are only "reminiscent of DOM patterns" (Rocquet 2013: 157). The modern Hungarian system results from the repeated reanalysis of an earlier system of DOM which used to be based on topicality (Coppock & Wechsler 2010, Bárány 2012, É.Kiss 2013, 2014). But modern Hungarian does not have a DOM system.

Returning to acquisition, the language pairing under investigation, Hungarian-Romanian, is similar to the Spanish-English one: one language has overt DOM, the other one does not.

3.3 Predictions for DOM in 2L1 Romanian in a Hungarian–Romanian context

Several authors argue that the acquisition process is identical in L1 and 2L1 (Meisel 1989, 1994, Paradis & Genesee 1996). According to this view, one would expect DOM to be acquired early in 2L1, given the findings reported for DOM in L1 acquisition. But the few existing studies provide convincing evidence that there is a striking difference between the acquisition of DOM by L1 and 2L1 children, with long-term vulnerability and incomplete acquisition in 2L1 (Montrul 2011, Montrul & Bowles 2009, Ticio 2015). Such findings provide evidence in favour of the Interface Hypothesis, according to which language structures involving an interface between syntax and an external domain are difficult in L2 learning and in bilingual acquisition even at advanced stages. Syntactic properties that do not involve external interfaces are not subject to delayed acquisition (Sorace 2004, Sorace & Filiaci 2006, Tsimpli & Sorace 2006, Sorace 2011, 2012). Romanian DOM offers the perfect ground to test this hypothesis. As shown in section 3.1, in Romanian the use of DOM with proper names and definite pronouns is obligatory because of a syntactic requirement. The Interface

Hypothesis predicts, in this case, early acquisition. The use of DOM with definite and indefinite descriptive DPs, on the other hand, is discourse-built. In this case, the Interface Hypothesis predicts vulnerability and delayed acquisition.

Previous studies on the use of DOM by simultaneous bilingual children mentioned cross-linguistic effects as a possible cause of the observed high omission rate. They suggest that in a Spanish-English learning context, the lack of overt differential object markers in English might favour the high omission of the marker *a* in Spanish. The context which we investigate in this study is similar in this respect. Hungarian does not have an overt differential object marker, which might determine a higher omission rate in the use of *pe* by Hungarian-Romanian bilinguals.

4. The Study

4.1 Main questions

The main questions addressed in the present study target the emergence and the early acquisition of *pe*-marking in Romanian by simultaneous bilinguals. Since previous studies on DOM in a 2L1 context showed that it is subject to acquisition delays and long lasting difficulty, the main question is to what extent this is replicated in other 2L1 contexts which involve different language pairs. Does the acquisition of DOM in 2L1 Romanian follow the same path as in L1 or is it subject to delayed acquisition? Given the properties of DOM in Romanian, the Interface Hypothesis (Sorace & Filiaci 2006, Sorace 2011, 2012) predicts an asymmetry between *pe*-marking with proper names and definite pronouns, on the one hand, and descriptive DPs on the other hand. Only the latter should be difficult to acquire in 2L1. The second question which we address is whether this prediction is borne out by the acquisition of DOM by Hungarian-Romanian simultaneous bilinguals.

In order to answer these questions we conducted two studies. The first one focuses on the analysis of *pe*-marking in spontaneous speech on the basis of longitudinal corpora. This allowed us to investigate the emergence and the early acquisition of DOM. The second study used 'frog story' narratives, extending the investigation to older groups of children.

4.2 Longitudinal study

4.2.1 Corpus and methodology

The longitudinal study examines the acquisition of DOM by Hungarian-Romanian 2L1 children on the basis of two longitudinal corpora of spontaneous production. They were collected by Veronica Tomescu and are described in more detail in Tomescu (2013, 2017). The two corpora contain spontaneous speech in a Romanian-Hungarian bilingual context between the child and various family members: mother, brother(s) and occasionally another family member. The data were audio-recorded and transcribed in CHAT format (MacWhinney 2000). The two boys, Toma and Petru (age range 1;11 – 2;11) are brothers and they come from a family with three children living in Bucharest. They were exposed to Hungarian and Romanian input since birth. But the quantity of the input in the two languages differs. At home, the input provided by the mother, a Hungarian-Romanian bilingual, is (mainly) Hungarian. The eldest brother, though also a simultaneous bilingual, usually speaks Romanian to his brothers and mother, with many instances of code-mixing. The children's father speaks only Romanian to them. Romanian is both the household and the community language; it is also the dominant language in both children, though one notices a difference between Toma and Petru, which is reflected in their different MLU in Hungarian. Toma is a more balanced bilingual (Tomescu 2017).

We compared *pe*-marking in the bilingual corpus to *pe*-marking by two Romanian monolingual boys of similar age range, who live in Romanian monolingual families in Bucharest: Iosif (Stoicescu 2013) and Antonio (Avram 2001). The corpus used in the analysis is presented in Table 1.

Table 1. The longitudinal corpus used in the analysis

Child	Nr of	Age	MLU	Total	VP + DP
	recording	5S	(Romanian)	utterances	

2L1	Toma	81 (42h)	1;11 – 2;11	$2.50 - 4.51^4$	9,310	976
	Petru	37 (18h)	2;00-2;08	$1.47 - 3.79^5$	6,024	447
	TOTAL	118 (60h)	1;11 – 2;11	1.47 – 4.51	15,334	1,423
L1	Antonio	17 (17h)	1;09 – 3;01	1.51 – 2.79	8,047	1,245
	Iosif	16 (16h)	1;09 – 3;00	1.11 – 2.85	8,006	1,196
	TOTAL	33 (33h)	1;09 – 3;01	1.11 – 2.85	16,053	2,407

All DOM contexts were identified and coded as (i) obligatory and (ii) optional. Objects in DOM contexts were coded as (i) marked; (ii) unmarked; (iii) overgeneralization. They were also coded for animacy and DP type. With respect to the former, they were coded as: (i) animate; (ii) inanimate. With respect to DP type, we coded the objects as: (i) definite pronouns; (ii) proper names; (iii) definite DPs; (iv) indefinite DPs. Percentages of correct/incorrect marking were calculated against the total number of DOM contexts. The use of DOM was also examined in relation to clitic doubling.

One DOM omission was not analyzed as an error: the omission of pe with relative pronouns⁶, which is attested in both 2L1 and L1:

⁴ Hungarian MLU: 2.46 – 4.68.

⁵ Hungarian MLU: 1.22 – 1.76.

⁶ Previous experimental studies revealed that Romanian children preferentially use direct object relatives with unmarked relative pronouns even at age 5 (Sevcenco et al. 2011).

(12) 2L1

Cutia aia de bile (pe) care l-a cumpărat.box:the that of balls PE which CL.ACC.3SG.M has bought'The ball box that she bought.'(Toma 2;09)

(13) L1

Ăla urîtul (pe) care-lcheamă [...]that ugly:the PE who CL.ACC.3SG.M calls'The ugly one whose name is...'(Iosif 2;06)

Unmarked relative pronouns in direct object relatives are frequently found in adult speech (Guţu Romalo 2000, Gheorghe 2011), child-directed speech included. The example in (14) below shows that *pe* omission in this context is found both in child speech and in child-directed speech:

(14)	Adult: <i>Ăla (pe) care l-</i> ai dezbrăcat tu.
	that PE who CL.ACC.3SG.M have undressed you
	'The one you undressed.'
	Child: Moș Crăciun ăla (pe) care l- ai
	Santa that PE whom CL.ACC.3SG.M have
	dezbrăcat.
	undressed
	'That Santa whom you undressed.' (Antonio 2;08)

The marked direct objects in child-directed speech were also analyzed (see Table 2).

Table 2. The corpus used for the analysis of DOM in child-directed speech

Context	Child	Nr of recordings	Age	Marked direct objects
2L1	Toma	33 (17h)	1;11 – 2;11	98
L1	Antonio	12 (12h)	1;09 – 3;00	75
	Iosif	11(11h)	1;10 – 2;08	69

4.2.2 Results

The analysis of the data reveals several similarities between the acquisition of DOM by bilingual and monolingual children: (i) early emergence; (ii) early 100% correct marking in obligatory contexts; (iii) the same overgeneralization pattern; (iv) similar overgeneralization rates.

The two Romanian-Hungarian bilinguals begin to *pe*-mark direct objects very early: Toma at 1;11 (MLU 1.94) (see example 15a) and Petru at 2;01 (MLU 2.41) (see example 15b). This is similar to what we find with the two Romanian monolinguals⁷; the first *pe*-marked object is attested at 2;01

⁷ See Ticio and Avram (2015) for a more detailed analysis of the acquisition of DOM in L1 Romanian on the basis of three longitudinal corpora (these two included) from the perspective of semantic scales.

(MLU 1.76) in the Iosif corpus and at 1;09 (MLU 1;51) in the Antonio corpus.

(15)	a.	Matei a adus pe Thomas.	
		Matei has brought PE Thomas	
		'Matei has brought Thomas.'	(Toma 1;11)
	b.	Şi pe ăsta-l iei.	
		and PE this CL.ACC.3SG.M take	
		'You'll take this one as well.'	(Petru 2;01)

Omission of DOM with proper names (illustrated in 16 for 2L1 and in 17 for L1) and with definite pronouns (see example 18 for 2L1 and 19 for L1), i.e. in syntactically obligatory contexts, is attested only in the early recordings. In 2L1 Romanian, DOM begins to be used in obligatory contexts 100% of the time at 2;09 by Toma and at 2;05 by Petru. In L1, the picture is identical. Iosif marks all the objects in obligatory contexts beginning at age 2;07 and Antonio at age 2;09.

(16) 2L1

a. Să arăți *(pe) Maria.
SBJV show PE Maria
'Show me Maria.' (Petru 2;02)
b. S -o vedem *(pe) Alexia.

SBJV CL.ACC.3SG.F see	PE	Alexia
'Let's see Alexia.'		(Toma 2;04)

(17) L1

*(pe) Panda bat.	
PE Panda beat	
'I'm beating Panda.'	(Antonio 1;11)

(18) 2L1

*(pe) mine doare.	
PE me hurts	
Intended: 'It's mine that hurts.'	(Petru 2;01)

(19) L1

Şi *(pe) ăsta *	*(îl) chea	ımă <i>Punge⁸.</i>	
and PE this	CL.ACC.3SG.M calls	Punge	
'And his name	is Punge.'		(Iosif 2;01)

DOM use is constrained by animacy at all stages in both L1 and 2L1 Romanian, in accordance with the target system. Children correctly mark animate proper names and descriptive DPs (see examples 20 - 21). With

⁸ Child-invented word.

definite pronouns, where the system allows it, they mark pronouns with animate and with inanimate antecedents (see examples 22 - 23).

(20) 2L1

a.	Le- ntrec	eu pe babele	astea.
	CL.ACC.3PL.F overtake	PE old women:t	he these
	'I'm going to overtake	these old women.' ((Petru 2;05)
b.	Vreau maşina roşie.		
	want car:the red		
	'I want the red car.'	(1	Petru 2;03)

(21) L1

a.	Umflă balonu' ăsta.	
	inflate balloon:the this	
	'Blow up this balloon.'	(Antonio 2;07)
b.	Uite- o pe tanti asta.	
	look CL.ACC.3SG.FPE auntie this	
	'Look at this auntie.'	(Antonio 2;11)

(22) 2L1

a.	Şi să	<i>m</i> -	aștepți pe mine.	
	and SBJV	CL.ACC.1SC	6 wait	PE me
	'And wai	t for me.'		(Toma 2;03)

b. *O* vreau pe aia ca un bob de fasole.
CL.ACC.3SG.F want PE that like a bean of beans
'I want the one (pebble) that looks like a bean.'

(Toma 2;06)

(23) L1

a.	Pe tine te pişcă.	
	PE you CL.ACC.2SG stings	
	'It will sting you.'	(Iosif 2;01)
b.	îl v(r)eau pe ăla galben.	
	CL.ACC.3SG.M want PE that yellow	
	'I want the yellow one.'	(Iosif 2;08)

Clitic doubling and *pe* emerge almost concurrently both in L1 and in 2L1 Romanian. There is no significant difference between age of clitic doubling emergence in any of the two learning contexts (as can be seen in Table 3).

Table 3. DOM and clitic doubling in L1 and 2L1 Romanian

Context	Child	1 st Clitic	1 st DOM	1 st CD
L1	I.	2;1	2;1	2;1
	А.	1;9	1;9	2;3

2L1	Т	1;11	1;11	2;2
	Р	2;1	2;1	2;3

In both 2L1 and L1, clitic omission in contexts in which *pe*-marking is obligatory, i.e. when it applies to proper names and definite pronouns, is extremely rare and disappears in the last files investigated. *Pe* omission in the presence of the clitic is found, however, in direct object relatives whose relative pronoun is not *pe*-marked. As mentioned earlier, this cannot be analyzed as an erroneous structure.

(24) 2L1

Unde -i aia *(pe) care a (a)dus- o where is that PE which has brought CL.ACC.3SG.F (ie)puraşu(l)? bunny:the 'Where is the one the Easter Bunny brought?' (Toma 2;03)

(25) L1

Ce era aia (pe) care ai aruncat-o? what was that PE that have thrown CL.ACC.3SG.F 'What was the one you threw away?' (Antonio 2;08) The high rate of DOM with definite pronouns and proper names in conjunction with the use of clitic doubling reflects early acquisition of DOM syntax in both L1 and 2L1.

Two types of overgeneralizations are attested: (i) the use of DOM with inanimate objects (illustrated in 26 for 2L1 and in 27 for L1), and (ii) the use of DOM with Nominative arguments of intransitive predicates (illustrated in 28 for 2L1 and in 29 for L1).

(26) 2L1

Dă -mi pe bu(buruz)a.
give me PE ladybug:the
'Give me the ladybug (Sudoku piece).' (Petru 2;04)

(27) L1

O întrec pe minge. CL.ACC.3SG.F outrun PE ball 'I am outrunning the ball.' (Antonio 2;09)

(28) 2L1

*Unde -i *pe ăla a mea Audi?* where is PE that mine Audi 'Where's my Audi?' (Toma 2;06) (29) L1

Da(r) *pe ăsta e bun?but PE this is good'But is this one good?' (Iosif 2:09)

The number of attested overgeneralizations of *pe* to inanimate objects is subject to individual variation, but it is very low in all the investigated corpora. There is no difference between L1 and 2L1 (see Table 4). Importantly, such overextensions, as mentioned before, are found in the adult language as well.

Besides the rarely encountered extensions of *pe* to inanimate objects one further overgeneralization attested in two of the corpora is that of DOM used in Nominative contexts, with subjects placed in post-verbal position (see examples 28 and 29 above). This type of marking is not found in adult speech and it is incorrect. The erroneous use of *pe* in Nominative case contexts was found exclusively with intransitives, mainly of the unaccusative type; in most cases they occur with the verb *be*. As the summary in Table 4 shows, there is individual variation within both groups with respect to this error.

 Table 4. DOM with inanimate DPs and in Nominative case contexts in 2L1

 and L1 Romanian

	Child	[-animate] <i>pe</i> -marked DP	*DOM in NOM context
2L1	Toma	2	49
	Petru	1	0
L1	Antonio	5	0
	Iosif	11	11

Both the monolinguals and the simultaneous bilinguals preferentially use DOM with definite pronouns and proper names (see examples 30–31). Marked indefinite DPs are found only in L1, and only in the Iosif corpus (see example 32).

(30) 2L1

a.	vreau să văd pe Petru.	
	want SBJV see PE Petru	
	'I want to see Petru.'	(Toma 2;02)
b.	mă lași pe mine să torn?	
	CL.ACC.1SG let PE me SBJV pour	
	'Will you let me pour?'	(Toma 2;05)

(31) L1

a.	A b	ăgat	autobuzu(l)	în j	garaj.	Bagă	şi	pe	asta.
	has p	ut	bus:the	in	garage	put	and	PE	this

'He's put the bus in the garage. Put this in as well.'

(Antonio 2;06)

b.	Îl cunoști	pe Luca?	
	CL.ACC.3SG.M know	PE Luca	
	'Do you know Luca?'		(Iosif 2;05)

(32)	a.	Eu l-	-	am	auzit	pe un	golan []
		Ιc	L.ACC.3SG.M	л have	heard	PE a	hooligan
		'I he	ard a hoolig	an'			(Iosif 2;06)
	b.	A s	alvat pe un o	om.			
		has s	saved PE a	man			
		'He	saved a man	ı.'			(Iosif 2;08)

The only difference between L1 and 2L1 is found with respect to DOM in syntactically optional contexts. In the 2L1 corpora the number of *pe*marked descriptive DPs is significantly lower than with proper names and definite pronouns ($\chi 2$ (1) = 13,607, p <0.001). The data reveal a significant association between the type of context in which DOM is used and whether or not the child is bilingual ($\chi 2$ (1) = 14,45, p < 0.001). Based on the odds ratio, the odds of bilinguals using *pe* were 2.27 times higher in obligatory contexts than in 'optional' contexts. The comparison is summarized in Table 5.

Context	Child	'optional' DOM	obligatory DOM
2L1	Toma	29% (n=4/14)	84.4% (n=130/154)
	Petru	27% (n=3/11)	87.8% (n=86/98)
L1	Antonio	64% (n=16/25)	76.7% (n=99/219)
	Iosif	95.2% (n=20/21)	93.6% (n=148/157)

Table 5. DOM in 'optional' and obligatory contexts in 2L1 and L1 Romanian

4.2.3 DOM in child-directed speech

The analysis of child directed speech shows the same preference for DOM with proper names and definite pronouns. In the bilingual corpora, all the 98 marked objects in the mother's Romanian utterances found in 32 files represent *pe*-marking in obligatory contexts (76 proper names, 19 various pronouns and 3 quantifiers). There are no marked definite or indefinite DPs. This result is, however, misleading. The analysis of the unmarked DPs reveals that, actually, they are all inanimate. In the input received by the monolinguals, only 4.34% (n= 3/69) of the marked objects in child directed speech in 11 files examined in the Iosif corpus are descriptive DPs. In the 12 files in the Antonio corpus examined for the present study out of 75 attested marked objects only 7, i.e. 9.3%, were descriptive DPs. No marked indefinite object was found in the speech addressed to the L1 acquirers. The

preference to mark inherently [+individuation] DPs is the same in child and child-directed speech in both L1 and 2L1.

Overgeneralizations of *pe* to inanimate objects (examples 33) are occasionally found in child directed speech in the monolingual corpora. This type of overgeneralization is also found in adult interaction. However, none are present in the bilingual corpora.

(33) a. *o duci la babă pe mărgică?*CL.ACC.3SG.F take to old woman PE bead
'Are you taking the bead to the old woman?' (in the Antonio corpus at 2;03)
b. *sau o vrei pe Cartea Junglei?*

or CL.ACC.3SG.F want PE Jungle Book 'Or do you want the Jungle Book?'

(in the Iosif corpus at 2;07)

4.2.4 Interim conclusions

The results of this small-scale longitudinal study revealed that DOM emerges early in both L1 and 2L1 Romanian. DOM use in syntactically obligatory contexts is target-like by age 3 in both learning contexts. No significant difference, quantitative or qualitative, was found between the two groups with respect to DOM in obligatory contexts. The data also showed that the error pattern is the same in L1 and 2L1 and that both monolinguals and bilinguals show early sensitivity to animacy and DP-type. But there were significantly fewer marked definite DPs in 2L1 than in L1 with those DPs with which the use of DOM requires some integration and updating of contextual information.

4.3 DOM in narrative

4.3.1 Aim

Previous studies showed that in 2L1 Spanish the vulnerability of DOM is there to last; it does not reflect a transitory stage. Incomplete knowledge of DOM has been attested with older bilingual children as well as with adult bilinguals, who still had problems using the differential object marker *a* (Montrul & Bowles 2009, Montrul & al. 2015). Since our longitudinal data revealed (weaker) vulnerability of DOM in Romanian, it is worth investigating whether this is an instance of delayed acquisition or whether it signals possibly long-lasting incomplete knowledge of DOM. In order to address this issue we conducted a second study, based on the examination of the use of DOM in 'frog story' narratives by older 2L1 children.

4.3.2 Corpus and methodology

The data come from various corpora of 'frog story' narratives (Berman & Slobin 1994) (described in Table 8). The analysis focused on the

narratives9 of 18 2L1 Hungarian - Romanian bilinguals compared with those of 18 age-matched L1 Romanian monolinguals. The bilingual children are from Bucharest, where Romanian is the societal majority language. They have been speaking Hungarian in the family (with at least 1 parent) since birth. At testing time, they were attending a Hungarian kindergarten, where the spoken language and the language of instruction was Hungarian, and where they spent approximately 8 hours/day. Hungarian is their dominant language. We also examined DOM in the narratives of two control groups of Romanian monolinguals and in the narratives of two control groups of simultaneous bilingual children (see Table 6). The first control group of bilinguals included 10 2L1 Lipovan Russian-Romanian children from Brăila, a town with a small Lipovan Russian community (3,499, according to the site of the ethnic community).¹⁰ These bilinguals receive Lipovan Russian input only in the family.¹¹ Instruction at school is in Romanian, but they have 3 classes of Russian per week. With this control group, Romanian is the community language and also the dominant language. The other control group included 10 2L1 Hutsul Ukrainian¹² - Romanian children from the village of Brodina, in the northern part of Romania. They speak Hutsul

⁹ The picture storybook was M. Myer (1969) - *Frog, where are you?*. New York: Dial Press.

¹⁰ http://www.crlr.ro/rusi-lipoveni/

¹¹ Lipovan Russian is a dialect of Russian spoken by the Lipovan community in Romania.

¹² A dialect of Western Ukrainian.

Ukrainian both in the family and in the community, where they also occasionally use Romanian. At school, the language of instruction is Romanian, but they have 3 classes of Ukrainian per week.¹³ With this group, both Ukrainian and Romanian are used in the community. The dominant language is Ukrainian (Miros 2016).

The data are summarized in Table 6.

Group	Number of	Age range
	participants	
2L1 Hungarian – Romanian (Tomescu 2017)	18	3;03 – 5;10 (4;05)
L1 Romanian (Buja 2008, Teodorescu 2017))	18	3;02 - 5;10 (4;05)
L1 Romanian (Buja 2008)	10	9;01 – 9;11 (9;06)
L1 Romanian (Teodorescu 2017)	17	3;01 - 3;11 (3;05)
2L1 (Lipovan) Russian - Romanian (Miros 2016)	10	5;09 - 8;01 (7;02)
2L1 Hutsul Ukrainian – Romanian (Miros 2016)	10	6;06 – 9;02 (7;01)

Table 6. The 'frog story' narratives corpora used in the analysis

Though these two groups are not matched to the Hungarian-Romanian bilinguals, the comparison could shed some light on the role of language specific properties as well as on the role of language dominance in the acquisition of DOM in 2L1 Romanian.

¹³ We thank Laura Miros for generously sharing her corpus of narratives with us.

The coding procedure was the same as the one used in the longitudinal study.

4.3.3 Results

The 4-year-old Hungarian-Romanian bilinguals *pe*-marked definite pronouns and proper names 100%. In this respect, their results are identical to those of the age-matched L1 Romanian group. But the rate of DOM with descriptive DPs is significantly higher in the narratives of the 4-year old group of Hungarian- Romanian bilinguals than in those of the group of agematched monolinguals ($\chi 2(1) = 13,027$, p = .000). The results of the analysis are summarized in Figure 1.



Figure 1. DOM in the narratives of 4-year-olds: 2L1 and L1 Romanian

Actually, the 4-year old Hungarian-Romanian bilinguals behave like 9year old monolinguals with respect to the *pe*-marking of descriptive DPs. The rate of *pe*-marked descriptive DPs with the latter is of 66%.

As for the Lipovan Russian-Romanian and Hutsul Ukrainian-Romanian bilinguals, they also use DOM in obligatory contexts 100% but at a much lower rate than the Hungarian-Romanian group with descriptive DPs. They are 7- and 8-years old respectively, but the DOM rate is similar to the one found in the narratives of 3-year old Romanian monolinguals, who used DOM 29% of the time with descriptive DPs. The results are summarized in Figure 2.



Figure 2. Optional DOM in the narratives of 2L1 Romanian

4.3 Discussion

The first question which was addressed in this study was to what extent the acquisition of DOM by simultaneous Hungarian-Romanian bilinguals is similar to the acquisition of DOM in L1 Romanian. Given the interface nature of DOM and previous results reported for the use of DOM in 2L1 Spanish by child bilinguals, we also examined the data with a view to testing the predictions of the Interface Hypothesis.

The longitudinal data showed that, in most respects, the acquisition of DOM in 2L1 Romanian is identical to its acquisition in L1: early age of emergence, high production rate in obligatory contexts, the same error pattern and early sensitivity to animacy and DP-type. DOM emerges and is acquired early in both 2L1 and L1, and, by age 3, it is used in a target-like way. Our data revealed that the early acquisition route of DOM in 2L1 Romanian is the same as in L1 with respect to proper names and definite pronouns, but it is relatively delayed with respect to descriptive DPs, with which *pe*-marking is syntactically optional and constrained by discourse pragmatics. In such contexts the bilingual corpora contained significantly fewer marked definite DPs. The preference for unmarked descriptive DPs may mirror the difficulty involved by the acquisition of an external interface property, which may be more easily affected by limited input. Our findings provide support in favour of the Interface Hypothesis (Sorace & Filiaci 2006, Sorace 2011, 2012).

The overall picture of DOM in 2L1 Romanian is relatively different from the results reported in previous studies on DOM in 2L1 Spanish. The Spanish-English bilingual children in Ticio's (2015) study used DOM accurately at a rate ranging between 12.5% and 57%, which is much lower than the 84.4% - 87.8% scored by the 2L1 Romanian children, whose early use of DOM differed from that of the monolinguals only with respect to the rate of *pe*-marked descriptive DPs. Another difference is related to error type. In our 2L1 longitudinal corpora, both omissions and overgeneralizations were found. Though the latter are also limited in number (as in 2L1 Spanish), the results are relatively similar to what was found in L1, showing that the 2L1 Hungarian-Romanian children are not more conservative than the Romanian monolinguals with respect to DOM production, as suggested for the Spanish bilingual children in Ticio's (2015) study. According to this author, the low number of overgeneralizations in 2L1 Spanish (lower than in L1) could actually reflect "lack of command of the DOM rule". The erroneous use of DOM in Nominative contexts actually indicates that Romanian speaking children have knowledge of the properties of the DOM system; they treat the post-verbal argument as prominent and consequently they differentially mark it even when it is the subject. These errors provide evidence that Romanian speaking children have early tacit knowledge of unaccusativity and that they correctly associate the use of pe with prominent internal arguments.

The difference between the emergence and the early use of DOM in 2L1 Spanish and 2L1 Romanian needs an explanation. Ticio (2015) offers convincing arguments that the vulnerability of DOM in 2L1 Spanish is determined by a delay in lexical development, which can be affected by reduced input. Following the analysis of Rodríguez-Mondoñedo (2007), according to which in Spanish differentially marked objects move out of the vP to a higher Dative position to check a [person] feature, Ticio (2015) advances the hypothesis that simultaneous bilinguals cannot associate the [person] feature with the Accusative objects which have this lexical feature, whose presence is based on the specificity value of the marked object; and this value is determined in the discourse context, i.e. it involves a property at the syntax-discourse pragmatics interface, which is predicted to be more difficult to acquire by bilinguals who receive reduced input. One identifies, then, two vulnerability causes: a language specific property of Spanish and the fact that DOM is an external interface phenomenon. In Romanian there is no intersection between Dative case (the differential object marker is not identical to the Dative marker) and pe-marking. Therefore, the only difficulty source targets those DPs whose marking is constrained by discourse pragmatics. This possibly explains why in Romanian DOM vulnerability is selective and weaker.

The analysis of DOM in the narratives of 4-year-old Hungarian-Romanian bilinguals revealed that, surprisingly, not only is DOM no longer vulnerable in those contexts where *pe*-marking is constrained by discoursepragmatics (as found, for 3-year-old bilinguals, in the longitudinal data) but the bilinguals actually marked objects at a rate which was significantly higher than the one found in the narratives of age-matched Romanian monolinguals. At age 4, the Hungarian-Romanian bilinguals in the present study *pe*-marked direct objects similarly to the group of 9-year-old Romanian monolinguals.

This significant change from age 3 to age 4 cannot be accounted for in terms of quantity of Romanian input. The 4-year-old bilinguals spend 8 hours per day in a Hungarian kindergarten, and they also speak Hungarian at home to at least one parent. The Lipovan Russian-Romanian bilinguals are older than the Hungarian-Romanian group and they speak Romanian both in the community and at school. But, at age 7, they pe-mark descriptive DPs at a rate similar to that of 3-year-old Romanian monolinguals. In their case, at age 7, DOM is not target-like yet. The low rate of pe-marked descriptive DPs found in the narratives of the Hutsul Ukrainian-Romanian bilinguals further reinforces the conclusion that input reduction alone cannot explain our findings. These children speak Ukrainian both at home and in a Ukrainian-speaking community. Their Romanian input is more reduced than the one received by the Lipovan Russian children. But their use of DOM in syntactically optional contexts is similar to the one found in the narratives of the latter and much lower than the one in the narratives of the 4-year-old Hungarian-Romanian bilinguals.¹⁴ The acquisition of DOM is

¹⁴ The difference cannot be discarded as being a side effect of 'optionality', which could simply reflect significant individual variation. The examination of DOM in the narratives of 3-, 5- and 9-year-old Romanian monolinguals revealed that the rate increases with age,

delayed in 2L1 Romanian even with older children in these two language pairings, as predicted by the Interface Hypothesis. The question is what could determine the observed difference between the Hungarian-Romanian bilinguals, on the one hand, and the other two bilingual groups on the other hand.

Hungarian lacks overt differential object markers. But Russian and Ukrainian have overt DOM: case inflection constrained by animacy (Bossong 1998, Hržica et al. 2015). This, however, is not reflected in the acquisition route of the bilinguals, suggesting that whether object marking is overt or not in both languages does not necessarily facilitate/hinder the acquisition of DOM in 2L1. An alternative account could build on an important difference between Hungarian, Hutsul Ukrainian and Lipovan Russian. The DOM system of Lipovan Russian and Hutsul Ukrainian is constrained only by animacy, not by definiteness or specificity (Bossong 1998, Hržica et al. 2015). This feature plays no role in object marking in these languages. In Hungarian, the definiteness feature of the direct object is unambiguously reflected in verb conjugation, which is acquired early in both L1 (Wéber 2011, MacWhinney 1976) and 2L1 Hungarian (Tomescu 2017). This robust property in Hungarian could increase the bilingual child's awareness that definite direct objects are associated with some form of overt

from 27% at age 3 to 66% at age 9. This also shows that DOM in syntactically optional contexts may be subject to delayed acquisition in L1 as well.

marking, which can be transferred to definite objects in Romanian, resulting in the increase in DOM use with definite DPs. This account is supported by the fact that no marked indefinite DP was found in the 2L1 data in any of the studies. Our findings are consistent with the idea that the early developmental difficulty associated with DOM as an interface phenomenon can be overcome by cross-linguistic effects. At the same time, it is not implausible to assume that the positive cross-linguistic interference effects attested with the Hungarian-Romanian bilinguals is additionally favoured by the Hungarian input. Though Romanian is the language of the community, these bilinguals attend a kindergarten/a school where instruction is principally in Hungarian. The Lipovan Russian-Romanian bilinguals live in Brăila, a city in which Romanian is the community language. But they attend a Romanian school, where instruction is in Romanian, with only three 50 minute Russian classes per week. Similarly, the Hutsul Ukrainian-Romanian group attend a Romanian school. The comparison of these groups of bilingual children reveals that the acquisition of DOM is affected by the properties of the DOM system(s) of the language pair as well as by the quantity and the nature of the input received for both languages.

5. Conclusion

While recent studies on the acquisition of DOM in Spanish by simultaneous Spanish-English bilingual children offered convincing data that this is an area of prolonged difficulty with this group of learners, we have provided evidence that DOM is not equally vulnerable in all 2L1 situations. The Hungarian-Romanian simultaneous bilinguals in our study followed the same acquisition route as Romanian monolinguals with one exception: pemarking of descriptive DPs. DOM with those DPs with which it is obligatory is not problematic to either L1 or 2L1 children at any stage. But pe-marking of those DPs with which DOM use involves discourse pragmatics considerations is subject to delayed acquisition. Our findings support the dichotomy postulated by the Interface Hypothesis between narrow syntax and external interface phenomena. They also show that phenomena which involve external interfaces can be subject to delayed acquisition in L1 as well. Those areas which are problematic to monolinguals might be even more problematic to bilinguals. In Romanian, the DOM system is less stable with descriptive DPs. Not only is *pe*-marking syntactically optional, but there are two competing grammars which send ambiguous signals in the input. The child needs more input in order to identify the properties of the target DOM system. Input reduction may explain why these DPs are undermarked. On the other hand, our findings clearly show that quantity of input alone cannot explain the developmental route of simultaneous bilinguals. The acquisition of DOM is determined by a coalition of factors, among which language specific properties, external interface vulnerability, language pairing, and quantity of input in both languages.

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