



Andriani, Luigi & D'Alessandro, Roberta & Frasson, Alberto & van Osch, Brechje & Sorgini, Luana & Terenghi, Silvia. 2022. Adding the microdimension to the study of language change in contact. Three case studies. *Glossa: a journal of general linguistics* 7(1), pp. 1–36. DOI: <https://doi.org/10.16995/glossa.5748>



Open Library of Humanities

Adding the microdimension to the study of language change in contact. Three case studies

Luigi Andriani, Utrecht University, Netherlands, l.andriani@uu.nl

Roberta D'Alessandro, Utrecht University, Netherlands, r.dalessandro@uu.nl

Alberto Frasson, Utrecht University, Netherlands, a.frasson@uu.nl

Brechje van Osch, University of Tromsø, Norway, brechjevanosch@gmail.com

Luana Sorgini, Utrecht University, Netherlands, l.sorgini@uu.nl

Silvia Terenghi, Utrecht University, Netherlands, s.terenghi@uu.nl

Syntactic change in contact is generally explained as a result of cognitive, structural/typological, or sociolinguistic factors. However, the relative weight of these factors in shaping the outputs of contact is yet to be assessed. In this paper, we propose a microcontact approach to the study of change in contact, focusing on microsyntactic points of variation across multiple language pairs that are structurally very close. We show that this approach makes it possible to more accurately identify some of the factors that are involved in change. By considering three case studies centered on the syntax of subjects, objects, and indexicals, we show that the outputs of syntactic change in microcontact diverge from what is expected under otherwise solid generalizations (avoidance of indeterminacy, avoidance of silence, the Interface Hypothesis, a tendency towards simplification, and the general stability of the indexical domain) regarding change in contact. Microcontact offers a finer-grained point of observation, allowing us to go beyond broader typological assumptions and to focus on the link between structure and cognition. The results of our case studies demonstrate that the outputs of change in contact are an interplay between cognitive and structural factors (see also Muysken 2013 for additional processing considerations), and that the micro-variational dimension is crucial in drawing a precise picture of heritage language syntax.

Glossa: a journal of general linguistics is a peer-reviewed open access journal published by the Open Library of Humanities. © 2022 The Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC-BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. See <http://creativecommons.org/licenses/by/4.0/>.

 OPEN ACCESS



1. Introduction

Heritage speakers (“HSs”) of a language are speakers who learnt that language in a naturalistic setting from early infancy and consistently spoke it at home, but who subsequently underwent extensive exposure to a different language, that of the wider society, and over time became dominant in it (Rothman 2009; Polinsky 2018a for an overview). Despite being native speakers of their heritage language (“HL”), however, HSs produce syntactic patterns that often diverge from those of monolingual and other bilingual speakers of the same variety. What causes this divergence is not completely clear, and while typological, cognitive, and language-specific factors have been considered in several studies, their relative weight in shaping change in HL is yet to be fully determined.

To assess the weight of these factors, HL studies have drawn on work on L2 or L3 acquisition or bilingualism. Regarding L2/L3, transfer (or borrowing, in typological terms) is one of the key concepts that has been examined, with considerable relevance attributed to the role of typological proximity, which is considered to be a main player in structural transfer by some (e.g. Rothman 2011), but not all (Westergaard 2019). Structural proximity has also been shown to play an important role in transfer, both in typological (Aikhenvald 2006) and theoretical (Montrul *et al.* 2011; a.o.) studies. Some stochastic models have been proposed for the relative weight of the languages in contact in the case of code-switching, which have highlighted the processing load of bilingual speech (Dijkstra & Van Heuven 1998) compared to monolingual speech (Dell 1986).

The study of code-switching, specifically, has brought to light several important factors that determine transfer and, in particular, the emergence of *blends* (Goldrick & Putnam & Schwarz 2016), i.e. linguistic structures that include elements from both languages. Note that some models of code-switching have been proposed that involve mainly grammatical factors: see for instance López & Alexiadou & Veenstra (2017), Alexiadou & Lohndal (2018), López (2020).

Still, most studies on HLs are exploring contact between two languages that are significantly distant, both typologically and structurally. Furthermore, a great deal of existing research considers HLs in comparison to either monolingual or other bilingual situations. This paper will not contribute to the debate on the profile of HSs and whether they should be compared to monolingual or bilingual speakers, but it will add an important piece to the puzzle of grammars in contact by looking at HLs spoken in contact between minimally different languages (“microcontact”). Moreover, we believe that detailed understanding of the phenomena and the output of contact situations is needed in order to draw sensible generalizations about the various factors at play in language change in contact. This paper provides a theoretically-informed description of a number of phenomena in heritage languages.

Our results show that, although the specific grammars that are in contact play a role in determining the output of change, and although our data are not completely homogeneous, some

generalizations that have been observed for HL grammars are systematically disrespected when the contact languages are typologically very similar. Specifically, in this study we explore five important generalizations regarding HL syntax.

The first regards the tendency of HSs to avoid indeterminacy (Generalization 1, GEN1): it has been noted that if an item has several syntactic functions, only one of them will be selected in the HL (Polinsky & Scontras 2020). Our study on Differential Object Marking (Diez 1874; Meyer-Lübke 1899; Moravcsik 1978; Bossong 1985, 1991) shows that this generalization does not hold in microcontact.

Related to this, it is believed that HLs evolve in the direction of simplification (Generalization 2, GEN2; Polinsky & Scontras 2020). For instance, Tsimpli *et al.* (2004) and Sorace *et al.* (2009) observe that bilingual English-Italian and English-Greek children tend to use more overt subjects in their null-subject language; they attribute this to the fact that these bilinguals follow the model of English, which has only one option – overt – for the expression of subjects. Rather than choosing a system that requires mastery of intricate interface conditions for the distribution of subjects, they opt for the simpler system. Our data from both subject and object domains show that while this is largely true, microcontact does sometimes trigger cases of increased complexity, both morphological and syntactic, rather than simplification.

Moreover, the Interface Hypothesis (IH; Hulk & Müller 2000; Sorace 2005) maintains that interface phenomena (of the weaker language) are more vulnerable in language-contact situations, the rationale being that the more grammatical modules are involved in a phenomenon, the more vulnerable to change that phenomenon will be (see also Müller & Hulk 2001; Paradis & Navarro 2003; Serratrice & Sorace 2003; Serratrice & Sorace & Paoli 2004; and many others). In particular, the fact that some phenomena involving discourse and information structure tend to weaken in HLs is taken to mean that HSs do not easily master the interplay between syntax and discourse-related information (Generalization 3, GEN3). Data from both subject and object domains contradict this generalization, as far as microcontact is concerned.

Along the same lines, previous research has also shown that heritage speakers tend to avoid silence (Generalization 4, GEN4; Polinsky 2006; Laleko & Polinsky 2016, 2017), i.e. they typically avoid *pro*-drop or ellipsis through the insertion of overt elements where monolingual speakers would use silent ones. In this article we show that once again the situation in microcontact is different; null subjects are not only widely used, but also overextended with respect to monolingual use.

Finally, the indexicality domain has been shown to be the most stable domain in HLs (Generalization 5, GEN 5; Polinsky 2018a): our data from the nominal domain partially contradict this generalization. We do observe change in the indexical domain, especially in demonstratives, but this change is parallel to that witnessed in diachrony.

This paper is structured as follows. In Section 2, we introduce some necessary background information; in particular, we clarify the importance of considering contact between *minimally different* languages (Section 2.1), stress the specific challenges posed by Italo-Romance HLs, especially in relation to the baseline definition (Section 2.2), and provide an overview of our methodology (Section 2.3). The latter two issues have been addressed in more detail in Andriani *et al.* (in press). We then introduce in greater detail the generalizations that have been proposed to account for a wide variety of instances of syntactic change in HLs/bilingualism, along with our contradictory data, to form three case studies: “Avoid indeterminacy” and DOM (Section 3); the Interface Hypothesis, “Avoid silence”, and the tendency to simplification with subject and object data (Section 4); and the stability of the indexical domain with data from the D and T domains (Section 5). Section 6 concludes the article.

2. Background

2.1. Microcontact

Heritage studies are usually carried out by observing bilingual speakers of a HL and a “dominant” language. These studies often target languages that are typologically quite distant from each other, like English and Spanish (Silva-Corvalán 1994; Montrul & Bowles 2009; Montrul & Sánchez-Walker 2013; Pascual y Cabo 2013; Scontras & Polinsky & Fuchs 2018), English and Korean (Lee *et al.* 2011; O’Grady *et al.* 2011), English and Russian (Polinsky 1997, 2005, 2006, 2011, 2018b), German and Turkish (Daller *et al.* 2011; Treffers-Daller *et al.* 2016; Kupisch *et al.* 2017), and so on. These studies have the advantage of a large speaker base, and can therefore be easily used for statistical generalizations. At the same time, we claim that they face two main problems.

The first is that HL studies usually target language *pairs*, and not language sets. This means that the comparison is normally performed on a one-to-one basis, and not on a one-to-many basis. This makes it ultimately impossible to ascertain whether the witnessed variation really is due to influence from the dominant language, i.e. language contact, or whether it is endogenous and would have taken place anyway (but perhaps more slowly, as in diachronic change). The study of language pairs is in fact not sufficient to identify the cause of change. As Aikhenvald puts it:

“[i]t has long been recognized that one of the hardest tasks in comparative linguistics is distinguishing between similarities due to genetic inheritance and those due to borrowing (cf. the classic debate between Sapir and Boas).” (Aikhenvald 2006: 24)

Likewise, Dench states that:

“making the argument for an innovation shared by virtue of a period of common development is never easy. I take it for granted that a statement of shared inheritance as explanation for a shared feature should only be made once all other possible explanations for the shared feature

have been exhausted. These other possibilities will include accidental similarity in form, borrowing and genetic drift.” (Dench 2001:113)

The second issue stems from the fact that the languages examined are usually typologically distant. This approach facilitates the examination of phenomena as a whole, but often lacks the granularity that is necessary to isolate the single features and follow their development in detail.

In this paper, we present a novel approach to the study of HLs, which we call *microcontact* (D’Alessandro 2015, 2018, 2021; D’Alessandro & Natvig & Putnam 2021). By *microcontact* we mean two things:¹ first, a study that focuses on the micro-level, and therefore on the output of contact (in the heritage context, in this case) between languages that are minimally different from each other. For this article, we consider HLs in contact with languages of the same family: Romance. By minimally different we mean the following: given a specific domain (for instance, the VP), everything is identical except for the value of the feature at issue. Second, the methodology we follow for microcontact studies also involves cross-checking: the evolution of the same feature is observed in a language L in contact with multiple minimally different languages; the output of change is compared to that of a language L1 (closely related to L) in contact with the same language set. Both aspects, focusing on microvariational issues and cross-checking, are necessary for a microcontact study.

The present study is therefore set up as follows. We consider a phenomenon X in a grammar A in contact with several other grammars, say B, C, D, that are very close to A, except for the specific feature X, which exhibits slight microvariation. Roughly, the grammars in contact are exactly the same in the domain around X, the only point of change being X itself. The rationale here is that the output of change in contact (CIC) for the different grammars can either be the same for all contact situations, or differ depending on the languages involved. If CIC outputs are identical across language-pairs ($A-B = A-C = A-D$), this implies that the change was entirely shaped by cognitive issues or by factors related to spontaneous change. Different outputs for at least one of the language pairs ($A-B \neq A-C$ and/or $A-D$) imply, instead, that the specific language pairs do matter.

The languages that we selected share most of their lexicon and are typologically identical (see Ledgeway 2015a for an overview). Likewise, the phenomena that we selected display minimal cross-linguistic differences, allowing us to observe variation and change with high accuracy. These are null subjects (NS), DOM and indexicality. Given the typological similarities of the languages included in our study, a difference in output also rules out the role of typology in the actual syntactic change, the relevant level being the exact microtypological profile of the languages involved.

1 The term microcontact is sometimes used in sociolinguistics studies to refer to contact between very small language groups, or contact for a very limited amount of time. This is *not* the meaning that we use in the remainder of this article.

The shift to a micro-dimension of contact parallels the shift that occurred with the introduction of the study of microvariation and comparative microvariational syntax; as many linguists, most notably Kayne (2000, 2005), observed for Romance, the introduction of this dimension uncovered a number of very important generalizations and made a substantial contribution to syntactic theory.

This article shows that considering the microcontact dimension is essential to establish a solid data set from which to draw generalizations. Here, we discuss some case studies taken from syntactic variation in microcontact that show significant differences from what has been reported in the literature on HLs.

2.1.1. Insights from L2 and L3 acquisition

Research on syntactic change in HLs typically focuses on a single phenomenon, tested by controlled elicitation (production) and acceptability judgments (comprehension), and concludes by assessing whether or not a given hypothesis can account for the observed data; if it cannot, the divergent results are usually accounted for by means of acquisition-related analyses (early vs late, possibly incomplete or, better, *differential* acquisition;² amount of input), structural complexity of the phenomenon, or typological considerations.

Importantly, much recent research relies on typology as a heuristic factor: as Rothman's (2010) Typological Primacy Model (TPM, developed on the basis of transfer in trilingual speakers; cf. also Rothman & Alonso & Puig-Mayenco 2019: §4.3.3) shows, transfer in an L3 comes from the (psycho-) typologically closest language to L3, regardless of the actual structure and the order of acquisition. This model is holistic in its approach, because it looks at broad typological factors (organized into an implicational hierarchy: Lexicon > Phonology/Phonotactics > Functional Morphology > Syntactic Structure; Rothman & Alonso & Puig-Mayenco 2019: 163), and uses them to account for the patterns observed, even if there is a difference between the languages in contact with respect to the specific phenomenon. In short, according to this model, typological similarity overshadows structural similarity. A very different approach is explored by Westergaard *et al.* (2017) and Westergaard (2019): in these studies, transfer is shown to take place structure by structure and is not overshadowed by holistic typological similarities (*contra* Rothman 2010 *et seq.*). According to the Linguistic Proximity Model (LPM; cf. Westergaard *et al.* 2017), transfer between L_n and L3 (or L4) takes place incrementally, structure by structure, mainly based on linguistic similarity.

This paper shows that both approaches are in fact correct. Some of our findings demonstrate that Italo-Romance languages in contact with English behave very differently compared to what is observed in microcontact, showing that macrotypology does indeed play a role, as predicted by

2 Kupisch & Rothman (2018) argue against the descriptive and theoretical accuracy of the term *incomplete acquisition*, deeming it “inappropriate to describe any outcome of naturalistic acquisition – bilingual or otherwise –” (Kupisch & Rothman 2018: 579). In its stead, they propose the term *differential acquisition*, which allows the differences between monolingual and HS grammars (including the degrees of difference across individual HSs) to be captured.

the TPM. However, given that macrotypological considerations vacuously apply to microcontact, the TPM cannot predict which structures will be transferred or will change in microcontact.

The LPM, however, *can* target microcontact, as it observes structures and not “typological kinds”. Our data show mixed results for the role of the specific structures in contact: for subject clitics, we observe that they are more readily reanalyzed as pronouns in Friulian in contact with Argentinian Spanish, which is heavily pro-drop, than in contact with Brazilian Portuguese, a partial pro-drop language. For DOM, on the other hand, the effect of cross-linguistic influence from the contact language is less obvious: while we find differences between Argentina, Brazil, and Canada, it is not clear that this is caused by cross-linguistic influence from the languages spoken there. We will return to the possible explanations for this in Sections 3 and 4; at this stage, however, neither model perfectly applies to our dataset.

Muysken (2013)³ describes four different scenarios for the output of CIC: maximize structural coherence of the first language; maximize structural coherence of the second language; match between first- and second-language patterns where possible; then, universal principles of language processing determine the final output. We could argue that each of these strategies is found in our data, to a certain extent. However, we see some developments that are not predicted, namely innovations that belong to neither the first, nor the second language, and also cannot be attributed to processing.

2.2. Italo-Romance Hls: The baseline problem

A common issue for many studies on minority languages is the impossibility of comparing and crosschecking the investigated varieties against a monolingual baseline (see, for an extended overview of the issues, Leivada & D’Alessandro & Grohmann 2019 and D’Alessandro & Natvig & Putnam 2021). Our study is no exception, as there are virtually no monolingual speakers of Italo-Romance varieties either in Italy (where Italian is spoken) or, obviously, in heritage contexts (where the national language of the host country is spoken). However, we additionally encountered further issues related to the enormous syntactic microvariation found in Italo-Romance and to the definition of the baseline; these are discussed below in Sections 2.2.1 and 2.2.2, respectively.

2.2.1. Microvariation

Investigating the morphosyntax of Italo-Romance varieties, either in contact or in the homeland⁴ setting, poses several challenges. The most striking of these is the breadth and depth of the

³ We thank one of the anonymous reviewers for pointing out this important reference to us.

⁴ Following Polinsky (2018a), we use the *homeland* varieties (i.e. the varieties spoken in Italy as described in the literature, which more closely reflect the varieties exported abroad in the 20th century) as points of comparison for our phenomena, while the term *baseline* is used to refer to the language of first-generation migrants.

morphosyntactic microvariation within Italo-Romance (see Manzini & Savoia 2005 for a detailed overview): since most of these varieties lack a standard, microvariation creeps into every structure and every paradigm. This tenet also applies to the heritage varieties investigated here. Due to lack of resources, we were unable to carry out interviews in any of the villages from which first-generation migrants (G1 speakers; cf. also Section 1.2.2) originated, nor could we find descriptive reference grammars for the specific varieties (and/or the specific investigated phenomena) spoken in each of those locations. Instead, in this study we refer to regional or areal features that are shared among all varieties that are spoken in a particular Italo-Romance linguistic area.

2.2.2. Identifying the G1 baseline as the input for HSs

Unlike heritage studies on major languages, this paper deals with minority Romance varieties that are typically non-standardized and display a large amount of microvariation, as mentioned above. As pointed out in D'Alessandro & Natvig & Putnam (2021) selecting a baseline grammar for comparison is not always necessary, given the autonomous status of HLs. However, since most generalizations concerning HLs are drawn on the basis of comparison, we did consider which variety could best be regarded as the baseline. In the absence of large groups of monolingual or bilingual speakers with mastery of the Italo-Romance varieties in question, and because these varieties are moribund, like those described by D'Alessandro & Natvig & Putnam (2021), we opted to carry out our study using G1 speakers as the baseline group. In order to ascertain the level of attrition for the phenomena under investigation, we compared the G1 grammars to the grammars of the varieties as they were spoken when they left Italy. This micro-diachronic dimension is, we believe, often overlooked in HL studies: languages also change in isolation, meaning that comparing HLs to contemporary varieties is methodologically risky. To overcome this issue, we tried to cross-check the grammars of G1 speakers with reference grammars from the 1960s and earlier.

However, despite all the methodological efforts outlined above, the *baseline problem* is further enhanced when it comes to establishing which speakers actually constitute the G1 baseline (i.e. the linguistic input for our HSs) and, consequently, how the HL transmission occurred. Indeed, the latter was not as straightforward as in other linguistic contexts, as the specific Italo-Romance linguistic input that our HSs received might have come from different sources; this is especially problematic when an unambiguous HL baseline needs to be identified and defined for control purposes. In the most ideal, albeit rare, cases our HSs acquired their own Italo-Romance variety directly from their G1 parents, as well as from other relatives and community members; this would constitute the ideal baseline in heritage studies, to which the HL can fairly easily be compared. However, most of our HSs reported that they did not learn the relevant Italo-Romance

variety from their parents, but only from older relatives (e.g. (great-)grandparents, great-aunts, and great-uncles) or older community members, who usually migrated either earlier or at the same time as the HSs' parents. This transmission gap is due to the undeniable trend – both in Italy and in heritage contexts – of abandoning the active use of Italo-Romance varieties in favor of monolingualism in the more prestigious variety available, be that Italian or the national language of the host country. This poses a challenge when trying to reconstruct the HL input in order to compare it with a single G1 baseline, as the HS's linguistic repertoire was built on varieties whose speakers are, in most cases, no longer alive. We therefore had to include at least two generations of migrants when considering G1 speakers as the baseline providing linguistic input for our HSs, who are the sole focus of this study. Although this baseline issue seems significant, it has in fact had virtually no impact on our data, given that the tendencies are clearly identifiable and the generalizations quite macroscopic.

3. Data collection

As stated at the outset, the remainder of the present study focuses on the novel generalizations drawn from our data and compares them to the generalizations in the literature that drawn on the basis of one-to-one investigations of language pairs. In this section we present the phenomena that we investigated (Section 3.1) and describe the participants' profiles and the tasks involved in our study (Section 3.2). For a detailed overview of the data collection, and for remarks on the design of the questionnaire and the issues that arose from fieldwork, the reader is referred to Andriani *et al.* (in press).

3.1. Phenomena

In the following subsections we briefly introduce the phenomena under investigation: Differential Object Marking (DOM) in Section 3.1.1; subject clitics in Section 3.1.2; and demonstratives in Section 3.1.3.

3.1.1. Differential Object Marking

DOM is a phenomenon whereby a subset of Direct Objects (DOs) have a different morphological realization in virtue of their semantic and pragmatic features, as well as verb type and argument structure.⁵ In Romance, DOs generally appear in the bare accusative case, as in (1a). Only 1st/2nd person pronouns distinguish Nominative vs Accusative forms, while the latter is usually not

⁵ While the term Differential Object Marking was introduced by Bossong (1985), DOM is such a pervasive phenomenon in Romance that it was already largely documented and studied under the label *Prepositional Accusative* (Diez 1882; Rohlfs 1971; among many others).

visible on full DPs. However, if the object features an animate, specific referent, it is marked by the preposition *a*,⁶ as in (1b), where *a* marks *mi amigo*, ‘my friend’.

- (1) a. *Spanish* (RAE <https://dle.rae.es/ver>)
 Veamos **las** **propuestas** **presentadas**.
 See.SBJV.1PL the.PL proposal.PL presented.PL
 ‘Let’s see the proposals presented.’
- b. *Spanish* (RAE <https://dle.rae.es/ver>)
 Mañana voy a ver a **mi** **amigo**.
 Tomorrow go.1SG to see DOM my friend
 ‘I’m going to see my friend tomorrow.’

The goal of our set of tests on DOM was to ascertain whether the marker insertion was performed in conformity with Silverstein’s (1976) hierarchy, where objects higher on the scale are expected to exhibit DOM more than objects lower on the scale.

- (i) 1st/2nd person pronouns > [+human] 3rd person pronouns > kinship terms >
 [+human][+definite] common nouns > [+human][–definite] common nouns >
 [+animate][+definite] common nouns > [+animate][–definite] common nouns

We investigated Heritage Venetan, Friulian, Abruzzese⁷, and Sicilian. Homeland Venetan and Friulian do not display differential marking of DOs, whereas homeland Abruzzese and Sicilian are DOM varieties. We examined these HLs in contact with one DOM variety (Argentinian Spanish), and three non-DOM varieties (Brazilian Portuguese, French, and Italian). Note that the extension of differential marking of DOs in Rioplatense Spanish is wider than in European Spanish, in that it also involves inanimates (Saab 2018).

Objects were tested both *in situ* and in fronted topic position (Rizzi 1997). Although the syntactic position is not a relevant factor for DOM in Abruzzese and Sicilian (with the exception of some Sicilian varieties, where DOM is favored in topic position with referents lower in the definiteness/animate hierarchy; Guardiano 2010), we will show that it is in fact relevant in some of the heritage varieties in our study.

3.1.2. Subject clitics

We considered subject clitics in Friulian, a Rhaeto-Romance variety spoken in northern Italy. Friulian has two series of pronouns: tonic subject pronouns and subject clitics, as illustrated in **Table 1**:

6 See Romanian *pe* and Peruvian Spanish *onde* (Bossong 1991) among other elements employed by Romance languages to mark DOM.

7 Unless otherwise stated, “Abruzzese” here only refers to the Eastern Abruzzese variety of the upper-southern Italo-Romance group, spoken in Abruzzo, and not to the Central-Sabino variety spoken in and around L’Aquila.

Friulian subject pronouns	Tonic	Clitic
1sg	jo	i, o
2sg	tu	tu
3sg	M: lui; F: je	M: al; F: e
1pl	noi	i, o
2pl	voi	i, o
3pl	lor	a

Table 1: The paradigms of Friulian tonic and clitic subject pronouns.

Previous studies on varieties with subject clitics of the Friulian type (Rizzi 1986; Brandi & Cordin 1989; Poletto 1993; Benincà 1994) show that these elements are not real pronouns, but markers of φ -agreement, which is equivalent to saying that they have rich agreement, or agreement doubling. Observe that subject clitics, given their agreement-like nature, are always obligatory, regardless of discourse conditions. Tonic subject pronouns are instead overtly realized when they need to perform some discourse function, such as topic shift, and do not appear in contexts of topic continuity. Homeland Friulian is therefore a null-subject language, in that tonic pronouns and full subjects follow the same distribution as in any other null-subject language, like Italian or Spanish, i.e. they are not obligatory. In our study, we investigated these Friulian subject clitics in contact with English, a non-pro-drop language, Argentinian Spanish, a heavily pro-drop language, and Brazilian Portuguese, a partial pro-drop language.

3.1.3. Demonstratives

We examined HLs whose corresponding homeland varieties display ternary demonstrative systems (in our sample: Abruzzese-Molisano, some varieties of Sicilian and Calabrian), i.e. demonstrative adjectives and pronouns that show three contrastive forms, each referring to the domain of one of the discourse participants, or neither of them (close to the speaker, close to the hearer, far from both), as illustrated in (2) for demonstratives pronouns:⁸

- (2) *Calabrian* (Ledgeway & Smith 2016: 883)
- | | | |
|----------------------|-----------------------|--------------------------|
| chist-u | chiss-u | chiḍḍ-u |
| DEM.close to me-M.SG | DEM.close to you-M.SG | DEM.far from me/you-M.SG |

Ternary systems are known for their instability, as witnessed by diachronic studies (Ledgeway 2015b; Ledgeway & Smith 2016): over time, they tend to reduce to binary demonstrative systems, i.e. systems that encode a two-way deictic opposition (between the speaker-related and the non-

⁸ Note that, for data coding purposes only, forms akin to *chistu* have been coded as *proximal*, forms akin to *chissu* as *medial*, and forms akin to *chiḍḍu* as *distal*, irrespective of their semantics in the elicited responses.

speaker-related areas, or between the participant-related and non-participant-related areas; for the distinction, see (3b) vs (3c) below), or to unary systems, which do not encode any deictic opposition (by means of sole demonstrative forms).

The varieties that we investigated in contact with our Italo-Romance heritage languages display either analogous ternary systems ('close to me' vs 'close to you' vs 'far from us': Argentinian Spanish in (3a), although not the Rioplatense variety), or dissimilar types of system, namely: speaker-oriented binary systems ('close to me' vs 'far from me': English in (3b)), participant-oriented binary systems ('close to me and/or you' vs 'far from us': Brazilian Portuguese in (3c), possibly extended to a ternary one by the addition of a locative adverb), or unary systems (no deictic contrast: French in (3d), although the system can make a binary distinction by the co-occurrence of the demonstrative form with a locative adverb):

- (3) Pronominal demonstrative systems
- a. *Argentinian Spanish* (fieldwork data collected in Cordoba and Santa Fe)

est-e	es-e	aquel
DEM.close to me-M.SG	DEM.close to you-M.SG	DEM.far from me/you.M.SG
 - b. *English*

this	that	
DEM.close to me.SG	DEM.far from me.SG	
 - c. *Brazilian Portuguese* (Ledgeway & Smith 2016: 888)

ess-e	aquele	
DEM.close to me/you-M.SG	DEM.far from me/you-M.SG	
 - d. *French* (Ledgeway & Smith 2016: 881)

celui
DEM.M.SG

3.2. Tasks, materials, and procedure

Our study is based on fieldwork data collected by our research team in Argentina, Brazil, and Canada. We considered five Italo-Romance varieties (Venetan, Trentino, Abruzzese, Calabrian, Sicilian) and one Rhaeto-Romance variety (Friulian)⁹ in contact with Argentinian Spanish, Brazilian Portuguese, and Quebec French.¹⁰ Italo-Romance data were also collected for control purposes in the area of New York City (NYC), thus in contact with English. These Italo-Romance varieties were chosen on the basis of the phenomena that we targeted and because their speakers

⁹ Although Friulian belongs to the Rhaeto-Romance language family, for convenience, we use the term "Italo-Romance" throughout the text to refer to all the Romance varieties spoken in Italy that are not Italian.

¹⁰ For contact with French, we also extended our area of investigation to Belgium: if not otherwise specified, the data collected in Belgium are also included in the following case studies.

have very similar sociolinguistic profiles: G1 speakers mostly left Italy after World War II to relocate in one of the American countries. Crucially, they were for the most part monolingual speakers of the Italo-Romance varieties, as Italian only started to be taught systematically at school around the time they left Italy.¹¹ This means, in turn, that the Italo-Romance varieties spoken in Italy today usually differ from those that were spoken when G1 speakers left (but see Section 1.2 above).

The data discussed here were collected during a preliminary set of fieldwork sessions that took place in spring 2019. A second, longer round of fieldwork was planned, but could not be carried out because of the Covid-19 outbreak. The first fieldwork session was intended to be more descriptive than analytical: given that most of these varieties had not been described at all, we first needed to check what the relevant structures looked like, before attempting any analysis. A quantitative overview of our fieldwork data is presented in **Table 2**.

Admittedly, the sample is rather varied, as we explained before. Nevertheless, some robust generalizations emerged and are worth reporting.

The methodology for this first round of fieldwork was comprised of three grammatical tasks: a forced-choice task, a picture-sentence matching task, and a semi-guided production task. We additionally used a spontaneous production task in which our informants were asked to tell a short story about their childhood: in this way, a large corpus of spontaneous speech was collected (approx. hours: 37h30', see details in **Table 2**). In order to check the HL proficiency of the speakers, we asked for a self-evaluation, via a sociolinguistic questionnaire. We also prepared a short picture-naming task in both the HL and the dominant language, inspired by the HALA test (O'Grady *et al.* 2009).

In the forced-choice task, we asked our informants to listen to audio stimuli (recorded by native speakers of the same variety as is spoken in Italy today) containing minimal pairs. For each pair, our informants had to choose the “right”, i.e. most natural, sentence. For DOM, the pair was formed by two sentences with and without a DOM-marked object, as shown in (4):

- (4) *Calabrian*
- a. Tə nsunnastə chə baciastə a idda.
REFL dreamt.2SG that kissed.2SG DOM her
'You dreamt that you kissed her'
- b. Tə nsunnastə chə baciastə idda.
REFL dreamt.2SG that kissed.2SG her
'You dreamt that you kissed her.'

11 The unified middle school, identified by De Mauro (2016) as the most important trigger for language unification in Italy, was introduced in Italy only in 1963.

	Argentina	Brazil	Quebec	NY	(Belgium)	Total nr of speakers	Total minutes
ABRUZZESE	9 speakers • 7 G1 • 2 HS	–	2 • 2 G1	3 • 1 G1 • 2 HS	1 • 1 G1	15 • 11 G1 • 4 HS	> 150' • 110' G1 • 40' HS
CALABRIAN	9 • 8 G1 • 1 HS	3 • 2 G1 • 1 HS	5 • 5 G1	–	–	17 • 15 G1 • 2 HS	> 170' • 150' G1 • 20' HS
FRIULIAN	8 • 4 G1 • 4 HS	7 • 7 HS	7 • 7 G1	6 • 4 G1 • 2 HS	–	28 • 15 G1 • 13 HS	> 280' • 150' G1 • 130' HS
SICILIAN	13 • 10 G1 • 3 HS	2 • 2 G1	5 • 4 G1 • 1 HS	10 • 8 G1 • 2 HS	5 • 4 G1 • 1 HS	35 • 28 G1 • 7 HS	> 350' • 280' G1 • 70' HS
TRENTINO	3 • 3 G1	7 • 7 HS	–	–	–	10 • 3 G1 • 7 HS	> 100' • 30' G1 • 70' HS
VENETAN	16 • 12 G1 • 4 HS	28 • 2 G1 • 26 HS	8 • 7 G1 • 1 HS	–	–	52 • 21 G1 • 31 HS	> 520' • 210' G1 • 310' HS
OTHER	15 • 14 G1 • 1 HS	3 • 1 G1 • 2 HS	9 • 9 G1	39 • 19 G1 • 20 HS	2 • 1 G1 • 1 HS	68 • 44 G1 • 24 HS	> 680' • 440' G1 • 240' HS
TOTAL	73 • 58 G1 • 15 HS	50 • 7 G1 • 43 HS	36 • 34 G1 • 2 HS	58 • 32 G1 • 26 HS	8 • 6 G1 • 2 HS	225 • 137 G1 • 88 HS	–
TOTAL MINUTES	> 730' • 580' G1 • 150' HS	> 500' • 70' G1 • 430' HS	> 360' • 340' G1 • 20' HS	> 580' • 320' G1 • 260' HS	> 80' • 60' G1 • 20' HS	–	> 2250' • 1370' G1 • 880' HS

Table 2: Overview of the speakers interviewed in our study by spoken Italo-Romance variety, country of immigration, and generation. An indication of the size (in terms of duration) of our spontaneous speech corpus is also provided.¹²

With respect to DOM, we examined data elicited from 2 Abruzzese, 4 Friulian, 4 Sicilian, and 3 Venetan HSs in Argentina; 3 Friulian and 8 Venetan HSs in Brazil; and 1 Sicilian and 1 Venetan HS in Canada. Speakers of northern varieties completed a questionnaire that included 9 sentences

¹² The figures reported here to indicate the (time) extension of our spontaneous-speech corpus are an approximation of the quantity of material we analyzed. For each speaker we collected at least 10 minutes of spontaneous data: we only indicate that here, rather than providing the exact duration of each recording. In addition, a large amount of data from “other” varieties has been left out from the analysis reported below and has not been fully quantified yet.

testing DOM plus 14 fillers (some of which tested subject clitics; see below), for a total of 23 sentences, whereas speakers of southern varieties had 13 DOM sentences plus 11 fillers, for a total of 24 sentences. We chose to give an unequal number of questions to the two groups as we were not expecting production of DOM on a wide range of arguments by speakers of northern varieties, since most of these do not exhibit DOM in their homeland counterparts. The stimuli were presented in random order.

The forced-choice task also contained items targeting subject clitics (see Frasson & D’Alessandro & van Osch 2021), for which the participants were asked to choose between a minimal pair with and without the subject clitic. There were 15 speakers of Friulian who participated in this task: 8 in Argentina (3 G1; 5 HSs) and 7 in Brazil (all HSs). For the results concerning subject clitics, we also analyzed the spontaneous production data from 15 speakers: 8 in Argentina (3 G1; 5 HSs) and 7 in Brazil (all HSs). In total, there were 580 sentences, of which 375 contained a subject clitic and 205 did not.

The second and third tasks were designed specifically for demonstratives: the purpose of this study was to assess whether or not ternary demonstrative paradigms, i.e. demonstrative systems with three contrastive forms, were retained in HLs (see Section 3.1.3 for details). The only varieties in our sample that have this system are some varieties of Abruzzese, Sicilian, and Calabrian, so only 38 speakers participated in this part of the task, distributed as follows: in Argentina, 2 Abruzzese, 1 Calabrian, 3 Sicilian HSs and 5 Abruzzese, 5 Calabrian, 6 Sicilian G1 speakers; in Brazil, 2 Sicilian G1 speakers; in Quebec and Belgium, 2 Sicilian HSs and 3 Abruzzese, 2 Calabrian, 7 Sicilian G1 speakers.

In order to test the organization of demonstrative paradigms, we performed a picture-matching task, in which our informants were shown pictures representing the three different deictic domains (related to the speaker, related to the hearer, and related to neither) and were asked to choose, from a set of audio stimuli, the one that best described the given picture. For instance, given the representation of the speaker-oriented domain (**Figure 1**, where the dog is close to the speaker), the target answer would have been of the ‘this’ type.

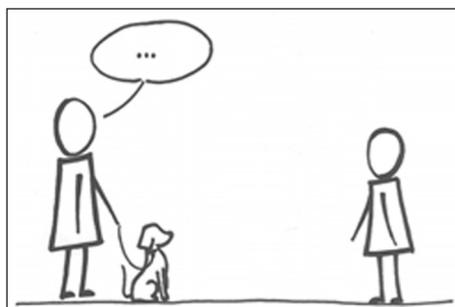


Figure 1: Speaker-oriented deictic domain.

Each domain was tested in three different syntactic environments: pronominal ('this/that is... dog'), adnominal ('this/that dog is...'), and in a demonstrative-reinforcer construction ('this here/that there...'). Finally, we collected semi-guided production data by asking our informants to refer to or locate target objects in the actual interview setting. In this last task, we elicited each of the three deictic domains twice: once by means of demonstrative forms ('which one is...?', to yield 'it's this' vs 'it's that' type answers), and once by means of a locative adverb ('where is...?', to prompt 'it's here' vs 'it's there' type answers). Thus, each deictic domain was elicited 5 times (i.e. in 5 different conditions) for each speaker. The elicited responses were transcribed and subsequently the demonstrative forms were coded according to their morphology as formally *proximal*, *medial*, or *distal*, to avoid making explicit connections with the semantics of those same forms (see Section 5 for details).

In the following sections, we report the results of our investigation and show how they conflict with the generalizations that have been established for HL syntax.

4. Generalizations 1 and 2: “Avoid indeterminacy” and tendency to simplification

The first generalization that we review here is related to indeterminacy. Several studies have concluded that HSs tend to avoid indeterminacy, that is, if a lexical item has several syntactic functions, only one of them will be selected in the HL (Montrul & Bowles 2009; Polinsky 2011). An example of indeterminacy is provided by the morphological DOM-marker *a*, employed in several Romance varieties (see Section 2.3.1). In the varieties under investigation here, the DOM-marker *a* is syncretic with that of datives, locatives, object experiencers and, potentially, topics.

According to GEN1, just one of the functions of *a* should be selected in heritage languages in order to avoid indeterminacy or ambiguity. Most of the loss or reduction of DOM in contact studies or bilingualism can be attributed to the multiple functions of this element (Polinsky 2006; Pascual y Cabo 2013; Montrul & Bhatt & Girju 2015). This is related to GEN2: heritage languages show a tendency to simplification, which means that a given linguistic element either loses one of more functions, or the element itself is lost or weakened.

In addition, DOM is also an interface phenomenon that requires the integration of syntactic and extra-syntactic knowledge (topicality, animacy, definiteness). This should make it more vulnerable to change (Montrul 2011). We will return to this in Section 4 in relation to GEN3.

Regarding the vulnerability of DOM, several studies (Silva-Corvalán 1994; Luján & Parodi 1996; Montrul 2004; Montrul & Bowles 2009; Montrul & Sánchez-Walker 2013; Montrul & Bhatt & Girju 2015) have shown that DOM weakens in Heritage Spanish spoken in the US. This conclusion is also supported by evidence from outside the Romance domain: Polinsky (2006, 2018a: 185–186) observes that HSs of Russian in the US tend to lose DOM, despite their perfect mastery of dative and accusative marking. Our data show the same tendency in heritage Southern Italo-Romance in contact with US English in NYC:

(5) *Heritage Cilentano in New York City*

- a. Edda ha vvist' a **mme**.
she has seen DOM me
'She saw me.'
- b. Ajerə ho vvisto Ø **mi fjjə**.
yesterday have.1SG seen DOM my son
'Yesterday I saw my son.'
- c. Oh, salutə Ø **questo qqua**, salutə Ø **questa persona qqua**.
hey greet.2SG DOM this here greet.2SG DOM this person here
'Hey, say hi to this one here, say hi to this person here.'
- d. Mi zio [...] portato Ø **tutta la famijja** là.
my uncle brought DOM all the family there
'My uncle [...] brought all his family there.'
- e. Io conosciuto Ø **tuttəquandə**.
I met DOM everyone
'I've met everyone.'

(6) *Heritage Sicilian in New York City*

- a. Mi nonna voleva canoscere a **mme**.
my grandma wanted know.INF DOM me
'My grandma wanted to know me.'
- b. Vasava Ø **la ma figlia** ajèri.
kissed.1SG DOM the my daughter yesterday
'I kissed my daughter yesterday'
- c. Vo' canosciàre Ø **u pecceriddu**.
want.1SG know.INF DOM the child.M
'I want to know the child (i.e. my granddaughter).'

(7) *Heritage Abruzzese in New York City*

- a. Jìrə l' ei bbasciat' a **jèssə**.
yesterday her = have.1SG kissed DOM her
'Yesterday I kissed her.'
- b. M'ei sunnatə ch' èi bbasciatə Ø **fjjə = ma**.
me = have.1SG dreamt that have.1SG kissed DOM daughter = my
'I dreamt that I kissed my daughter.'

While all these varieties present DOM in their homeland counterpart, the data in (5)-(7) show that the DOM-marker is dropped almost everywhere in heritage Italo-Romance varieties spoken in NYC. This is in accordance with what has been described in other studies on contact. Note,

however, that in no case does the weakening of differential marking of DOs lead to its complete loss: it is in fact retained with the most prototypically DOM-marked referents, i.e. personal pronouns (5a), (6a), (7a), but it is absent with other referents which would bear the *a*-marking in the homeland and baseline varieties (see the hierarchy in (i), Section 3.1.1). In particular, the *a*-marking is lost with kinship terms, as in (5b), (6b), (7b) and other highly referential/specific expressions, i.e. with demonstratives, as in (5c), definite referents, (6c), and universally quantified referents, e.g. ‘all the family’ (5d) and the pronoun ‘everyone’ (5e). Our control group for contact between Italo-Romance and English in NYC behaves exactly as expected.

Microcontact, however, presents a completely different picture. The data collected in Argentina challenge GEN1: there, not only is DOM preserved, or even extended, in Abruzzese and Sicilian, but it also emerges in non-DOM varieties such as Friulian and Venetan. As an example of expansion, consider (8) in Heritage Abruzzese:

- (8) *Heritage Abruzzese in Argentina*
 Lu lopə s’a magnatə a nu gnillə.
 the wolf SI=has eaten DOM a lamb
 ‘The wolf ate a lamb.’

Example (8) illustrates a case of extension of DOM to items that would not require it in homeland Abruzzese, where animals – and, in some varieties, 3rd-person referents – are not introduced by the preposition. Example (9) illustrates the emergence of differential marking in Heritage Friulian, a variety traditionally considered as lacking DOM in its homeland counterpart:

- (9) *Heritage Friulian in Argentina*
 Tu as fât un sium. Tu as bussât a to fie.
 you.SCL have made a dream you.SCL have kissed DOM your daughter
 ‘You had a dream. You kissed your daughter.’

While varieties lacking differential marking of DOs, such as Venetan and Friulian, tend to accept DOM to a lesser extent than Abruzzese and Sicilian, the acceptance rate for all heritage varieties is higher than in their homeland counterpart (except for Sicilian varieties, cf. Manzini & Savoia 2005; Guardiano 2010). Despite these general tendencies, some differences can be found with respect to the degree of acceptability of DOM depending on the contact language: differential marking of DOs is considerably higher in heritage varieties in Argentina than in Brazil and Canada,¹³ as shown in **Figure 2**:

13 An anonymous reviewer suggests that this might be due to dominant language transfer from Spanish. This effect is not as strong in contact with French and Portuguese, as they are non-DOM languages. However, a follow-up study by Sorgini (2021) showed that DOM in Italo-Romance varieties in Argentina does not develop under the same syntactic contexts as in Argentinian Spanish, which would seem to be in conflict with an account based on transfer. At this stage, we do not feel confident enough as to establish the exact role of the contact language, which is by no means obvious.

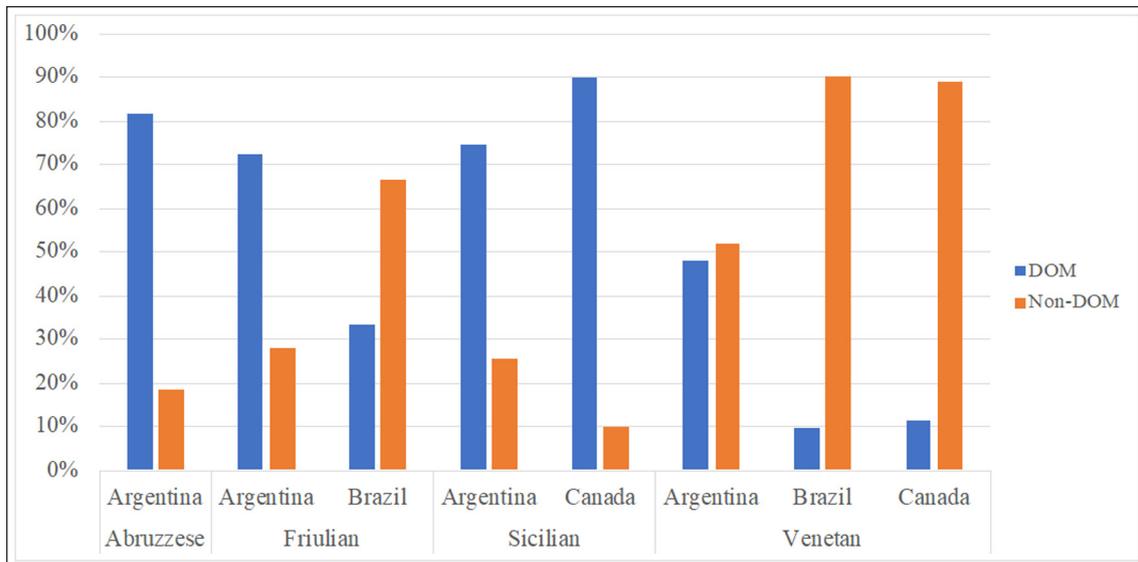


Figure 2: Percentage of DOM and non-DOM marked objects in a forced choice task with HSs of Abruzzese, Friulian, Sicilian, and Venetan in Argentina, Brazil, and Canada.

The elicited data show similar patterns to Abruzzese and Sicilian spontaneous speech.¹⁴ We also find many instances of DOM in the spontaneous speech of Heritage Friulian:

- (10) *Heritage Friulian in Argentina*
 ...e an clamat a me mari.
 and have.3PL called DOM my mother
 ‘...and they called my mother.’

These results are in keeping with earlier findings on Catalan DOM in (micro)contact with Spanish: while Standard Catalan only has obligatory DOM with pronouns and dislocated DPs, non-standard varieties of Catalan preserve DOM and actually expand its context of occurrence, possibly because of contact with Spanish:

- (11) *Catalan (Corpus Oral de Conversa Colloquial; Benito Galdeano 2017: 16)*
- Esperant a la mare.
 waiting DOM the mother
 ‘Waiting for the mother.’
 - Coneixies a la seva família.
 knew.2SG DOM the 3.POSS family
 ‘You knew his/her family.’

¹⁴ The Sicilian data are not as straightforward as the others. The literature generally reports the presence of DOM for human indefinites (Manzini & Savoia 2005; Guardiano 2010), but our recent data collection in Italy shows a generalized absence of DOM with this class of objects. Furthermore, Braitor (2017) also reports only 5% of DOM-ed human indefinites in her corpus. This might be due to substantial microvariation. Given that we have no way to ascertain how exactly DOM works with human indefinites for G1 speakers, we leave this issue aside for further investigation.

Interestingly, our data from Venetan show an asymmetry between the results of the forced-choice task and spontaneous speech. In the forced choice task, the DOM option was chosen over the non-DOM option in 48% of cases by HSs (38% if we add G1 speakers), despite the fact that homeland Venetan is generally regarded as non-DOM – with some exceptions found in Triestino (Rohlf's 1969; 1971) and Paduan (Fabris 1928: 14). In spontaneous production, on the other hand, they never produced DOM. Given this discrepancy, we leave the Venetan data aside for further investigation.

The facts reported here constitute systematic counterexamples to GEN1 and GEN2:¹⁵ indeterminacy is not resolved in HLs in microcontact, but is preserved and possibly even strengthened. The *a*-marker is consistently selected for DOM and other uses (e.g. datives and locatives). In the case of Friulian, HSs extend the use of *a* to differential marking of DOs, which is not found in the homeland grammar. We can therefore argue that in this case the heritage variety has become more complex, rather than simpler, than the homeland variety.

5. Generalizations 3 and 4: the Interface Hypothesis and null elements

The third generalization that we address in this paper is the Interface Hypothesis (IH): change targets structures that involve several grammatical modules (Hulk & Müller 2000; Sorace 2005, 2011; Sorace & Serratrice 2009; Sorace *et al.* 2009; a.o.). The core of the hypothesis is that strictly grammatical phenomena are less vulnerable, because they only require mastery of one module; instead, phenomena at the interfaces between different modules, such as syntax, discourse, and information structure, are more vulnerable, as they require the integration of more modules and hence have higher computational and processing loads. The IH was originally proposed to account for adult L2 learners and was later widely used to explain the linguistic behavior of bilinguals; it has also been applied to the study of HLs (see e.g. Benmamoun & Montrul & Polinsky 2013 and references therein).

In this discussion, we specifically target the syntax-discourse interface, which we explore with reference to two different phenomena: DOM and null subjects (NS). While NS are situated at the syntax-discourse interface, DOM typically involves the internal interface between syntax and semantics. In some cases, however, it also touches upon the syntax-pragmatics interface. For both DOM and NS, then, syntactic computation must be integrated with information-structure requirements: this integration is computationally heavy, so both phenomena are predicted to be vulnerable to change in contact situations.

¹⁵ See Cohal (2014: 173) for a case where DOM did not expand in microcontact.

In the previous section we showed that differential marking of DOs is preserved, or even strengthened, in heritage Italo-Romance varieties in (micro)contact with Argentinian Spanish. The contexts in which this extension takes place usually involve a fronted topic. It has been argued, in fact, that topicality favored the emergence of DOM in a number of early Romance varieties. Pensado (1995) shows the relevance of topicality in the rise of DOM in old Spanish; Iemmolo (2009, 2010) observes the same behavior in Old Sicilian, while Ledgeway (2009) shows that old Neapolitan had a contrast between unmarked *in-situ* DOs and marked dislocated (i.e. topicalized) ones. Our data also show that DOM is accepted significantly more often with fronted topicalized objects than with *in-situ* objects, as illustrated in **Figure 3**:

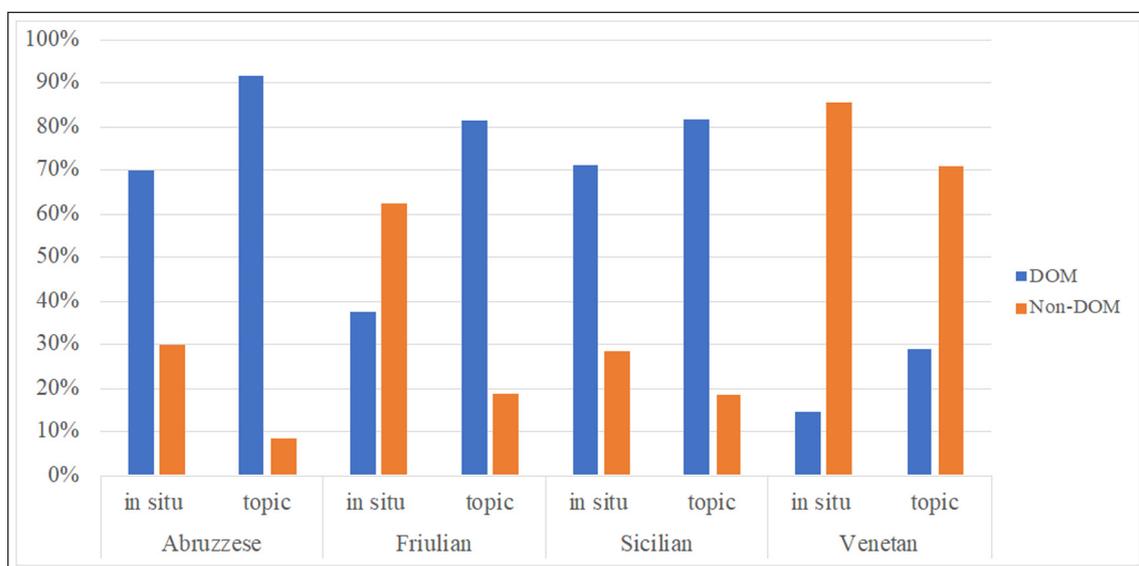


Figure 3: Percentages of DOM and non-DOM with both topicalized and non-topicalized constructions in a forced choice task with HSs of Abruzzese, Friulian, Sicilian, and Venetan (data grouped across the three different host countries).

This difference between DOM with topicalized and non-topicalized objects was significant for Abruzzese speakers (DOM extension; 6 G1, 2 HSs) and Friulian speakers (4 G1, 4 HSs), although for the latter it emerged that the effect was only significant for HSs ($z = -3.14$, $p = .006$), and not for the G1 migrants:

- (12) a. *Heritage Abruzzese in Argentina*
 A **na candandə**, jirə, li so vasciatə.
 DOM a singer yesterday her.CL AUX kissed
- b. *Heritage Friulian in Argentina*
 A **une cjantant**, îr, la ai bussade.
 DOM a singer yesterday her.CL AUX kissed
 ‘As for a singer, I kissed one yesterday.’

While homeland Abruzzese, Friulian, Sicilian, and Venetan do have topicalization strategies, these do not trigger differential marking of DOs. DOM is widespread in Abruzzese and Sicilian, and is triggered by the semantic features of the objects, such as specificity and definiteness. In these varieties, the classes of objects that are available for *a*-marking will have DOM independently of their syntactic position (with the exception of some Sicilian varieties, where differential marking is favored in topic position with some referents lower in the definiteness/animacy hierarchy; see Guardiano 2010). In Heritage Abruzzese, Friulian, Sicilian, and Venetan DOM is instead introduced or strengthened in topicalization contexts, to different extents.

This shows that HSs introduce discourse-related constraints on DOM, like topicality, that are not crucial in the realization of DOM in the baseline; in doing so, they defy the IH by showing good mastery of a discourse-related operation, i.e. topicalization, involving the syntax-pragmatics interface. Indeed, these facts seem to indicate that syntactic change penetrates into the system from the periphery of the clause.

Turning to null subjects, the IH predicts that the production of NS will be affected by the computationally taxing integration of syntax and pragmatics.¹⁶ Research on both L2 and HLs has shown that this is the case for NS. When a pro-drop language enters into contact with a non-pro-drop language there are two possible logical outcomes. The first outcome is that the NS is partially lost, and that speakers of originally pro-drop languages actually start inserting overt subjects in contexts in which they are not used by monolingual speakers. This has been attested in many studies, such as Paradis & Navarro (2003) and Serratrice *et al.* (2004) for English-Italian; Sorace *et al.* (2009) for English-Italian and Spanish-Italian; Müller *et al.* (2006) for German-Italian.

The second logical possibility is that non-pro-drop languages can become pro-drop, but this is barely attested. The emergence of pro-drop would imply an increase in the complexity of a system. In non-pro-drop languages all subjects are overt, regardless of discourse and context factors, so they display a simpler system for subject insertion than pro-drop languages, in which the insertion of an overt subject is dependent on specific discourse-related factors (Tsimplici *et al.* 2004, Sorace *et al.* 2009). The preference for the simpler system is usually chosen by L2 speakers as well as heritage speakers (Sorace *et al.* 2009). Other more gradable options are also found.

Although the main tendency is towards the use of overt subjects, null subjecthood can also sometimes remain unaffected, or even be extended. Data pointing in this direction have been found by Pinto (2013) for Dutch speakers of L2 Italian; Montrul (2004) for HSs of Spanish in the US; Montrul & Rodriguez Louro (2006) and Rothman (2009) for American-English L2 speakers of

16 In this paper, we refer to null subjects as *pro*. We do not take any stand here regarding the exact analysis of null subjects though, in particular regarding the existence of *pro* (Roberts 2010, Holmberg 2010). *pro* is used here as a shorthand for null subject.

Spanish. The tendency to maintain the pro-drop status of the language is only marginally attested in contact situations, and therefore considered a deviation from the norm. However, studies on microcontact, such as contact between Spanish and Portuguese, have reported similar results (see in particular De Prada Pérez 2009 on Catalan-Spanish; Carvalho & Child 2011 and De Souza *et al.* 2018 on Spanish-Portuguese).

For our study, we looked at subject clitics in Heritage Friulian, both in contact with English in the US and in microcontact situations in Argentina and Brazil. As mentioned above, subject clitics are always obligatory, while tonic pronouns can be dropped in certain discourse contexts, similar to other null subject languages.

In our control group of Heritage Friulian in the US, subject clitics are indeed always obligatory in the context of topic continuity, on a par with homeland Friulian (see (14a) below). In particular, we note that subject clitics are realized whenever a finite verb appears, regardless of discourse conditions, as expected for markers of φ -agreement. This is illustrated in (13):

(13) *Heritage Friulian in New York City*

I soi zût a scuela il prin dì chi (...). I ai fât sessante *credits*.
 I.SCL am gone to school the first day here I.SCL have made sixty credits
 ‘I went to school on the first day here (...). I got sixty credits.’

However, Frasson & D’Alessandro & van Osch (2021) show that in heritage varieties of Friulian spoken in microcontact situations in Argentina and Brazil, subject clitics display occasional pronominal behavior, in that they can be dropped in the second conjunct of coordinated structures (14b), while this is impossible in the homeland variety (14a):

(14) a. *Homeland Friulian*

Al mangje e **al** bef.
 he.SCL eats and he.SCL drinks
 ‘He is eating and drinking.’

b. *Heritage Friulian in Buenos Aires (Argentina) and Ivorà (Brazil)*

Al mangje e ___ bef.
 he.SCL eats and drinks
 ‘He is eating and drinking.’

Frasson & D’Alessandro & van Osch (2021) observe a two-step development: agreement clitics are not mere φ -bundles like in the homeland variety, but are full pronouns. These pronouns are then dropped, creating a pro-drop context that is not present in the homeland grammar. Moreover, the spontaneous production data show an effect of topicality for subject drop in Heritage Friulian: HSs are more likely to produce a clitic when there is a shift in topic with respect to the previous sentence (15), compared to cases of topic continuity (16):

(15) *Heritage Friulian in Buenos Aires*

Dopo tancj agn a è restade cun me. E cusì, i fevelavi cun je (...)
 after many years she.SCL is stayed with me and so I.SCL talked with her
 ‘Many years later, she decided to stay with me. So, I would talk with her (...).’

(16) *Heritage Friulian in Buenos Aires* (Frasson & D’Alessandro & van Osch 2021)

I ai tacât fevelà furlan (...). Dop *pro* ai sposât une furlane.
 I.SCL have started speak.INF Friulian then *pro* have married a Friulian
 ‘I started to speak Friulian (...). Then I married a Friulian.’

The effect can be seen in both Brazilian and Argentinian heritage speakers, but is only significant in Argentina, as illustrated in **Figure 4**.

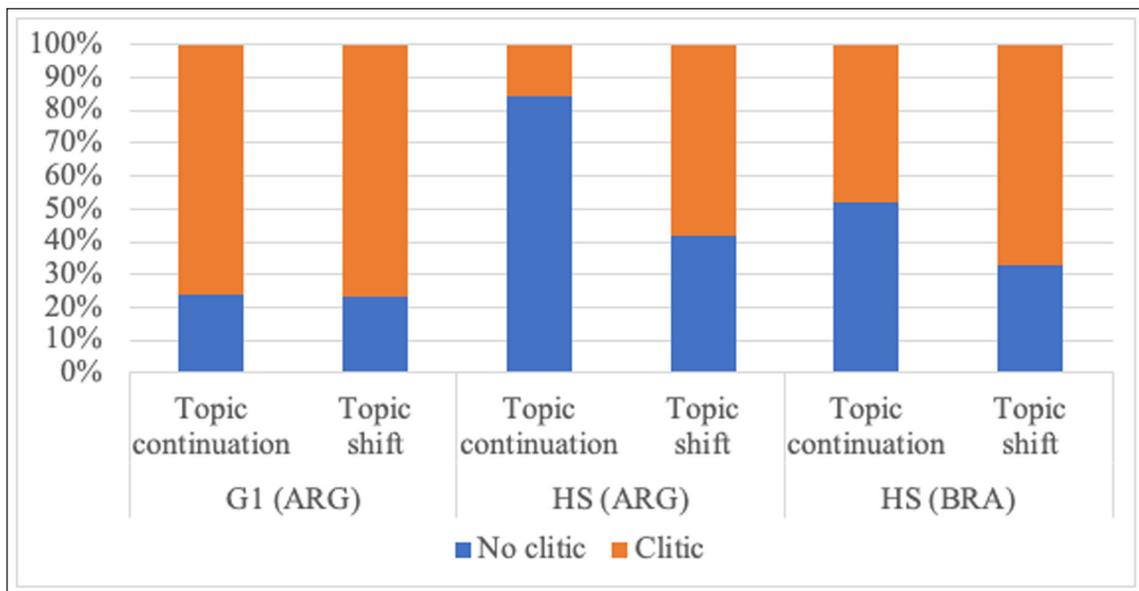


Figure 4: Percentages of subject clitic use in Heritage Friulian (spontaneous production) in Argentina and Brazil.

This indicates that specific interface conditions trigger subject drop. Contrary to what is expected under the IH, HSs introduce new discourse-related constraints on *pro*-drop that are unavailable in the baseline, namely the use of topicality. This suggests that HSs in microcontact situations do not face specific difficulties with the computation of discourse operations; on the contrary, they exploit these discourse strategies to create new structural configurations, like *pro*-drop, which are unavailable for subject clitics in the homeland variety. In addition, the different outcomes in the two contact situations suggest that the effects of language contact are not solely due to cognitive issues and can therefore emerge as a consequence of specific language pairings.

The data on subject clitics that we have just presented also allow us to reassess the fourth generalization, related to silent elements: HSs have been shown to be uncomfortable with silent elements (Polinsky 2006; Laleko & Polinsky 2016) and hence to tend to avoid them, possibly because of processing issues.

Friulian data from Argentina and Brazil plainly contradict this generalization, given that some of the HSs we interviewed introduced new silent elements into their systems. Heritage Friulian speakers in Argentina and Brazil in fact allow for a pronominal use of subject clitics (obligatory agreement markers) that can therefore be omitted, as predicted for pronominal elements in null-subject languages: that is, in our data we see that an element that used to be obligatory in the homeland variety becomes optional in the HL. Thus, HSs in microcontact situations are comfortable with silence, given the appropriate discourse conditions.

Finally, the data from both DOM and subject clitics in microcontact contradict GEN2, which predicts that change in contact should entail simplification. For DOM, we see that Italo-Romance varieties that do not have DOM in the baseline can integrate DOM marker into their grammars, when in contact with another DOM language. For subject clitics, we see that some varieties reanalyze these clitics as pronouns that can be dropped under the right discourse conditions. Thus, in both cases we see that the systems have started to include more variation rather than less: where there was a one-to-one mapping in the baseline variety, we now have a one-to-many mapping in the heritage variety. Moreover, for both of these properties, discourse constraints are added to a domain that was purely syntactic in the baseline. We can therefore conclude that, at least for these phenomena, heritage speakers are not simplifying their languages; if anything, they are making them more complex.

6. Generalization 5: Stability of the indexical domain

The last generalization we consider concerns the indexical domain, which is generally believed to be unaffected by contact in HLs (GEN5, Polinsky 2018a), a conclusion supported by wider evidence from contact linguistics (Nichols 1992; Heine & Kuteva 2005; Friedman 2006; Matras 2009). The only type of change that we can observe in indexical elements is diachronic in nature, i.e. endogenous. This is confirmed by our data in microcontact, but surprisingly only partially by our findings in contact.

6.1. Demonstratives

As described in Section 3.2, we tested the three spatial domains ('close to the speaker', 'close to the hearer', 'far from both') via a picture-sentence matching task and a semi-guided production task with HSs and G1 speakers of Abruzzese, Sicilian, and Calabrian, for a total of 38 speakers.

Given the fragmentation of our sample across different contact situations, and its small size, we were only able to report some descriptive statistics in this case. We nonetheless found preliminary converging results across heritage varieties, contact situations, and generations.

Specifically, the study revealed the following results. 100% ($n = 33/33$) of the HSs' responses for the speaker-related domain were target-like (i.e. morphologically proximal: 'this/here close to me'), that is: compatible with a ternary system as described in the homeland grammars. Likewise, the encoding of the speaker-related domain is target-like (proximal) in the G1 population (99.26% of responses, $n = 135/136$). Similarly, the responses elicited for the other-related domain were mostly target-like (i.e. morphologically distal: 'that/here far from me'): 87.88% ($n = 29/33$) for HSs, 88.26% ($n = 120/136$) for G1 speakers. These figures rise if only the results of the semi-guided production task are considered: in this case, target-like responses (distal) were given in 93.33% of cases ($n = 14/15$) by HSs and in 100% of cases ($n = 55/55$) by G1 speakers. For the likely task-related effect in this context, see Andriani *et al.* (in press). The speaker- and other-related domains can therefore be regarded as very stable.

The hearer-related domain, however, is rather unstable: only 54.55% of responses ($n = 18/33$) given by HSs and 54.35% of responses ($n = 75/138$) given by G1 speakers were target-like (i.e. morphologically medial: 'that/there close to you'). No effect of the specific contact varieties has been detected. Note that the hearer-related domain is also the most unstable diachronically: this means that if ternary systems change in contact situations (only in the case of the hearer-related domain), this change exactly mirrors their diachronic development. In other words, it is impossible to ascertain whether change has been triggered by contact or has emerged spontaneously. Nonetheless, given that change follows exactly the same path in all contact contexts and for all HLs, we conclude that this change is spontaneous rather than contact-induced; in this case (but not in all others), contact might be accelerating the diachronic development. Overall, the results of this study seem to support GEN5.

6.2. D- and T-drop

GEN5 is not only concerned with the organization of indexical paradigms, but extends to the functional heads linked to indexicality, concluding that they too should be stable. Interestingly, our investigation of the indexicality-related heads in Italo-Romance spontaneous production data collected in NYC (i.e. not in microcontact) seem to contradict GEN5. First, some heritage speakers tend to leave some functional heads empty(/underspecified). The relevant functional heads are, strikingly, those related to indexicality (Polinsky 2018a): D and T.

The data in (17) illustrate D-drop, while the data in (18) illustrate T-drop or T-impoverishment (the \emptyset indicates the position in which the relevant heads appear in the homeland and baseline varieties):

- (17) a. *Heritage Friulian in NYC*
 Il prim post al era al 34, dop a è giuta a- \emptyset _[D] 28.
 the first place 3.SCL was at=the 34, then 3.SCL is gone to= \emptyset 28
 ‘The first place was on the 34th (street), then it moved to 28th.’
- b. *Heritage Cilentano in NYC*
 Mə piascə visitare \emptyset _[D] me_[D] nonni.
 to.me.CL likes visit.INF my.PL grandparents
 ‘I like to visit my grandparents.’
- (18) *Heritage Cilentano in NYC*
- a. io sempre **va** a Italia.
 I always go.3SG to Italy
 ‘I always go to Italy.’
- b. **nessciuno capire** questa lingua.
 no-one understand.INF this language
 ‘no-one understands this language.’
- c. mi zio era... a *politician* e \emptyset _[AUX] **portato** tutta la famijja llà.
 my uncle was a politician and \emptyset brought all the family there
 ‘my uncle was a politician and brought all his family there.’

In (17) we observe the omission of definite articles in a prepositional phrase (17a) and with a possessive (17b), for which we would either expect an (American-)Italian-like structure *i miei nonni* or Cilentano *i nonnə m(e)i*, always with an overt definite article. The examples in (18) show three different non-target-like behaviors related to T. Example (18a) instantiates the most frequent strategy of T-impoverishment, i.e. the loss of person-features on the inflected verb, resulting in a default 3SG-agreement strategy (this can also be seen in (19) below). Instead, (18b) shows the presence of a root-infinitive rather than a finite verb, allegedly suggesting that the verb has not raised to T (cf. Pollock 1989; Schifano 2018). In (18c), we observe the omission of the perfective auxiliary *ha* ‘has’, suggesting that T has not been lexicalized at all; this leaves only the past participle to express (perfective) past tense. In some respects, these facts also weaken GEN4 regarding null/silent elements, in that HSs do produce them in contexts where this is not expected, i.e. D and T, the highest functional heads of the N and V extended projections.

Finally, person pronouns also exhibit a type of impoverishment, mainly related to the number feature, as in (19), where a third-person plural pronoun (*loro* ‘them’) is expressed by a third-person singular pronoun (*lei*):

(19) *Heritage Sicilian in NYC*

Quanno io fa sto mossa con lei.
 when I do.3SG this.M movement.F with her
 ‘When I do this movement with her (intended: them).’

In conclusion, while microcontact data regarding the organization of indexical paradigms confirm the general tendency of indexicals to remain stable or to change minimally in diachrony, the plain contact data relative to the indexical-related heads might prove problematic for this generalization.

7. Conclusions

In this paper, we have shown that microsyntactic variation offers an important additional set of data for understanding what is involved in change; it allows holistic typological considerations to be factored out in order to focus solely on structural factors. The outputs of CIC related to the different language pairs involved vary slightly, but they show tendencies that overall contradict what has been reported in the existing literature, which is mainly based on contact among typologically different languages. Specifically, we have shown that GEN1-GEN4 (and partially GEN5) are contradicted by microcontact data. We maintain that these generalizations do not hold across the board because they have been established on the basis of structurally distant languages alone. This paper offers a methodological contribution to the study of language contact, in that it shows that introducing a microcontact perspective is not only desirable, but necessary. Furthermore, checking the same phenomenon in multiple contact situations offers a clearer picture of the factors involved and the incipient direction of language change.

Abbreviations

AUX = auxiliary, CIC = change in contact CL = clitic, DEM = demonstrative, DOM = Differential Object Marking, HL = heritage language, HS = heritage speaker, INF = infinitive, NS = null subject, PL = plural, SCL = subject clitic, SG = singular.

Funding information

This research received funding by the European Research Council under the Horizon 2020 Research and Innovation Programme (grant agreement ERC CoG 681959_MicroContact).

Competing interests

The authors have no competing interests to declare.

References

- Aikhenvald, Alexandra Y. 2006. Reflections on language contact, areal diffusion, mechanisms of linguistic change. In Caron, Bernard & Zima, Petr (eds.), *Sprachbund in the West African Sahel*, 23–26. Louvain/Paris: Peeters.
- Alexiadou, Artemis & Lohndal, Terje. 2018. Units of Language Mixing: A Cross-Linguistic Perspective. *Frontiers in Psychology* 9. 1719. DOI: <https://doi.org/10.3389/fpsyg.2018.01719>
- Andriani, Luigi & Casalicchio, Jan & Ciconte, Francesco M. & D'Alessandro, Roberta & Frasson, Alberto & van Osch, Brechje & Sorgini, Luana & Terenghi, Silvia. 2022. Documenting Italo-Romance minority languages in the Americas. Problems and tentative solutions. In Coler, Matt & Nevins, Andrew (eds.), *Contemporary research in minority and diaspora languages of Europe*. Berlin: Language Science Press.
- Benincà, Paola. 1994. *La variazione sintattica*. Bologna: Il Mulino.
- Benito Galdeano, Rut. 2017. *Differential object marking in Catalan: Contexts of appearance and analysis*. Barcelona: Universitat de Barcelona MA thesis.
- Benmamoun, Elabbas & Montrul, Silvina & Polinsky, Maria. 2013. Heritage languages and their speakers: Opportunities and challenges for linguistics. *Theoretical Linguistics* 39(3–4). 129–181. DOI: <https://doi.org/10.1515/tl-2013-0009>
- Bossong, Georg. 1985. *Differentielle Objektmarkierung in den Neuiranischen Sprachen*. Tübingen: Narr Verlag.
- Bossong, Georg. 1991. Differential object marking. In Wanner, Dieter & Kibbee, Douglas A. (eds.), *New Analyses in Romance Linguistic*, 143–170. Amsterdam: John Benjamins. DOI: <https://doi.org/10.1075/cilt.69.14bos>
- Braiton, Ana-Maria. 2017. *Unità e diversità nella marcatura differenziale dell'oggetto diretto in rumeno e in siciliano*. *Studio comparativo*. Palermo: Università degli Studi di Palermo dissertation.

- Brandi, Luciana & Cordin, Patrizia. 1989. Two Italian dialects and the Null Subject Parameter. In Jaeggli, Osvaldo A. & Safir, Kenneth J. (eds.), *The Null Subject Parameter*, 111–142. Springer: Dordrecht. DOI: https://doi.org/10.1007/978-94-009-2540-3_4
- Carvalho, Ana M. & Child, Michael. 2011. Subject pronoun expression in a variety of Spanish in contact with Portuguese. In Michnowicz, Jim & Dodsworth, Robin (eds.), *Selected Proceedings of the 5th Workshop on Spanish Sociolinguistics*, 14–25. Somerville, MA: Cascadilla Proceedings Project.
- D'Alessandro, Roberta. 2015. *Microcontact. Language variation and change from the Italian heritage perspective*. ERC project, <https://microcontact.sites.uu.nl/project/>
- D'Alessandro, Roberta. 2018. Microcontact, what it is and what it does. Paper presented at the UiL-OTS Colloquium, Utrecht University, 15 March 2018.
- D'Alessandro, Roberta. 2021. Syntactic change in contact: Romance. *Annual Review of Linguistics* 7(7). 309–328. DOI: <https://doi.org/10.1146/annurev-linguistics-011619-030311>
- D'Alessandro, Roberta & Natvig, David & Putnam, Michael T. 2021. Addressing challenges in formal research on moribund heritage bilinguals: A path forward. *Frontiers in Psychology* 12. 700126. DOI: <https://doi.org/10.3389/fpsyg.2021.700126>
- Daller, Michael H. & Yildiz, Cemal & de Jong, Nivja H. & Kan, Seda, & Basbagi, Ragip. 2011. Language dominance in Turkish German bilinguals: Methodological aspects of measurements in structurally different languages. *International Journal of Bilingualism* 15(2). 215–236. DOI: <https://doi.org/10.1177/1367006910381197>
- De Prada Pérez, Ana. 2009. *Subject expression in Minorcan Spanish: Consequences of contact with Catalan*. State College, PA: Pennsylvania State University dissertation.
- De Souza, Karoline Gasque & da Silveira Chaves, Lurian & Simioni, Leonor. 2018. Sujeitos nulos no português de Poblado Uruguay. *PAPIA* 28(1). 7–24.
- Dell, Gary S. 1986. A Spreading-Activation Theory of Retrieval in Sentence Production. *Psychological review*, 93(3). 283–321. DOI: <https://doi.org/10.1037/0033-295X.93.3.283>
- Dench, Alan. 2001. Descent and diffusion: The complexity of the Pilbara situation. In Aikhenvald, Alexandra Y. & Dixon, Robert M. W. (eds.), *Areal diffusion and genetic inheritance: Problems in comparative linguistics*, 105–133. Oxford: Oxford University Press.
- Diez, Friedrich. 1882. *Grammatik der romanischen Sprachen*. Bonn: E. Weber.
- Dijkstra, Ton & van Heuven, Walter J. B. 1998. The BIA model and bilingual word recognition. In Grainger, Jonathan & Jacobs, Arthur M. (eds.), *Localist connectionist approaches to human cognition*, 189–225. Mahwah, NJ: Lawrence Erlbaum Associates Publishers.
- Fabris, Giovanni. 1928. *Lingua e dialetto. Libro di esercizi per la città e provincia di Padova. Parte II per la quarta classe delle Scuole elementari*. Trieste: La Editoriale Libreria.
- Frasson, Alberto & D'Alessandro, Roberta & van Osch, Brechje. 2021. Subject Clitics in microcontact: A case study from heritage Friulian in Argentina and Brazil. *Heritage Language Journal* 18. DOI: <https://doi.org/10.1163/15507076-12340001>

- Friedman, Victor A. 2006. Balkanizing the Balkan Sprachbund: A closer look at grammatical permeability and feature distribution. In Aikhenvald, Alexandra Y. & Dixon, Robert M. W. (eds.), *Grammars in contact. A Cross-linguistic Typology*, 201–219. Oxford: Oxford University Press.
- Goldrick, Matthew & Putnam, Michael T. & Schwarz, Lara. 2016. Coactivation in bilingual grammars: A computational account of code mixing. *Bilingualism* 19(5). 857–876. DOI: <https://doi.org/10.1017/S1366728915000802>
- Guardiano, Cristina. 2010. L'oggetto diretto preposizionale in siciliano. Una breve rassegna e qualche domanda. In Garzonio, Jacopo (ed.), *Studi sui dialetti della Sicilia*, 83–101. Padua: Unipress.
- Heine, Bernd & Kuteva, Tania. 2005. *Language contact and grammatical change*. Cambridge: Cambridge University Press. DOI: <https://doi.org/10.1017/CBO9780511614132>
- Holmberg, Anders. 2010. Null Subject Parameters. In Biberauer, Theresa & Holmberg, Anders & Roberts, Ian & Sheehan Michelle (eds.), *Parametric Variation; Null Subjects in Minimalist Theory*, 88–124. Cambridge: Cambridge University Press.
- Hulk, Aafke & Müller, Natasha. 2000. Bilingual first language acquisition at the interface between syntax and pragmatics. *Bilingualism: Language and Cognition* 3(3). 227–244. DOI: <https://doi.org/10.1017/S1366728900000353>
- Iemmolo, Giorgio. 2009. La marcatura differenziale dell'oggetto in siciliano antico. *Archivio Glottologico Italiano* 94(2). 185–225.
- Iemmolo, Giorgio. 2010. Topicality and differential object marking: Evidence from Romance and beyond. *Studies in Language* 34(2). 239–272. DOI: <https://doi.org/10.1075/sl.34.2.01iem>
- Kayne, Richard. 2000. *Parameters and Universals*. Oxford/New York: Oxford University Press.
- Kayne, Richard 2005. Some notes on Comparative Syntax, with special reference to English and French. In Cinque, Guglielmo & Kayne, Richard (eds.), *The Oxford Handbook of Comparative Syntax*. New York/Oxford: Oxford University Press. 3–69.
- Kupisch, Tanja & Belikova, Alyona & Özçelik, Öner & Stangen, Ilse & White, Lydia. 2017. Restrictions on definiteness in the grammars of German-Turkish heritage speakers. *Linguistic Approaches to Bilingualism* 7. 1–32. DOI: <https://doi.org/10.1075/lab.13031.kup>
- Kupisch, Tanja & Rothman, Jason. 2018. Terminology matters! Why difference is not incompleteness and how early child bilinguals are heritage speakers. *International Journal of Bilingualism* 22(5). 564–582. DOI: <https://doi.org/10.1177/1367006916654355>
- Laleko, Oksana & Polinsky, Maria. 2016. Between syntax and discourse: Topic and case marking in heritage speakers and L2 learners of Japanese and Korean. *Linguistic Approaches to Bilingualism* 6(4). 396–439. DOI: <https://doi.org/10.1075/lab.14018.lal>
- Laleko, Oksana & Polinsky, Maria. 2017. Silence is difficult: On missing elements in bilingual grammars. *Zeitschrift für Sprachwissenschaft* 36(1). 135–163. DOI: <https://doi.org/10.1515/zfs-2017-0007>
- Ledgeway, Adam. 2009. *Grammatica diacronica del napoletano*. Tübingen: Max Niemeyer Verlag. DOI: <https://doi.org/10.1515/9783484971288>

- Ledgeway, Adam. 2015a. Parallels in Romance Nominal and Clausal Microvariation, *Revue roumaine de linguistique* 60. 105–127.
- Ledgeway, Adam. 2015b. Varieties in Italy 1. In Jungbluth, Konstanze & Da Milano, Federica (eds.), *Manual of Deixis in Romance Languages*, 146–162. Berlin: De Gruyter. DOI: <https://doi.org/10.1515/9783110317732-007>
- Ledgeway, Adam & Smith, John Charles. 2016. Deixis. In Ledgeway, Adam & Maiden, Martin (eds.), *The Oxford Guide to the Romance Languages*, 879–896. Oxford: Oxford University Press. DOI: <https://doi.org/10.1093/acprof:oso/9780199677108.003.0054>
- Lee, Miseon & Kwak, Hye-Young & Lee, Sunyoung & O’Grady, William. 2011. Processing, pragmatics, and scope in Korean and English. In Sohn, Ho-Min & Minegishi Cook, Haruko & O’Grady, William & Serafim, Leon & Cheon, Sang Yee (eds.), *Japanese/Korean linguistics* 19, 297–311. Stanford, CA: CSLI Publications.
- Leivada, Evelina & D’Alessandro, Roberta & Grohmann, Kleantes K. 2019. Eliciting big data from small, young, or non-standard languages: 10 experimental challenges. *Frontiers in Psychology* 10. 313. DOI: <https://doi.org/10.3389/fpsyg.2019.00313>
- López, Luis. 2020. *Bilingual grammar. Toward an integrated model*. Cambridge: Cambridge University Press. DOI: <https://doi.org/10.1017/9781108756181>
- López, Luis & Alexiadou, Artemis & Veenstra, Tonjes. 2017. Code-Switching by Phase. *Languages* 2(3). 9. DOI: <https://doi.org/10.3390/languages2030009>
- Luján, Marta & Parodi, Claudia. 1996. Clitic-doubling and the acquisition of agreement in Spanish. In Gutiérrez-Rexach, Javier & Silva Villar, Luis (eds.), *Perspectives on Spanish linguistics* (vol. 1), 119–138. Los Angeles, CA: UCLA, Department of Linguistics.
- Manzini, M. Rita & Savoia, Leonardo M. 2005. *I dialetti italiani e romanci. Morfosintassi generativa*. Alessandria: Edizioni dell’Orso.
- Matras, Yaron. 2009. *Language Contact*. Cambridge: Cambridge University Press. DOI: <https://doi.org/10.1017/CBO9780511809873>
- Meyer-Lübke, Wilhelm. 1899. *Grammatik der romanischen Sprachen*. Dritter Band: Syntax. Leipzig: Reisland.
- Montrul, Silvina. 2004. Subject and object expression in Spanish heritage speakers: A case of morphosyntactic convergence. *Bilingualism: Language and cognition* 7(2). 125–142. DOI: <https://doi.org/10.1017/S1366728904001464>
- Montrul, Silvina. 2011. Multiple interfaces and incomplete acquisition. *Lingua* 121(4). 591–604. DOI: <https://doi.org/10.1016/j.lingua.2010.05.006>
- Montrul, Silvina & Bhatt, Rajesh, & Girju, Roxana. 2015. Differential Object Marking in Spanish, Hindi, and Romanian as Heritage Languages. *Language* 91(3). 564–610. DOI: <https://doi.org/10.1353/lan.2015.0035>
- Montrul, Silvina & Bowles, Melissa. 2009. Back to basics: Differential Object Marking under incomplete acquisition in Spanish heritage speakers. *Bilingualism: Language and Cognition* 12(3). 363–383. DOI: <https://doi.org/10.1017/S1366728909990071>

- Montrul, Silvina & Dias, Rejanés & Santos, H elade. 2011. Clitics and object expression in the L3 acquisition of Brazilian Portuguese. Structural similarity matters for transfer. *Second Language Research* 27(1). 21–58. DOI: <https://doi.org/10.1177/0267658310386649>
- Montrul, Silvina & Rodr guez Louro, Celeste. 2006. Beyond the syntax of the Null Subject Parameter: A look at the discourse-pragmatic distribution of null and overt subjects by L2 learners of Spanish. In Torrens, Vincent & Escobar, Linda (eds.), *The Acquisition of Syntax in Romance Languages*, 401–418. Amsterdam/Philadelphia: John Benjamins. DOI: <https://doi.org/10.1075/lald.41.19mon>
- Montrul, Silvina & Noelia S nchez-Walker. 2013. Differential Object Marking in child and adult Spanish heritage speakers. *Language Acquisition* 20(2). 109–132. DOI: <https://doi.org/10.1080/10489223.2013.766741>
- Moravcsik, Edith. 1978. On the case marking of objects. In Greenberg, Joseph H. (ed.), *Universals of human language, vol. 4: Syntax*, 249–289. Stanford: Stanford University Press.
- Muysken, Pieter. 2013. Language contact outcomes as the result of bilingual optimization strategies. *Bilingualism: Language and Cognition* 16(4). 709–729. DOI: <https://doi.org/10.1017/S1366728912000727>
- M ller, Natasha & Hulk, Aafke. 2001. Cross-linguistic influence in bilingual language acquisition: Italian and French as recipient languages. *Bilingualism: Language and Cognition* 4. 1–21. DOI: <https://doi.org/10.1017/S1366728901000116>
- M ller, Natasha, Tanja Kupisch, Katrin Schmitz & Katja Cantone. 2006. *Einf hrung in die Mehrsprachigkeitsforschung: Deutsch, Franz sisch, Italienisch*. T bingen: Narr Verlag.
- Nichols, Johanna. 1992. *Linguistic diversity in space and time*. Chicago: University of Chicago Press. DOI: <https://doi.org/10.7208/chicago/9780226580593.001.0001>
- O’Grady, William & Schafer, Amy J. & Perla, Jawee & Lee, On-Soon & Julia Wieting. 2009. A psycholinguistic tool for the assessment of language loss: The HALA Project. *Language Documentation & Conservation* 3. 100–112.
- O’Grady, William & Kwak, Hye-Young & Lee, On-Soon & Lee, Miseon. 2011. An emergentist perspective on heritage language acquisition. *Studies in Second Language Acquisition* 33. 223–245. DOI: <https://doi.org/10.1017/S0272263110000744>
- Paradis, Johanne & Navarro, Samuel. 2003. Subject realization and crosslinguistic interference in the bilingual acquisition of Spanish and English: what is the role of input? *Journal of Child Language* 30(2). 371–393. DOI: <https://doi.org/10.1017/S0305000903005609>
- Pascual y Cabo, Diego. 2013. *Agreement Reflexes of Emerging Optionality in Heritage Speaker Spanish*. Gainesville, FL: University of Florida dissertation.
- Pensado, Carmen. 1995. La creaci n del objeto directo preposicional y la flexi n de los pronombres personales en las lenguas rom nicas. In Pensado, Carmen (ed.), *El complemento directo preposicional*, 179–233. Madrid: Visor Libros.
- Pinto, Manuela. 2013. Tracking reference with null subjects. In Aalberse, Suzanne & Auer, Anita (eds.), *Linguistics in the Netherlands 2013*, 131–145. Amsterdam: John Benjamins. DOI: <https://doi.org/10.1075/avt.30.10pin>

- Poletto, Cecilia. 1993. *La sintassi del soggetto nei dialetti italiani settentrionali*. Padua: Unipress.
- Polinsky, Maria. 1997. American Russian: Language loss meets language acquisition. In Browne, Wayles & Dornisch, Eva & Kondrashova, Natasha & Zec, Draga (eds.), *Annual Workshop on Formal Approaches to Slavic Linguistics. The Cornell meeting 1995*, 370–406. Ann Arbor, MI: Michigan Slavic Publications.
- Polinsky, Maria. 2005. Word class distinctions in an incomplete grammar. In Ravid, Dorit & Shyldkrot, Bat-Zeev (eds.), *Perspectives on language and language development*, 419–434. Dordrecht: Kluwer. DOI: https://doi.org/10.1007/1-4020-7911-7_30
- Polinsky, Maria. 2006. Incomplete acquisition: American Russian. *Journal of Slavic Linguistics* 14(2). 191–262.
- Polinsky, Maria. 2011. Reanalysis in adult heritage language: New evidence in support of attrition. *Studies in Second Language Acquisition* 33(2). 305–328. DOI: <https://doi.org/10.1017/S027226311000077X>
- Polinsky, Maria. 2018a. *Heritage Languages and their Speakers*. Cambridge: Cambridge University Press. DOI: <https://doi.org/10.1017/9781107252349>
- Polinsky, Maria. 2018b. Bilingual children and adult heritage speakers: The range of comparison. *International Journal of Bilingualism* 22(5). 547–563. DOI: <https://doi.org/10.1177/1367006916656048>
- Polinsky Maria & Scontras, Gregory. 2020. Understanding heritage languages. *Bilingualism: Language and Cognition* 23(1). 4–20. DOI: <https://doi.org/10.1017/S1366728919000245>
- Pollock, Jean-Yves. 1989. Verb Movement, Universal Grammar, and the Structure of IP. *Linguistic Inquiry* 20(3). 365–424.
- Rizzi, Luigi. 1986. On the status of subject clitics in Romance. In Jaeggli, Osvaldo A. & Silva-Corvalán, Carmen (eds.), *Studies in Romance Linguistics*, 391–420. Dordrecht: Foris. DOI: <https://doi.org/10.1515/9783110878516-025>
- Rizzi, Luigi. 1997. The fine structure of the left periphery. In Haegeman, Liliane (ed.), *Elements of grammar. Handbook in generative syntax*, 281–337. Dordrecht: Springer. DOI: https://doi.org/10.1007/978-94-011-5420-8_7
- Roberts, Ian. 2010. *Agreement and Head Movement. Clitics, Incorporation, and Defective Goals*. Cambridge, MA: MIT Press. DOI: <https://doi.org/10.7551/mitpress/9780262014304.001.0001>
- Rohlf, Gerhard. 1969. *Grammatica storica della lingua italiana e dei suoi dialetti. Vol. 3: Sintassi e formazione delle parole*. Turin: Einaudi.
- Rohlf, Gerhard. 1971. Autour de l'accusatif prépositionnel dans les langues romanes: concordances et discordances. *Revue de linguistique romane* 35. 312–334.
- Rothman, Jason. 2009. Understanding the nature and outcomes of early bilingualism: Romance languages as heritage languages. *International Journal of Bilingualism* 13(2). 155–163. DOI: <https://doi.org/10.1177/1367006909339814>

- Rothman, Jason. 2010. On the typological economy of syntactic transfer: Word order and relative clause attachment preference in L3 Brazilian Portuguese. *International Review of Applied Linguistics* 48(2–3). 245–273. DOI: <https://doi.org/10.1515/iral.2010.011>
- Rothman, Jason. 2011. L3 syntactic transfer selectivity and typological determinacy: The typological primacy model. *Second Language Research* 27(1). 107–127. DOI: <https://doi.org/10.1177/0267658310386439>
- Rothman, Jason & González Alonso, Jorge & Puig-Mayenco, Eloi. 2019. *Third Language Acquisition and Linguistic Transfer*. Cambridge: Cambridge University Press. DOI: <https://doi.org/10.1017/9781316014660>
- Saab, Andrés. 2018. *Case conflicts and A-movement: DOM, doubling and clitics in Rioplatense Spanish*. Lecture series held at Utrecht University (December 2018).
- Schifano, Norma. 2018. *Verb Movement in Romance: A comparative study*. Oxford: Oxford University Press. DOI: <https://doi.org/10.1093/oso/9780198804642.001.0001>
- Scontras, Gregory & Polinsky, Maria & Fuchs, Zuzanna. 2018. In support of representational economy: Agreement in heritage Spanish. *Glossa: A Journal of General Linguistics* 3(1). 1. DOI: <https://doi.org/10.5334/gjgl.164>
- Serratrice, Ludovica & Sorace, Antonella. 2003. Overt and Null Subjects in Monolingual and Bilingual Italian Acquisition. In Beachley, Barbara & Brown, Amanda & Conlin, Frances (eds.), *BUCLD 27: Proceedings of the 27th annual Boston University Conference on Language Development, Volume 2*, 739–750. Somerville, MA: Cascadilla Press.
- Serratrice, Ludovica & Sorace, Antonella & Paoli, Sandra. 2004. Crosslinguistic influence at the syntax–pragmatics interface: Subjects and objects in Italian-English bilingual and monolingual acquisition. *Bilingualism: Language and Cognition* 7(3). 183–205. DOI: <https://doi.org/10.1017/S1366728904001610>
- Silva-Corvalán, Carmen. 1994. *Language contact and change: Spanish in Los Angeles*. Oxford: Clarendon.
- Silverstein, Michael. 1976. Hierarchy of features and ergativity. In Dixon, Robert W. M. (ed.), *Grammatical categories in Australian languages*, 112–171. Canberra: Australian Institute of Aboriginal Studies.
- Sorace, Antonella. 2005. Syntactic optionality at interfaces. In Cornips, Leonie E. A. & Corrigan, Karen P. (eds.), *Syntax and variation: Reconciling the biological and the social*, 46–111. Amsterdam: John Benjamins.
- Sorace, Antonella. 2011. Pinning down the concept of “interface” in bilingualism. *Linguistic Approaches to Bilingualism* 1(1). 1–33. DOI: <https://doi.org/10.1075/lab.1.1.01sor>
- Sorace, Antonella & Serratrice, Ludovica. 2009. Internal and external interfaces in bilingual language development: Beyond structural overlap. *International Journal of Bilingualism* 13(2). 195–210. DOI: <https://doi.org/10.1177/1367006909339810>

- Sorace, Antonella & Serratrice, Ludovica & Filiaci, Francesca & Baldo, Michela. 2009. Discourse conditions on subject pronoun realization: Testing the linguistic intuitions of older bilingual children. *Lingua* 119(3). 460–477. DOI: <https://doi.org/10.1016/j.lingua.2008.09.008>
- Sorgini, Luana. 2021. *A case of language change. Differential Object Marking in Friulian*. Paper presented at RomTin 8, June 25th, 2021. Utrecht.
- Treffers-Daller, Jeanine & Daller, Michael & Furman, Reyhan & Rothman, Jason. 2016. Ultimate attainment in the use of collocations among heritage speakers of Turkish in Germany and Turkish–German returnees. *Bilingualism: Language and Cognition* 19. 504–519. DOI: <https://doi.org/10.1017/S1366728915000139>
- Tsimpli, Ianthi & Sorace, Antonella & Heycock, Caroline & 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. 257–277. DOI: <https://doi.org/10.1177/13670069040080030601>
- Westergaard, Marit. 2019. Microvariation in multilingual situations: The importance of property-by-property acquisition. *Second Language Research*. November 2019. DOI: <https://doi.org/10.1177/0267658319884116>
- Westergaard, Marit & Mitrofanova, Natalia & Mykhaylyk, Roksolana & Rodina, Yulia. 2017. Crosslinguistic influence in the acquisition of a third language: The Linguistic Proximity Model. *International Journal of Bilingualism* 21(6). 666–682. DOI: <https://doi.org/10.1177/1367006916648859>

