

Null subjects in contact. A case study

Alberto Frasson, Roberta D'Alessandro & Brechje van Osch
Utrecht University

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1. Introduction

This paper is concerned with language change in contact, in particular in situations of unbalanced bilingualism, in which one of the two language in contact is a heritage language. The ever-growing field of heritage language studies has thus far revealed several generalizations with respect to which grammatical properties tend to result in difficulties for heritage speakers. While change can be detected in all domains of language, certain domains may be particularly vulnerable.

Already at the beginning of this century, various researchers observed that phenomena pertaining to the C-domain are vulnerable in bilingual acquisition (Hulk & Müller, 2000). This observation ultimately led to the formulation of the Interface Hypothesis (Sorace & Filiaci, 2006, Sorace, 2011), which claims that constructions in which information between formal grammar interacts with domains of language that are not purely linguistic such as discourse and pragmatics, are particularly vulnerable in bilingual populations. This specific vulnerability of the interfaces is caused by the increased cognitive load required by the integration of information between different modules, something that is particularly problematic for bilingual speakers, who have fewer cognitive resources available due to the fact that they are constantly switching between languages and inhibiting one of their two systems.

Probably the most described phenomenon in the research on the Interface Hypothesis has been the expression and the interpretation of subjects in pro-drop languages in contact with a non-pro-drop language. What these studies consistently show is that bilinguals whose weaker language has pro-drop have some command of the syntactic constraints related to the distribution of null subjects but do not show native-like competence regarding the discourse-pragmatic constraints regulating their use as opposed to overt subjects (e.g. Sorace & Filiaci, 2006, Montrul, 2008; Sorace and Serratrice, 2009; Keating et al., 2011).

In this paper we present data from first generation immigrants and second and third generation heritage speakers of Friulian, an Italo-Romance language spoken in Argentina and Brazil. The target phenomenon are subject clitics (SCIs). We show that subject clitics in heritage Friulian are in a process of degrammaticalization, going from being agreement markers to weak pronouns. While subject clitics are obligatory in baseline Friulian, they are often omitted in heritage Friulian in Argentina and Brazil; this omission, however, needs to be interpreted as an omission of pronominal subjects, and not of agreement-like subject clitics. We also demonstrate that the use of SCIs (reanalyzed as pronominal subjects) is conditioned both by grammatical factors (it happens more in some persons than in others) and by discourse factors (it happens more in the case of a continuation topic than in other topicalization contexts). This means that in this heritage variety, it is not the case that discourse constraints on the expression of subjects are being lost or weakened; in fact, new discourse constraints are introduced.

These findings counter the generally accepted assumption that heritage speakers do not master discourse-interface factors and that null subjects are vulnerable in bilinguals. We will argue that these surprising findings may be due to the fact that, unlike in most previous research, we are here dealing with closely related languages.

This paper is organized as follows. In the next section we discuss the grammatical and discourse properties of *pro*-drop, followed by an overview of previous research concerning this phenomenon in bilingual populations. Section 3 and 4 explain the pronominal systems in baseline Friulian and in the contact language, Argentinian Spanish and Brazilian Portuguese, respectively. In Section 5 our data collection is presented, followed by the results; in Section 6 offers an analysis of null subjects in heritage Friulian. Section 7 contains our conclusions.

2. Pro-drop

2.1. Why *pro*-drop is called *pro*-drop

Null subjecthood is the phenomenon whereby some languages can leave the overt subject of a clause unexpressed. Null subject languages are usually referred to as *pro*-drop as it is assumed that the element that is left out is pronominal. The reason for this assumption is the observation that full DPs usually introduce new referents in a clause, while pronouns do not necessarily do (if we leave aside ostension, pronouns must refer to an element already mentioned in the discourse). In well-behaved *pro*-drop languages, the subject can be left out when referring to an element already present in the discourse, usually a topic (Frascarelli 2007, Frascarelli & Hinterhölzl 2007, Sorace *et al.* 2009, Sorace & Serratrice 2009, Kwon and Sturt 2012, Jimenez-Fernández 2016, Frascarelli & Jimenez-Fernández 2019 and many others).

In (1), the *pro* subject is interpreted as being co-referential with the subject of the preceding clause. In (2), an overt pronoun is not necessarily coreferent with the subject of the preceding clause, but it can be. The postverbal position of the pronoun is more felicitous because it bears a contrastive focus, which is more consistent with the use of an overt pronoun. In (3), the repetition of the full DP can only be licensed if the two DPs have different referents. In particular, the post-verbal, focused position is ruled out with a co-referential reading.

- (1) Il professore è entrato e — ha iniziato a parlare
the professor is entered and *pro* has started to talk
“The professor entered. He started to talk”
- (2) Il professore_i è entrato e (lui_{i,j}) ha iniziato a parlare (lui_{i,j})
the professor is entered and he has started to talk he
“The professor entered. He started to talk”
- (3) Il professore_i è entrato e (il professore_{?i,j}) ha iniziato a parlare (il professore_{*i,j})
the professor is entered and the professor has started to talk the professor
“The professor entered and the professor started to talk”

These sorts of considerations brought linguists to postulate that the silent element, in sentences like (1), is a pronoun and not an overt DP. Notably, the observation that *pro* is a

pronominal element is exploited by Rizzi (1982) when formulating the null subject parameter. His formulation is the following:

- (4) a. INFL can be specified [+pronoun]
- b. INFL which is [+pronoun] can be referential.
- Only a pronominal INFL can license a null subject. (Rizzi 1982: 143)

Not all *pro*-drop languages have the same distribution of *pro*. Some languages are radically *pro*-drop, others are subject *pro* drop for all persons, other can drop the pronominal subject only for some persons (see D'Alessandro 2015 for an overview of the distribution of *pro*).

2.2. Conditions on the interpretation of *pro*

Regarding the interpretation of *pro*, it has been shown that, in case of multiple possible antecedents, *pro* tends to refer to the sentential subject (Carminati 2002), while overt pronouns tend to refer to lower arguments. As an example, consider (4), from Carminati (2002):

- (4) Marta scriveva frequentemente a Piera quando Ø /lei era negli Stati Uniti
- Marta_i wrote frequently to Piera_j when pro_{i,j} /she_{i,j} was in the US
- “Marta frequently wrote to Piera when she was in the US”.

While the Italian syntax allows *pro* to potentially corefer to both antecedents, *Marta* and *Piera*, Carminati (2002) shows with a number of experiments that native speakers of Italian prefer the interpretation according to which *pro* refers to the item in Spec,TP (i.e. in the canonical sentential subject position), while the overt pronoun selects a lower antecedent (in this case, *Piera*). Carminati's work sets an important step in defining the conditions for the licensing of *pro*, and highlights the fact that null subjects involve more than just syntax.

That the use of *pro* is not only determined by syntax is shown by several studies, most notably those put forward by Sorace *et al.* regarding the processing and interpretation of *pro*¹, and those proposed by Frascarelli (2007), Jiménez-Fernández (2016), Miyagawa (2017) and many others. Sorace's work focuses on L2 acquisition and bilingualism, while Miyagawa, Frascarelli & Jiménez-Fernández focus on *pro* in one language. The conclusions to which they all come are however rather similar: topicality plays an important role in licensing *pro*: the pronoun is more likely to be overtly expressed in sentences where there is a shift in the topic with respect to the previous discourse.

As an example, compare (5) and (6) from Spanish (Montrul, 2004):

- (5) Pepe no vino hoy a trabajar. *Pepe / ?Él / Ø estará enfermo.
- Pepe not came today to work. *Pepe/ ?He / Ø will be sick.
- “Pepe did not come to work today. He must be sick.”
- (6) Hoy no fui a trabajar. Pepe / él / *Ø pensó que estaba enferma
- today I no went to work Pepe / he / *Ø thought that I was sick

¹ Sorace's and her colleagues' work focus mostly on the processing aspects related to the discourse constraints on pronouns, although she does not rule out the representation may also be involved (Sorace, 2011)

“Today I did not go to work. Pepe/he thought I was sick.”

(5) is an example of topic continuation: the topic of the second sentence is the same as in the first sentence, which makes a null subject the most felicitous option. In (6), there is a *topic shift*: the topic changes from the first person to someone else, thus requiring an overt pronoun (or a full DP).

2.3. *pro*-drop in contact

The realization of null and overt subjects in *pro*-drop languages has been one of the main topics in studies on bilingualism. Numerous studies have shown that bilingual populations whose weaker language is a null-subject language tend to overgeneralize overt subjects to pragmatically infelicitous contexts. This is attested in bilingual children (e.g. Sorace et al., 2009), adult second language learners (e.g. Sorace & Filiaci 2006), L1 attriters (e.g. Tsimpli et al., 2004) as well as heritage speakers (e.g. Montrul 2004).

These problems with the distribution of null and overt subjects has usually been attributed to the influence of the contact language, which in most studies is a non-*pro*-drop language, e.g. English. However, some studies on the expression of the subject in contact between two Romance languages have shown that null subjects may be easily acquired by bilingual speakers (Carvalho and Child 2011, De Souza et al. 2018). In particular, the varieties of Uruguayan Spanish and Portuguese spoken on the border with Brazil display rates of null subjects that pattern with canonical *pro*-drop languages (like Spanish) rather than with non-*pro*-drop or partial *pro*-drop languages (like Brazilian Portuguese).

These data contrast with other studies that demonstrate an overextension of overt subject pronouns even when both languages are *pro*-drop (Bini, 1993 and Sorace & Serratrice, 2009 for Italian-Spanish; Margaza & Bel, 2006 and Lozano 2006 for Greek-Spanish; Guido Mendes & Iribarren, 2007 for Brazilian Portuguese and Spanish). However, as noted by Filiaci, Sorace and Carreiras (2014) it may be the case that the division of labor between null and overt pronouns in the two null-subject varieties in contact is not exactly identical in the two languages in contact.

The literature also reports an effect of person. 1st singular seems to be the most frequent overt pronominal subject, even in cases where it does not serve any pragmatic function, such as indicate contrastive focus of a shift in topic. This has been attested both in monolingual acquisition (Serratrice, 2005 for Italian children) and for bilingual acquisition (Pinto 2006 for Dutch-Italian children) and heritage speakers (Schmitz et al 2016 for Italian and Spanish heritage speakers in Germany).

In this paper, we address the distribution of null and overt subjects in heritage Friulian as spoken by first generation immigrants and second and third generation heritage speakers. We show that Friulian subject clitics in heritage northern Italo-Romance varieties are in a process of degrammaticalization, going from being agreement markers to weak pronouns. Furthermore, heritage Friulian in Argentina and Brazil has introduced a sort of *pro*-drop that is not present in Friulian as spoken in Italy, and is conditioned both by grammatical factors (it happens more in some persons than in others) and by discourse factors (it happens more in the case of a continuation topic than in a shifted topic). These findings counter the generally adopted assumption that phenomena involving discourse-interface factors are vulnerable in bilinguals.

Before presenting the data, a disclaimer is in order: in the rest of the paper, we will be comparing heritage Friulian to the baseline variety as described in the studies on the syntax of Central Friulian (Benincà 2014, 2015; Benincà and Vanelli 2016) and we will moreover compare first generation immigrants from Friuli in Argentina and Brazil to second and third generation heritage speakers. Although it has been noted that ideally, a baseline should consist of a group of balanced bilingual speakers (Polinsky 2018), this is impossible in our study, since these speakers do not exist, to the best of our knowledge, as Friulian is not an official minority group in Argentina and Brazil.

3. Pronominal, clitic, and null subjects

3.1. Pronominal, clitic and null subjects in in Central Friulian

Friulian, as most northern Italo-Romance varieties, is particularly interesting as far as *pro*-drop is concerned, as it has two series of subject pronouns: a tonic one and a clitic one (see Poletto 1993, 2000; Benincà 2014, 2015; Benincà and Vanelli 2016). To check whether things have changed with respect to the descriptions we found in the grammars, we conducted an online questionnaire with 18 speakers of Central Friulian. The questionnaire did not evidence any change in the system of subject clitics with respect to the description given in the literature.

Friulian tonic pronouns are strong pronouns, according to the traditional tripartite model initially proposed by Cardinaletti and Starke (1999). On a par with their Italian or Spanish counterparts, Friulian tonic pronouns are stress-bearing elements that can appear in isolation or can be coordinated. Northern Italo-Romance varieties have generally been analyzed as canonical null subject languages, in that strong pronouns are not obligatory and are normally realized only when they serve some discourse function. However, these varieties differ from canonical null subject languages like Italian in that they have an additional set of obligatory subject clitics. These are not real pronominal elements: they are inflectional heads, on a par with verbal agreement endings (Benincà 1994; Brandi & Cordin 1981, 1989; Poletto 1993, 2000; Rizzi 1986). This situation is illustrated by Central Friulian (7), a dialect of the Friulian spoken in Italy, which constitutes the baseline for the heritage varieties under analysis in this study:

- (7) Central Friulian
 Jo o feveli furlan.
 I I.SCL speak Friulian
 ‘I speak Friulian.’

In example (7) we see that the overt subject and the subject clitic co-occur; this is possible because SCLs are inflectional elements and they do not occupy the subject position. Unlike pronouns, they also need to be realized in both conjuncts in coordinated structures, as shown in (8), and do not allow for non-clitic material to be inserted between them and their verbal host, as shown in 9).

- (8) Central Friulian
 Al mangje e al bef.

he.SCL eats and he.SCL drinks.
‘He is eating and drinking.’

- (9) Al diseve simpri cussì.
he.SCL said always like this
‘He always said this.’

These considerations were first identified by Rizzi (1986) and are valid cross-linguistically in northern Italo-Romance varieties.

More specific studies on Central Friulian (Benincà and Vanelli 2015, Gaglia 2012) show that the system of this language is particularly uniform: subject clitics are present in all persons and are realized in all syntactic contexts. The only restriction is posed by clitic clusters: subject clitics are not realized when they appear in a cluster (including negation, direct and indirect object, impersonal and reflexive²), as illustrated in (10).

- (10) Un sarpint, îr, (*al) lu à copât.
a snake yesterday he.SCL it.OCL has killed
‘Yesterday he killed a snake.’

The conditions under which we expect a subject clitic are quite easily identifiable, which makes Friulian a good candidate for the analysis of change in contact. The complete paradigm of subject pronouns and clitics in Friulian is outlined in Table 1.

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

| | Singular | | Plural | |
|----------|-----------------|-------------------|---------------|--------|
| | Tonic | Clitic | Tonic | Clitic |
| 1 | jo | i / o | nô / noaltris | i / o |
| 2 | tu | tu | vô / vualtris | i / o |
| 3 | M: lui F: jê | M: al F: e / a | lôr | a / e |

As far as *pro*-drop is concerned, Friulian is a fully fledged null subject language: full subjects can be dropped in the same structural and pragmatic conditions that determine subject drop in Italian or Spanish. Recall that Friulian SCLs are inflectional elements, and therefore their occurrence in a clause does not amount to saying that this is a non-null subject clause.

² This restriction is a peculiarity of the system of Central Friulian subject clitics, it is normally not found in other Friulian varieties such as Western Friulian, as well as other northern Italo-Romance varieties. However, there are two exceptions to this restriction:

i) second person singular is generally immune to this restriction, as the subject clitic *tu* is realized even when it cooccurs with other pronominal clitics and with negation;

ii) the subject clitic *a*, unlike other subject clitics, in some varieties appears before negation and its realization is not affected by the cooccurrence of other clitics; according Poletto (2000) *a* is not an agreement clitic, but rather a deictic clitic located in CP, which would explain its idiosyncratic behavior; other works (see in particular Casalicchio and Masutti 2015) provide evidence that the clitic *a* in Friulian is a real agreement marker, as shown by the fact that it doubles lexical subjects and that it is repeated in both conjuncts in coordinated structures.

Previous research (Frasson, in press) on heritage speakers of Venetan, another northern Italo-Romance variety, has shown that subject clitics tend to be reanalyzed as weak pronouns, in the terms of Cardinaletti and Starke (1999). In what follows, we show that the same tendency is present in the system of heritage Friulian subject clitics, because they are not licensed in the context of doubling of a lexical or pronominal subject except when these are clearly topicalized; the subject clitics can be omitted in the second conjunct in coordinated structures; and the restriction on their appearance in clitic clusters is violable³. We take these findings to indicate that they are in a process of reanalysis, from inflectional to pronominal elements. In the next section we present some relevant data on null subjects in Argentinian Spanish and Brazilian Portuguese, the two contact varieties, that may have an effect on the system of subject pronouns of heritage Friulian.

4 Null subjects in Argentinian Spanish and Brazilian Portuguese

The heritage varieties of Friulian under analysis are spoken in Argentina and Brazil, where they underwent extensive contact with Spanish and Portuguese, respectively. The local varieties of Portuguese and Spanish are relevant for our study, in that they represent the dominant contact languages for most of the speakers. Therefore, their status with respect to null subjecthood, to the nature of *pro* and to the considerations on its realization we presented in section 2.1 is crucial for the definition of the role of contact in shaping the change we examine in heritage Friulian.

Brazilian Portuguese has been analyzed as a partial-*pro*-drop language⁴. Duarte (2000), analyzing a corpus of written texts, shows that second person singular subject pronouns are much more frequent in Brazilian Portuguese (90% of the occurrences) than in European Portuguese (24%). Similarly, Barbosa et al. (2005) show that spoken Brazilian Portuguese displays a higher number of overt pronominal subjects than European Portuguese and argue that this might be related to the fact that verbal morphology in Brazilian Portuguese is reduced. For this reason, at least an overtly realized subject must appear in Spec-TP in Brazilian Portuguese. In spoken varieties, such pronoun is generally a weak and phonologically reduced counterpart of the strong pronoun, as illustrated in (11), the structure of which is exemplified in (12). When the strong pronoun is found in a left dislocated position inside the complementizer field, the weak pronoun can double it.

(11) Spoken Brazilian Portuguese

Você, cê canta.
 you you sing.2SG
 ‘You are singing.’

(12) [TopP (Você) [TP cê [T canta] [vP ...]]]

³ For the discussion of cases of subject clitic omission in Friulian, see also Pescarini and Calabrese (2014), who analyze the phenomenon in terms of fission. Gaglia (2010, 2012), on the other hand, proposes an optimal-theoretical perspective.

⁴ Our study focusses on the realization of the subject in main clauses. Specifically for Brazilian Portuguese, it has been shown that subject realization in embedded clauses is different. See Duarte (1993, 1995) and Rodrigues (2004) for a clear picture of the restrictions on subject drop in Brazilian Portuguese.

The doubling of DP subjects through (weak) pronouns seems to be particularly extensive in Riograndense Brazilian Portuguese, the colloquial variety spoken in Rio Grande do Sul, the area where the data for this study were collected. To be completely sure of the status of the contact language with respect to null subjects, we interviewed one monolingual Brazilian Portuguese speaker in Caxias do Sul and one in Bento Gonçalves. A preliminary analysis of spontaneous speech⁵ shows that almost half of the lexical DP subjects realized by these speakers are doubled with an agreeing pronominal element, as shown in (13):

- (13) Riograndense Brazilian Portuguese
 O gaúcho ele fala “buenas”.
 the gaúcho he speaks buenas
 ‘A gaúcho would say “buenas” ’.

The doubling seems to be restricted to DP subjects: there are no cases of phonologically reduced pronouns doubling tonic pronouns.

As for Argentinian Spanish, we rely on the research that has been conducted on the expression of the subject in the Rioplatense variety. In the literature about Spanish dialects (see in particular Silva-Corvalán 2001), the Rioplatense variety is described as a *pro*-drop language, in which null subjects are generally favoured. The only notable difference between Rioplatense and European Spanish regards the realization of the second person singular subject pronoun with a non-specific or indefinite referent; in this case the overt realization of the pronoun is much more frequent in Rioplatense (55% of the total occurrences of second person singular) than in European Spanish (19%). However, when the referent is specific and definite, Rioplatense Spanish does not exhibit a preference for the overt pronoun.

Some of the points we highlighted here will become relevant in the discussion of the heritage Friulian data: the two languages have a different distribution of *pro*. As a matter of fact, the conditions under which a null subject is accepted in the contact language seems to be playing a role in determining the realization of a pronominal subject as an overt or as a null element in heritage Friulian. Before moving to the presentation of our results, we introduce some methodological notes.

5. Methodology

The data used in this study were collected in March-April 2019 in Argentina (Buenos Aires and Colonia Caroya) and Brazil (Bento Gonçalves and Ivorã). The interviews were carried out by two different interviewers in Argentina and Brazil; the languages used by the interviewers were mainly Spanish and Portuguese, occasionally Italian. All the interviews were recorded and consequently transcribed.

5.1. Participants

⁵ A complete analysis of subject doubling in Riograndense Brazilian Portuguese is beyond the scope of this paper.

Our study involves 8 Friulian speakers in Argentina and 7 in Brazil, for a total of 15 speakers (4 females, 11 males); the ages range from 57 to 93 years. All of them are native speakers of Friulian but are dominant in the contact language (Argentinian Spanish or Brazilian Portuguese). All Brazilian informants (mean age: 69) are third generation heritage speakers born in remote areas of the state of Rio Grande do Sul; 5 Argentinian speakers are second generation heritage speakers (mean age: 59) born and raised in Buenos Aires, while the remaining 3 speakers (mean age: 71) were born in Italy and moved to different cities in Argentina when they were respectively 24, 14 and 13 years old. The general tendency in both countries is to use the contact language in the vast majority of cases; speakers use Friulian only at home or with other Friulian speakers. This is particularly evident in the Friulian communities of Brazil, which are still quite isolated from the bigger Portuguese-majority cities. In Argentina, Friulian always alternates with Spanish, even among members of the community. Other potentially relevant differences between the Friulian communities in Argentina and Brazil regard their level of education and knowledge of other languages. All the participants in Argentina speak also Italian (first generation immigrants are bilingual Friulian-Italian speakers and have learned Spanish when they moved to Argentina; heritage speakers are bilingual Friulian-Spanish speakers and have learned Italian as a second language in Argentina); besides, 4 participants have a university degree, 3 participants have a high school degree and only 1 participants finished just primary school. On the other hand, all the participants in Brazil are Friulian-Portuguese bilingual speakers and were never exposed to Italian; 5 participants finished primary school, 1 participant attended the first two years of primary school and only one participant has a high school degree.

While we are well aware of the non-homogeneity of the speaker pool, the reader needs to be aware that finding heritage speakers of non-standard Italo-Romance varieties in Brazil and Argentina is a rather difficult enterprise. Furthermore, we take the convergence of data that were collected in different areas and from speakers with different profiles as a sign of the fact that the change at issue is not exceptional, but rather the actual result of contact. Moreover, as we will show, the contact language seems to play a role in determining the output of change.

5.2. Tasks and Materials

At the beginning, a sociolinguistic questionnaire was proposed to all informants, in order to obtain information on their background: their degree and quality of exposure to Friulian and to the contact languages, their language dominance, their education and family situation. Two tasks followed the sociolinguistic questionnaire: a grammaticality judgement task and a spontaneous production task. Not all participants carried out both tests; 10 participants carried out both tasks; for 2 participants in Brazil only spontaneous production data were collected, while for 3 participants in Argentina only grammaticality judgement data were collected.

5.2.1. Grammaticality judgement task

The grammaticality judgement task consisted of 24 items. 8 items targeted subject clitics, but only 4 will be reported here, because the others are not relevant to the questions asked in this study⁶. 16 items targeted other constructions such as differential object marking. Participants

⁶ Some data were excluded due to the fact that some speakers did not give a clear answer for every item.

had to choose between two proposed sentences, one containing a subject clitic and one without it. The order of the two sentences was counterbalanced across the task. The aim of the task was to test whether clitics are still agreement markers in heritage Friulian or whether they are analyzed as pronouns. The tested contexts are:

(i) doubling of a pronominal or lexical subject

- (14) Maria *(e) à comprât il pan.
 Mary she.SCL has bought the bread
 ‘Mary bought bread.’

(ii) doubling of a topicalized subject

- (15) Marco, îr, *(al) à mangjât masse.
 Mark yesterday he.SCL has eaten too much
 ‘Yesterday Mark ate too much.’

(iii) cluster of subject clitics with other clitic elements (negation, direct and indirect object, reflexive, impersonal).

- (16) Un sarpint, îr, (*al) lu à copât.
 a snake yesterday he.SCL it.OCL has killed
 ‘Yesterday he killed a snake.’

(iv) repetition of the subject clitic in both conjuncts in coordinated structures

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

Participants were presented with auditory stimuli recorded by a Central Friulian native speaker. Each recorded item contained a pair of sentences testing one of the phenomena in i-iv; After listening to the sentences, participants were asked to choose the one they preferred.

5.2.2. Spontaneous production

In the production task, informants were asked to tell a short story about their childhood. In the case of first-generation immigrants, the interviewer asked the informants to say something about the time they arrived in the destination country; in the case of heritage speakers, the interviewer asked the informants to say something about their childhood. This way, we managed to obtain a uniform corpus of spontaneous speech.

Spontaneous production was used to support elicited data in the questionnaire and to check whether the use of clitics depends also on other linguistic or non-linguistic features.

6. Results

6.1. Grammaticality judgment task

The judgment data confirmed our expectation that clitics are undergoing a process of reanalysis as pronouns⁷. This is particularly evident in the context of doubling, which is lost in most cases. Table 2 shows that both first generation and heritage speakers disfavor the doubling of a non-topicalized subject (through the use of the clitic *e* in sentence 18). As stated above, baseline Friulian would show clitic doubling in these contexts.

Table 2.

| | G1 (AR) | HS (AR) | HS (BR) | Total |
|--|---------|---------|---------|-------|
| (18) Maria e à comprât il pan. Mary she.SCL has bought the bread | 0 | 0 | 1 | 1 |
| (19) *Maria à comprât il pan. Mary has bought the bread 'Mary bought bread.' | 4 | 4 | 5 | 13 |
| Total | 4 | 4 | 6 | 14 |

In topicalization contexts, like in sentence (20), the picture is different: topicalized subjects are doubled in most cases, like in baseline Friulian.

Table (x).

| | G1 (AR) | HS (AR) | HS (BR) | Total |
|--|---------|---------|---------|-------|
| (20) Marco, îr , al à mangjât masse. Mark yesterday he.SCL has eaten too much | 4 | 3 | 6 | 13 |
| (21) *Marco, îr , à mangjât masse. Mark yesterday has eaten too much 'Yesterday Mark ate too much.' | 0 | 1 | 0 | 1 |
| Total | 4 | 4 | 6 | 14 |

The doubling of topicalized subjects is accepted by most participants, with only one heritage speaker in Argentina preferring the sentence without the subject clitic. This suggests that, in sentences with a lexical subject, topicalization is the context in which subject clitics are most likely to appear. This reminds the situation of Standard French and colloquial Brazilian Portuguese, in which a subject pronoun can double a topicalized subject.

The restriction imposed on the realization of subject clitics in clusters, which is present in the baseline Friulian grammar, is generally lost in heritage speakers (22), while it seems stable in first generation speakers (23).

Table (x).

| | G1 (AR) | HS (AR) | HS (BR) | Total |
|--|---------|---------|---------|-------|
| (22) *Un sarpint, îr , al lu à copât. a snake yesterday he.SCL it.OCL has killed | 0 | 3 | 2 | 5 |
| (23) Un sarpint, îr , lu à copât. a snake yesterday it.OCL has killed 'Yesterday he killed a snake.' | 4 | 1 | 1 | 6 |
| Total | 4 | 4 | 3 | 11 |

In the context of coordinated structures, we see that first-generation speakers normally accept the repetition of the clitic in both conjuncts (24), as expected in the baseline Friulian

⁷ A statistical analysis of these data is not possible due to the low number of sentences.

grammar. Heritage speakers, on the other hand, seem to allow for an optional realization of the clitic in the second conjunct (24).

Table (x).

| | G1 (AR) | HS (AR) | HS (BR) | Total |
|---|----------------|----------------|----------------|--------------|
| (24) Al mangje e al bef. he.SCL eats and he.SCL drinks | 4 | 2 | 5 | 11 |
| (25) * Al mangje e bef. he.SCL eats and drinks 'He is eating and drinking.' | 0 | 2 | 1 | 3 |
| Total | 4 | 4 | 6 | 14 |

The data presented in Tables (x)-(x) confirm that heritage Friulian SCLs are changing from inflectional to pronominal elements.

6.2. Spontaneous production data

For the spontaneous production data, all sentences containing finite verbs were coded for the following linguistic variables: person, subject type, cluster, verb class, and clause type. For the variable 'person', 2nd person was excluded from the analysis. This was done for two reasons. First, in Friulian, and in northern Italo-Romance languages in general, 2nd person singular subject clitics behave differently from first and third person in that they are unaffected by the constraints on clitic clusters described in section 2: they are realized in all contexts and in the literature are generally treated differently from other subject clitics⁸. Second, there were too few instances of sentences with 2nd person singular and plural (only 6% of the data) to be able to include them in a statistical model. 1st person singular and plural were merged into one category and 3rd person singular and plural as well, as we did not observe any significant differences between them. For 'subject type', a distinction was made between DPs (which included both demonstrative and full DPs), null subjects, pronouns and quantified pronouns⁹, but the latter category was excluded due to the low number of cases (only 9). The variable 'Cluster' refers to whether or not there was some other intervening clitic (such as a negator, a direct or indirect object, a reflexive or an impersonal clitic), in which case a subject clitic is not expected in the baseline variety. The variable 'verb class' consisted in three categories, namely transitive/unergative, unaccusative/passive and copular constructions, and the variable 'clause type' distinguished between matrix clauses and subordinate clauses¹⁰.

⁸ According to Renzi and Vanelli (1983) and Vanelli (1998), second person singular needs a different treatment than other subject clitics. As a matter of fact, it is the only person that is realized in all cases in all varieties. In Poletto's (2000) analysis of the different types of subject clitics, second person singular occupies a special HearerP position, the lowest one in the clitic field that she proposes.

⁹ Besides Friulian, our study targeted other heritage northern Italo-Romance varieties, such as Venetan, Trentino and Piedmontese, which were not included in this paper. Some of these varieties, in particular the Venetan ones, exhibit a different distribution of subject clitics with lexical, pronominal and quantified subjects (see Benincà 1994). Friulian subject clitics behave more regularly in this respect, as they double all types of subjects. All the varieties were uniformly tested for the same varieties, even though we would not expect a difference in the doubling of different types of subjects in Friulian.

¹⁰ As in the case of subject type, the literature on Friulian subject clitics does not evidence a different distribution with different verb or clause types. These variable were nevertheless included in the analysis, as they have been demonstrated to be relevant in the realization of subject clitics in other varieties in our study. See in particular Benincà (1994), Manzini and Savoia (2005) and Poletto (2000) for a discussion on the realization of subject clitics in relative clauses and unaccusative constructions with postverbal subjects.

We also coded each sentence for whether there was a continuation or a shift in topic. In other words, if the referent of the subject clitic was mentioned in the previous sentence, independently of its syntactic function (so not only the cases of co-reference with the previous subject), the sentence was coded as Topic Continuation; otherwise, if the referent was not mentioned in the previous sentence (including the cases of reintroduction of an old referent after some time and introduction of a totally new referent), the sentence was coded as Topic Shift (see also De Prada Pérez 2009 for a precise distinction between discourse function and co-reference). Topic continuation is an important factor that determines pronoun use in canonical null subject languages (Sorace 2009, Frascarelli 2006, Frascarelli & Hinterhölzl 2007, Jiménez-Fernández 2016). If subject clitics in heritage Friulian indeed behave like pronouns, we may expect them to be constrained by a similar discourse constraint.

In total, 580 sentences were coded, of which 375 contained a subject clitic and 205 did not. Two generalized mixed effects models were run using the lme4 package (Bates et al., 2012) from statistical tool R (R Development Core Team, 2017). The first model included all the data. The second model included only sentences with null subjects only, as this context is crucial to determine whether the subject clitic is analyzed as a pronoun or an agreement marker. In both models, all variables mentioned above (person, subject type, cluster, verb class, clause type and topic), were included, as well as the variable ‘group’, for which orthogonal sum-to-zero contrasts were set; one contrast compared the first generation speakers to all heritage speakers, and the other compared the two heritage speakers groups in the different countries with each other. The two-way interactions between group and all other factors were also entered into the models.

The first model, which included all subject types, rendered a significant effect of group, which was modulated by interaction effects with some of the other variables. For instance, a significant interaction between group and cluster ($\beta=1.91$, $SE=0.68$, $t=2.80$, $p=.005$) and subsequent Tukey posthoc tests showed that, only in sentences with no other intervening clitics, first generation speakers were significantly more likely to produce clitics (26) than the Argentinian heritage speakers (27), ($p<.001$) as well as more than the Brazilian heritage speakers ($p=.01$). In sentences containing clitic clusters there was no difference between the three groups: all participants tended to omit the subject clitic in this context. This is illustrated in figure 1)

(26) Buenos Aires (Argentina, G1)
 Gno pari al veve une vore di amis.
 my father he.SCL had a lot of friends
 ‘My father had a lot of friends.’

(27) Buenos Aires (Argentina, HS)
 Gno fi à viodut una femina.
 my son has seen a woman
 ‘My son saw a woman.’

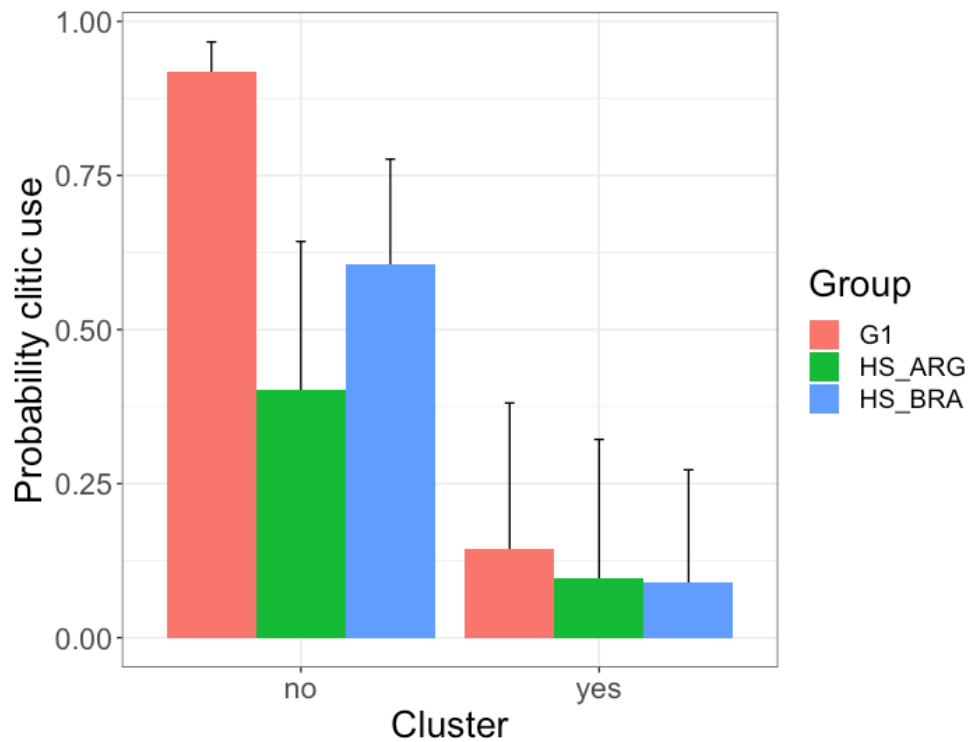


Figure 1.

Similar effects were found in the model which included only null subjects. A significant interaction between group and cluster ($\beta=-2.84$, $SE=0.90$, $t=-3.15$, $p=.002$), followed up by Tukey post hoc tests, indicated that, in null subject sentences without clusters, the first generation immigrants in Argentina were most likely to use a subject clitic, followed (with a significant difference; $p=.016$) by the Brazilian HS, and the Argentinian HSs, who produced least subject clitics of all, and significantly less than the immigrants ($p<.001$), and marginally significantly less than the Brazilians HSs ($p=.07$). Post hoc tests moreover indicated that only the immigrants and the Brazilian HSs were more likely to produce more subject clitics in sentences without clusters (G1: $p<.001$; HS_Bra: $p<.001$), but the Argentinian HSs did not differ significantly between sentences with and without clusters ($p=.19$) These effects are shown in (Figure 2)

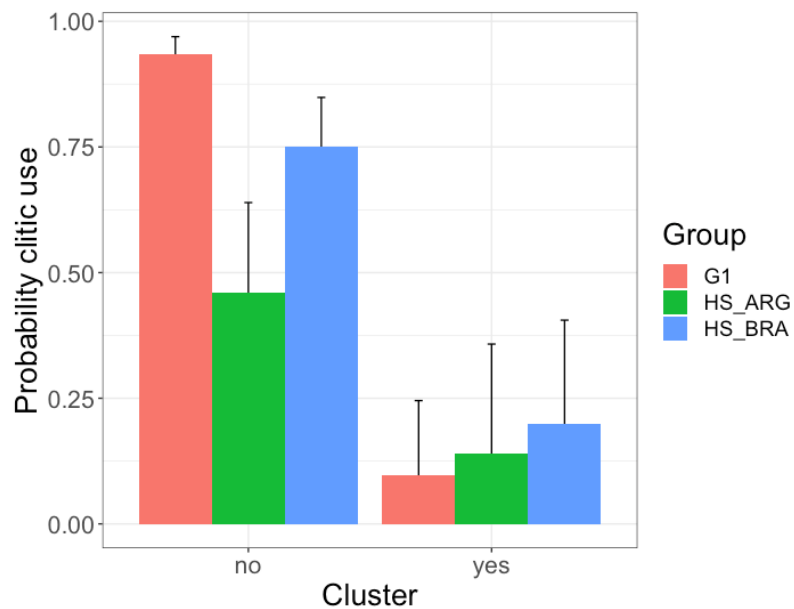


Figure 2.

The full model revealed another interaction effect, namely between group and person ($\beta=-1.42$, $SE=0.69$, $t=2.06$, $p=.039$), indicating that both heritage speakers groups were significantly more likely to produce clitics in the 3rd person (28) than in the 1st person (29) ($p=0.001$ for the Argentinian HSs; 0.026 for the Brazilian HSs), while the first-generation did not make this distinction. This effect can be seen in figure 3.

(28) Ivorà (Brazil)

Al à fat une promese.
 he.SCL has made a promise
 'He made a promise.'

(29) Ivorà (Brazil)

Sin stats indaur.
 are.1PL been behind
 'We were left behind.'

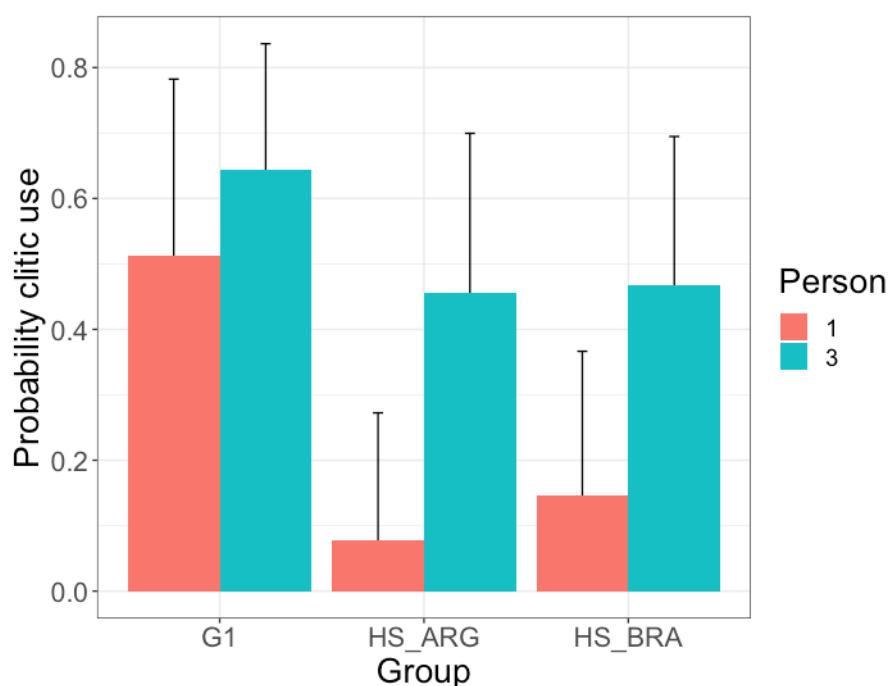


Figure 3.

As for the model on null subjects only, a significant main effect of person ($\beta=1.50$, $SE=0.37$, $t=4.04$, $p<.001$) was found there as well. While the interaction with group was not significant in this model, post hoc comparisons were carried out to check whether similar patterns could be found as in the model on the entire dataset. These showed that, in sentences with null subjects only, Brazilian heritage speakers did not differentiate significantly between the first and third person clitics ($p=.12$). Neither did the immigrants ($p=.80$), similar to the first model. The Argentinian heritage speakers on the other hand preferred subject clitics with third person in null subject sentences, just as they did in the model on all sentences. These effects are shown in Figure 4.

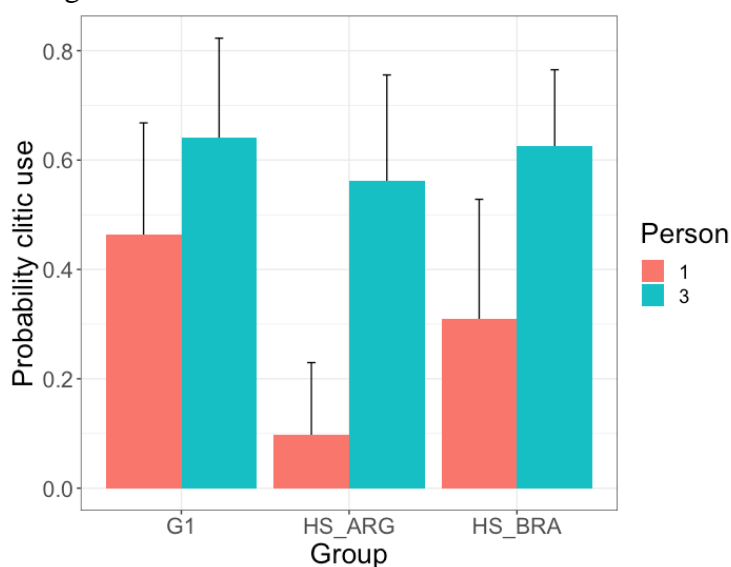


Figure 4.

In the model on the entire dataset, subject type also had a significant effect on clitic use ($\beta=1.21$, $SE=0.41$, $t=2.90$, $p=.004$). Pairwise comparisons indicated that all speakers were significantly more likely to omit the subject clitic when it doubled a pronoun (30) than when it doubled a

null subject (31) ($\beta=3.35$, $SE=1.40$, $t=2.90$, $p=.01$). The omission rate of clitics with lexical subject was in between that of pronouns and null subjects, but the difference with each of the two extremes was not significant. This seems to indicate that the most appropriate context for these speakers to produce a subject clitic is when there is an unexpressed subject and the least appropriate is when the clitic doubles an overt subject pronoun.

(30) Buenos Aires (Argentina)

Io soi tornat al gno mistir.

I am returned to=the my job

‘I went back to work.’

(31) Buenos Aires (Argentina)

O soi tornat cà in Argentine.

I.SCL am returned here in Argentina.

‘I came back to Argentina.’

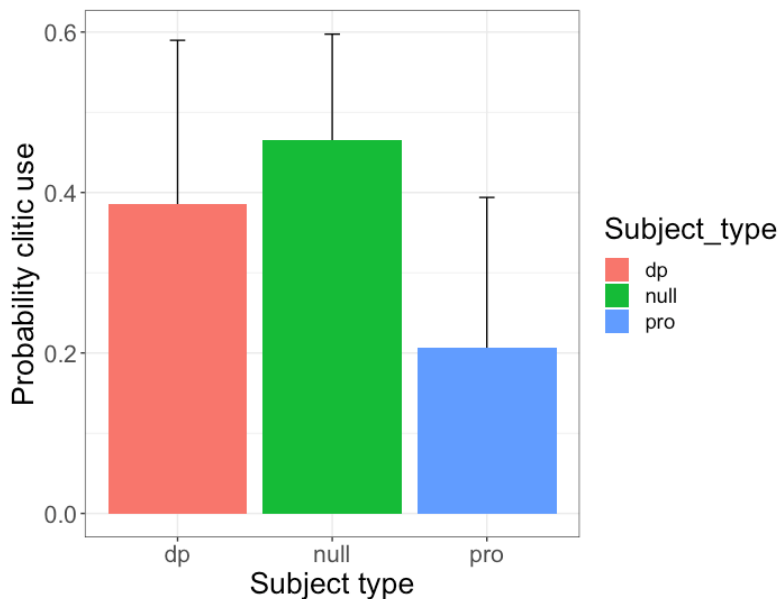


Figure 5.

Finally, the full model rendered a significant effect of topicality ($\beta=1.05$, $SE=0.29$, $t=3.64$, $p<.001$), indicating a preference to produce a clitic when there was a shift in topic with respect to the previous sentence. The interaction with group was marginally significant as well ($\beta=-1.06$, $SE=0.59$, $t=-1.80$, $p=.07$), which led us to explore the comparisons through Tukey post hoc tests. These showed that, in fact, only the Argentinian heritage speakers were significantly more likely to produce clitics in topic shift contexts than in topic continuation contexts (example 32) ($p=.02$). For the Brazilian heritage speakers, the same tendency was present, but the difference was not significant, ($p=.10$), and neither was the effect in the first-generation group ($p=0.93$). These effects are illustrated in figure 6.

(32) Buenos Aires (Argentina)

a. Gno santul al me a dite: [...]

my godfather he.SCL me.OCL has said

b. SHIFT I ai tacat fevelà in furlan, [...]

I.SCL have started to speak in Friulian

c. CONTINUATION [...] dop *pro* ai vut ancje la fortune di sposà une fie di furlans.

then have had too the fortune to marry a daughter of Friulians

‘My godfather told me: [...] . I started to speak Friulian, [...] then I was lucky enough to marry a Friulian descendent.’

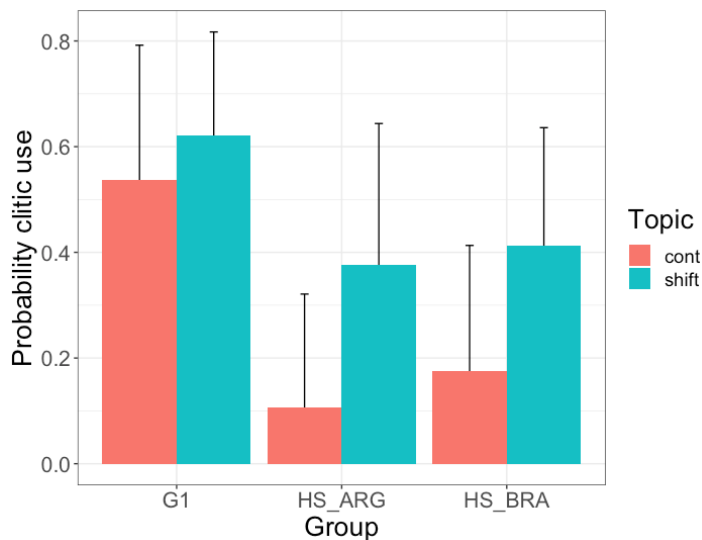


Figure 6.

The above described effect of topicality on subject clitic use was found in all sentences. The second model confirmed the significant effect of topicality for sentences with null subjects only ($\beta=1.17$, $SE=0.34$, $t=3.48$, $p<.001$), though it was not modulated by group. This means that in sentences with null subjects, all speakers, regardless of group, were more likely to produce a subject clitic in topic shift contexts than in topic continuation contexts with null subjects. The effect is illustrated in Figure 7

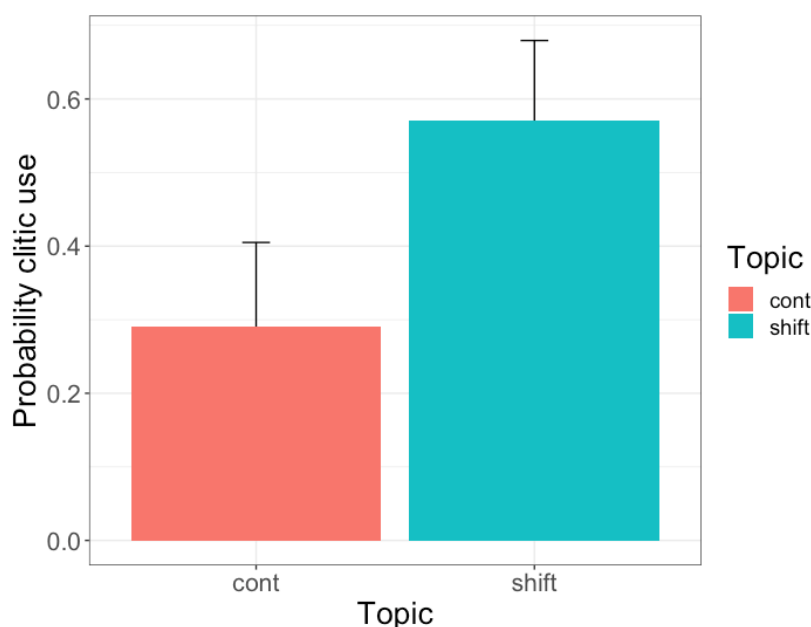


Figure 7.

7. Discussion

The results of the grammaticality judgement task presented in section 6.1 show that subject clitics in the varieties of Friulian spoken in Argentina and Brazil show a tendency towards reanalysis as pronouns. The tests (in particular the realization of the subject clitics with topicalized and non-topicalized subjects and the repetition of the subject clitic in both conjuncts in coordinated structures) evidenced the fact that subject clitics allow also for a pronominal interpretation, which is absent in modern Friulian as spoken in Italy. This situation resembles the results shown in Frasson (in press) for the heritage varieties of Venetan spoken in Brazil. However, subjects are not omitted at random, as revealed by the spontaneous production data.

One important syntactic factor that constraints the use of subject clitics is person: first person subject clitics are more likely to be omitted by heritage speakers than third person subjects. This effect is particularly interesting in light of the findings shown in Serratrice (2005) for monolingual acquisition and Pinto (2006) for bilingual acquisition. As discussed in section 2.3, these studies show that first person is the most used overt subject, inserted in contexts that would require a null subject in the baseline grammar. An interesting parallel with this situation is shown by the diachronic evolution of Venetan subject clitics, which used to have a vocalic *a* clitic for first person singular and plural until the 17th century (Benincà 1994). In most varieties there is no trace of this subject clitic: subject agreement for 1st persons relies only on verbal morphology. Our data suggest that the peculiar contact situation in which heritage Friulian is spoken may have favored an acceleration of the process and the use of first-person subject clitics has therefore drastically declined in the span of one generation.

The type of subject also influenced the likelihood of a subject to be omitted: most clitics were produced in sentences with null subjects resulted, and least in sentences with pronominal subjects. This findings further strengthens the idea that subject clitics are indeed interpreted as pronominal elements.

The spontaneous production data furthermore revealed an effect of the presence or absence of another clitic on clitic use. In Friulian spoken in Italy, the presence of another clitic

is the only context in which clitics can, and in fact should, be omitted. The data presented here show that both first generation immigrants and heritage speakers seem to adhere to this constraint, perhaps not surprisingly, given their general tendency to omit clitics in other contexts as well. However, the judgment data show a different picture when it comes to clitic clusters: while first generation immigrants correctly chose the sentence without the subject clitic, most heritage speakers chose the sentence containing the clitic cluster. Now, it must be noted that the judgment task contained only one sentence with a clitic cluster, and thus one would be right to question whether this is truly representative of all sentences of this type. The critical sentence in the judgment task contained a null subject, for instance, and as we know from the production data, the type of subject influences the likelihood of a subject clitic to be produced. In fact, sentences with null subjects invoke the highest use of subject clitics among heritage speakers, compared to sentences with pronominal or lexical subjects. However, a separate model on the spontaneous production data which only included sentences with null subjects showed a similar result: all three groups preferred to omit the subject clitic in the presence of another clitic. Discrepancies between judgment and production data are not uncommon in linguistic research, and especially in heritage speakers (Montrul et al., 2008; Bowles, 2011). The reason for this is probably that heritage speakers do not have much metalinguistic / explicit knowledge about their heritage language, given that they were never exposed to formal instruction in the language. Metalinguistic knowledge is particularly useful in tasks that target this type of explicit knowledge such as forced choice judgment tasks.

Finally, an important result that arose from the spontaneous speech data concerns the effect of topicality on subject clitic use. This finding regards the distribution of subject clitics in the context of topic shift or continuity: subject clitics are most likely to be omitted when the topic is the same as in the previous sentence. This means that subject clitics, when used as pronouns, obey to conditions for the licensing of *pro* in line with what was shown by Frascarelli (2007), Miyagawa (2017) and Jimenez-Fernández (2016): they are most likely to be used in sentences in which there is a shift in the topic. This finding is relevant in different respects. Firstly, it strengthens the idea that subject clitics in heritage Friulian can be reanalyzed as pronominal elements: recall that subject clitics are obligatory agreement markers in baseline Friulian and topic distinctions should not be involved in their realization. Secondly, it contradicts previous research showing that having more than one module involved in the resolution of a grammatical phenomenon causes problems bilingual (and heritage) speakers, as by the Interface Hypothesis. The second generation heritage speakers in our study actually introduced a new discourse-related condition on the realization of the reanalyzed subject clitics, demonstrating a particular sensitivity to discourse factors, rather than a weakening or loss thereof. How can we explain this departure from other studies? We would like to argue that it may be related to the fact that the vast majority of studies on this topic have considered bilinguals who speak one pro-drop language and one non-pro-drop language, the latter being English in most cases. In the present study, on the other hand, we are dealing with 1) two pro-drop languages, and 2) typologically similar languages. It may be the case that the predictions from the Interface Hypothesis are not borne out in our study because of the specific language combination. This would explain why other studies on bilinguals speaking two Romance language have also failed to attest problems with null subjects (Carvalho and Child 2011, De Souza et al. 2018). More studies are necessary whether the difference is due to the setting of the pro-drop parameter alone, or (also) the

typological proximity between the two languages involved, but what is clear from the present study is that the specific language combination seems to matter.

The idea that the contact language plays an important role is further strengthened by the fact that several differences were observed between the heritage speakers in Argentina and Brazil. First, the preference for third person in sentences with null subjects only applies to the heritage speakers in Argentina, not (significantly) for their Brazilian peers. Another difference between the heritage speakers in the two countries arose in their use of clitics in clusters in sentences with null subjects. Where heritage speakers in Brazil and first-generation immigrants produced more subject clitics in sentences without clitic clusters, in line with baseline Friulian, the Argentinian heritage speakers did not make this distinction. In sentences without clusters, where clitics are obligatory in Friulian, the Argentinian heritage speakers produced the lowest amount of clitics, and almost significantly less than their Brazilian peers. Finally, the two groups differed with respect to the effect of topicality. Heritage speakers of Friulian in Argentina used subject clitics in a way that is compatible with the conditions on the interpretation of *pro* we presented in section 1.2: subject clitics are most likely to be omitted in sentences where there is not a shift in the topic with respect to the previous one. The same tendency was present in heritage speakers of Friulian in Brazil but it did not reach significance.

The most obvious explanation for these differences between the two groups is the different contact language. For instance, the difference between the two groups with respect to the topicality may be due to the specific configuration of the contact language with respect to *pro*-drop, as briefly described in section 2.2. Argentinian Spanish is considered a full-fledged *pro*-drop language, in which overt pronouns are used only in specific discourse contexts, such as when there is a shift in topic. Brazilian Portuguese, on the other hand, is typically described as a partial *pro*-drop language, which exhibits more overt subjects and in which the topicality effect is not as strong as in a *pro*-drop language like Argentinian Spanish.

However, there are other differences between the groups that should be taken into consideration here. Another possible factor behind the difference between heritage speakers in Argentina and Brazil is the different generation to which speakers belong. Our informants in Brazil are all third-generation heritage speakers (they are the grandchildren of the original immigrants), as the migration wave to Brazil happened earlier than the one to Argentina, where all our informants are second generation heritage speakers (the children of the original immigrants). This difference may account for the fact that topic continuity effects are more evident in second generation speakers in Argentina than in third generation speakers in Brazil. It may be the case that second-generation speakers introduce new interface conditions on the realization of the (reanalyzed) subject clitics, but such conditions are gradually lost in third generation speakers, which would confirm the prediction made by the Interface Hypothesis: that the integration of information from syntax and discourse in the realization of subject clitics requires a high processing load and is therefore recessive.

The two heritage speaker groups also differed from each other in terms of the amount of contact they had with the majority language. Heritage speakers in Brazil live in isolated communities, further away from big cities, which are still mainly composed of descendants of Friulian immigrants; as a result, they use their two languages in a diglossic way: Friulian is used with other members of the heritage community, while Brazilian Portuguese is normally used in other contexts. Heritage speakers in Argentina (at least the ones in Buenos Aires), on

the other hand, mix their two languages much more, using Spanish even with other Friulian speakers. This may result in a higher degree of cross-linguistic influence (in the terms of Hulk and Muller, 2000) in the case of the Argentinian heritage speakers, or to a higher degree of incomplete acquisition or attrition of the heritage language (e.g. Montrul, 2008).

Finally, we should not forget that the contact situations in Argentina and Brazil are very different. Recall the differences between speakers in Argentina and Brazil with respect to their level of education and the knowledge of other languages (Italian in particular) we presented in section 3.1: that speakers in Argentina generally have a higher level of education than speakers in Brazil, and that the first also speak Italian could be relevant in the explanation of the different results of language contact in the two countries.

While the present study makes it impossible to conclusively differentiate between the possible effects of contact language, generation or other external factors (amount of contact with the majority language, level of education, knowledge of other languages), it raises the issue of the importance of the specific language combination in bilingualism research. We encourage other researchers to pay more attention to this matter, by including understudied language combinations, specifically of closely related languages.

7 Conclusion

The study described in this paper aimed to explore the use of subject clitics in first generation immigrants and second and third generation heritage speakers of Friulian in Argentina and Brazil. The data from a grammaticality judgment task and a spontaneous production task revealed that subject clitics in heritage Friulian are in the process of being reanalyzed as pronominal subjects, as they are no longer obligatory. Their omission, however, is not random: it is constrained by various linguistic and extra-linguistic factors. For instance, first person clitics are omitted more often than third person clitics. Moreover, clitics are omitted more often when the topic of the sentence is the same as in the previous sentence, which is another reason to assume that these clitics are analyzed as pronominal elements. The fact that discourse-constraints are not only not lost, but rather *added* to a domain that does not feature the same constraints in the baseline grammar, indicates that the syntax-discourse interface is not always vulnerable in bilingual populations, as predicted by the Interface Hypothesis and as attested in previous work. We argue that a possible explanation for this departure from other studies might be the fact that, unlike the majority of previous research, we are dealing with closely related languages. This underlines the importance of expanding our research to include more language pairings, particularly typologically related languages.

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a.frasson AT uu.nl

r.dalessandro AT uu.nl

b.van.osch AT uu.nl