Subject clitic variability is not free variation: Evidence from a Northern Italian dialect.

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Abstract

Previous research on Northern Italian dialects (Benincà, 1983; Poletto, 2000; Renzi & Vanelli, 1983), has overlooked the presence of intra-language subject clitic (SCl) variability by dismissing it as free variation. This paper shows that intra-language SCl variability, involving deletion and multiple overt variants, is influenced by internal and external factors. A variationist investigation of data from Ligurian shows that, among internal factors, syntax affects the variability to a greater extent than phonology and , moreover, past participle agreement triggers a SCl categoricality vs. variability split; among external factors, recency of the same variant influences variability, whereas speaker's age does not. A minimalist analysis of categorical cases reveals that SCl deletion involves a null variant that is fully specified for number and gender, whereas overt variants are, at least, underspecified for gender. Finally, the results of the two analyses are tentatively interpreted by adopting a non-structural approach to variability (Adger, 2007) that, crucially, accounts equally for the significance of internal and external factors, and considers a variable system as part of the individual's I-language.

Keywords: deletion, northern Italian dialects, subject clitics, variability

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1. The phenomenon

One of the syntactic features that distinguishes northern Italian varieties from both southern dialects and standard Italian is the presence of subject clitics. In these varieties, the subject referent is usually doubled by a clitic, i.e., a subject clitic (henceforth, SCl) that shares person and number (and, occasionally, gender) features with the subject (Brandi & Cordin, 1989; Renzi & Vanelli, 1983). In (1) is an example of the occurrence of SCls in Ligurian, a north-western variety.

(1) I fratti *i* sun ndet-i via (E01#2#33.20)
Subj.m.3pl SCl.3pl BE.Aux.3pl GO.PP-m.pl away
the friars they-are gone away
'The friars left'

According to the standard approach (Brandi & Cordin, 1989; Poletto, 2000; Rizzi, 1986), Northern Italian dialects (henceforth, NIDs) SCls are the phonological realization of the inflectional properties of the verb that, instead of (or as well as) being expressed on the verb morphology, are expressed by a preverbal phonologically full element, namely, the SCl.

Previous studies on NIDs SCls (Benincà, 1983; Poletto, 2000; Renzi & Vanelli, 1983) have identified variation patterns that involve realization vs. non-realization of SCls across varieties, while dismissing cases of language-internal variability as instances of free variation. The present study restricts the investigation of SCl variation to a single variety (i.e., Ligurian) and shows that within an individual variety there occur variability patterns in the choice of SCls that are not free because they are influenced by linguistic factors.

This investigation focuses on two variability patterns that are found in Ligurian 3rd plural SCls. One of these is the phonological realization (2.a) vs. non-realization (namely, deletion) of the SCl (2.b), a variable that has been until now studied only as a crosslinguistic phenomenon (Poletto, 2000; among others).

(2) a. Tanti *i* l' ha-n u mezzu (I01#2#28.05)
Subj.3pl SCl.3pl Cl HAVE-3pl Obj
many they-have the means (of transport)
'Many people have a car'

b. I atri Ø se sun sarve-i (T01#2#10.50)
Quant.Subj.3pl (SCl) Refl. BE.Aux.3pl SAVE.PP-pl
the others themselves they-are saved
'The others saved themselves'

The second variable pattern that is investigated is the existence of multiple variants for the phonologically realized SCl, that is, variant *i* (3.a) and variant *e* (3.b). The variability of overt variants constitutes a new aspect of SCl variation within a single Northern Italian variety.

(3) a. E articiocche *i* sun bell-e (T01#1#11.50)
Subj.pl.f SCl.3pl BE.Aux.3pl Adj.Pred-pl.f
the artichokes they-are nice
'Artichokes are nice'

b. E cüne *e* cust-an in müggiu (G01#1#12.15)
Subj.pl.f SCl.3pl COST.Pres-3pl a lot
the cradles cost a lot
'Cradles are expensive'

This paper aims to show that the two aspects of SCl variation in Ligurian, namely, phonological realization and overt SCl variability, are not instances of free variation because they are influenced by language-related factors. In order to determine the nature of these factors, a

variationist analysis is carried out that focuses on the impact of internal linguistic factors on SCl variability, while controlling for most external (sociolinguistic) variables. The variable age is included in the analysis in order to determine from apparent time data whether a linguistic change is ongoing in the dialect, rather than to examine the effect of age *per se* as an external social factor. The variationist analysis ultimately identifies cases of SCl categoricality vs. variability whose feature-based structural analysis crucially provides us with a theoretical account of SCl variation within this particular dialect.

In particular, this paper aims (i) to determine which internal factors (syntactic or phonological) have an impact on the variability, and whether other language-related factors (such as processing effects) need to be taken into account; (ii) to establish whether the external variable age has an impact on the overall variability across generations, and, if this is the case, whether it can be considered as a reflex of an ongoing change in the SCl system of the dialect; (iii) to define the nature of the overt variants (syntactic or phonological) and the factors that impact on such variability; (iv) to investigate the mechanisms behind SCl variation and, finally, (v) to contribute to a general account of variation that accommodates it within a single grammar (the individual's I-language), without having to stipulate the existence of multiple grammars for speakers of the same variety (Henry, 1995, 2002).

2. Previous characterizations of the phenomenon

SCl deletion as free variation. In the last three decades, research on NIDs SCls (Benincà, 1983; Poletto, 1993, 2000; Renzi & Vanelli, 1983; among others) has focused on the investigation of variation patterns that arise by comparing the behaviour of SCls in a number of (more or less) related varieties. One of the aims of these previous studies has been that of examining the behaviour of SCls across varieties in order to determine how crosslinguistic SCl variation can be accounted for by means of a single underlying structure (Poletto, 2000).

One aspect that has been overlooked by previous research on SCls is the fact that variation may (and, indeed, does) occur also within a single variety. When occurring within the same dialect variation patterns, such as SCl deletion, have been dismissed as instances of 'free variation'. Renzi and Vanelli (1983:128-9) claim that:

> "… Not all [grammatical] persons behave in the same way as far as the regular presence of the subject pronoun is concerned, when this is a clitic. This means that there are varieties in which certain [grammatical] persons present the pronoun or the absence of it in *free variation*…" (my translation).[1]

According to Renzi and Vanelli (1983:129, fn.6), absence of the SCl in NIDs does not imply its non-existence, as is the case for Standard Italian. Moreover, they distinguish SCl deletion as free variation from occasional SCl omission (as in the case of fast speech), as well as from SCl categorical omission in specific contexts (preceding negation, object clitics and reflexive clitics) that is attested in two north-eastern varieties, i.e., Friulian and Istrioto. Thus, in Renzi and Vanelli's crosslinguistic analysis SCl variation is interpreted either as categorical presence vs. categorical absence in a few defined contexts, or as a result of inaccuracy related to performance, or, more generally, as unbound variability.

Benincà (1983: 25-6, fn.1) claims that, in many NIDs, it is frequent to find SCl deletion within a single dialect. However, she also claims that within the same variety deletion patterns are categorical as they are related to person specification. In particular, 1st person singular and plural and 2nd plural occur without a SCl, whereas 2nd singular, and 3rd singular and plural regularly occur with a SCl (on the lack of SCl for 1st person, see also Poletto (2000:30)). According to Benincà (1983:34), some varieties present a clitic-like element *a* that has the function of introducing a

[1] "… Non tutte le persone si comportano allo stesso modo per quanto riguarda la presenza del pronome soggetto, se questo è clitico. […] Questo vuol dire che ci sono varietà in cui determinate persone presentano il pronome o l'assenza di pronome in *variazione libera*…".

'new' sentence. This clitic-like element occurs with all grammatical persons, and in cases where the SCl is normally deleted its occurrence generates a SCl presence vs. absence variation pattern that is, nonetheless, only apparent, given the different syntactic function of this element (and its different structural position).

In her extended crosslinguistic analysis of NIDs SCls, Poletto (2000) accounts for SCl deletion across varieties by claiming that it is related to the degree of strength of the verbal inflection. According to Poletto (2000:144), NIDs have lost some of the properties of null-subject languages, namely the properties of licensing and of identification of a null subject (*pro*). In some varieties, the verb has lost only the latter, hence a SCl appears only when the identification requirement needs to be fulfilled. In other varieties, the verb has lost both properties and a SCl is required with both a referential and an expletive *pro*.

Poletto's hypothesis is relevant to deletion patterns that differ across varieties, but fails to account for cases in which variability in SCl deletion varies within the same group of dialects, and indeed within the same dialect.

Overt SCl variability. Following the standard view (Brandi & Cordin 1989; Rizzi 1986; but see Manzini & Savoia (2002) for a different account of NIDs SCls) that interprets NIDs SCls as inflectional agreement elements, Poletto (2000) distinguishes SCls into two main groups with different feature specification, namely, agreement elements and complementizer elements. Agreement SCls are specified for person and number, whereas complementizer SCls have an invariable form for all persons (cf. Benincà's clitic-like element *a*), or they differ on the basis of deixis.

In order to determine whether a SCl is an agreement or a complementizer clitic, Poletto takes into account their presence or absence in coordinated structures, and their position in relation to negation, which occupies an intermediate position between agreement and complementizer elements and does not move (see also Parry, 1997; Zanuttini, 1997). Furthermore, she claims that the occurrence of the higher elements in the sentence (i.e., the complementizer SCls) requires the presence of the lower ones (i.e., the agreement SCls), and two SCls may occur in the same clause provided that they do not belong to the same functional group.

The hypothesis put forward by Poletto (2000) accounts for cases of co-occurrence of two SCls in a single clause, but fails to explain cases in which a SCl has more than one overt variant and either of the two variants may occur in a sentence independently of each other (as in example (3) repeated here in (4)).

(4) a. E articiocche *i* sun bell-e (T01#1#11.50)
Subj.pl.f SCl.3pl BE.Aux.3pl Adj.Pred-pl.f
the artichokes they-are nice
'Artichokes are nice'

b. E cüne *e* cust-an in müggiu (G01#1#12.15)
Subj.pl.f SCl.3pl COST.Pres-3pl a lot
the cradles cost a lot
'Cradles are expensive'

Let us assume that SCl *i* in (4.a) is an agreement SCl. According to Poletto's account this clitic should occur either alone (4.a), or with a potential complementizer SCl. However, in (4.b) we observe that the SCl *e* may occur independently of the agreement SCl *i*. The presence of SCl *e* in (4.b) may be accounted for by claiming either that *e* is also an agreement SCl (and is an allophone of SCl *i*), or that SCl *e* is a complementizer clitic that can occur without the presence of a following agreement SCl. Poletto's account of overt SCl variation makes strict predictions that are not borne out in the Ligurian data. More generally, Poletto's analysis of crosslinguistic SCl variation, as well as work prior to it, does not take into account overt SCl variability occurring within individual varieties.

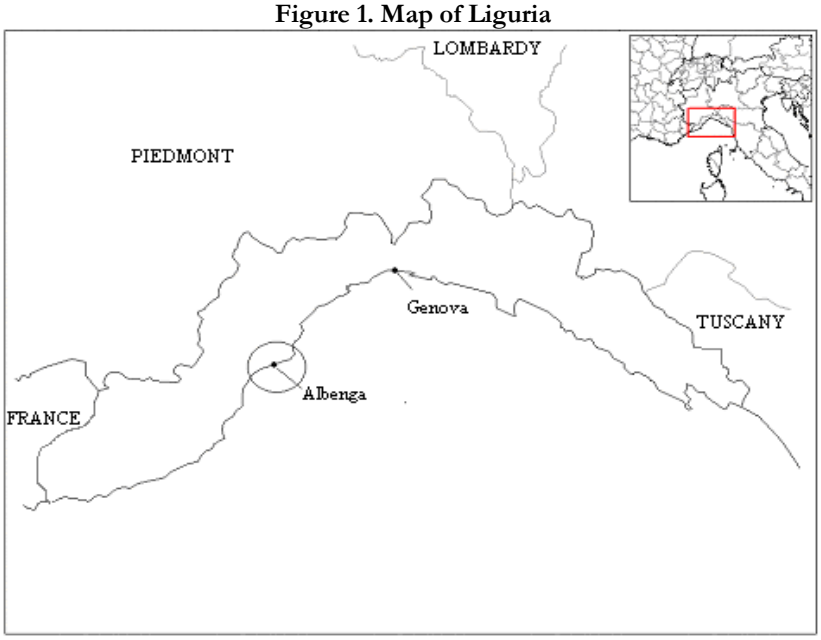
To summarize, in previous studies SCl deletion and overt SCl variability have been investigated primarily at a crosslinguistic level. SCl deletion has been structurally defined as a phenomenon that relates to how the properties of the verb differ from variety to variety, whereas instances of SCl deletion within the same variety have been regarded either as free variation, or as categorical cases related to grammatical person. Overt SCl variability has only been considered in relation to the possibility in some varieties of combining SCls with different functions. Cases in which the same grammatical person may appear with distinct overt SCl forms have been left unexplained and, indeed, ignored.

3. Subject clitic variation in Ligurian

3.1. The variety and the variables under investigation

The variety analysed in this study is a dialect spoken along the north-western coast of the region of Liguria (more precisely, in and around the town of Albenga), which I refer to as western coastal Ligurian, or simply Ligurian.

Figure 1. Map of Liguria



The varieties of Ligurian spoken along the coast differ sharply in lexis, phonology and syntax, although less evidently in the latter, from the varieties spoken in the Ligurian hinterland (Forner 1997:246). Coastal Ligurian presents lexical and phonological differences, but it is syntactically rather homogenous. Its two main groups, western varieties (more rural and more conservative) and eastern varieties (influenced by the powerful Genoese variety (Forner 1997)) differ in one major syntactic feature, namely their SCl paradigms. Eastern (Genoese) varieties present a reduced paradigm, involving 2nd and 3rd person singular, whereas western (Ligurian) varieties preserve a full SCl paradigm (Ligurian I and II in Renzi & Vanelli's (1983) categorisation).

Besides presenting a full overt SCl paradigm, Ligurian allows SCl deletion with all grammatical persons, apart from 2nd singular (cf. Benincà, 1983). Furthermore, most grammatical persons show more than one overt SCl variant: variants *e/a* for 1st person singular and plural, variants *u/a* for 3rd singular, variants *i/e* for 2nd plural, and variants *i/e* for 3rd plural (Ciarlo, forthcoming).

The present study focuses on SCl variation in 3rd person plural contexts, where the SCl variable may be phonologically realized, namely with an overt SCl (*i/e*), or non-realized (*Ø*). In (5) is an example of the SCl variable *i/e/Ø* with a null subject (*pro*).

(5) a. (pro) *i* ghe purt-an anche da mangià (G01#2#45.55)
pro SCl IOCl BRING-Pres.3pl also Inf.Obj
to-him they-bring also to-eat
'They feed him as well'

b. (pro) *e* i campa-van tütte in tera (T01#1#22.45)
pro SCl OCl PICK-Impf.3pl Obj.Quant LocAdv
them they-picked all on the ground
'They used to pick them all off the ground'

c. (pro) Ø te vegni-van a giüttà (T01#2#31.10)
pro SCl OCl COME-Impf.3pl to HELP.Inf
you they-came to help
'They were coming to help you'

The variationist analysis focuses on two aspects of the variability: (i) SCl deletion, that is, which elements trigger the choice of SCl deletion vs. that of an overt variant ((5.a,b) vs. (5.c)); and (ii) overt SCl variability, namely, what causes the choice of one overt variant over the other ((5.a) vs. (5.b)).

3.2. Data and methods

The present study is based on empirical data I collected between 2005 and 2006 using standard sociolinguistic methodology (interviews and spontaneous exchanges between no more than two speakers) for a total of over forty hours of recordings from twelve speakers (six males and six females). All speakers were born and raised in the same part of the town, and belonged to the same social network (friends or relatives).

Data were collected, extracted and coded into a corpus that involves the investigation of several variables that occur in the Ligurian SCl system. The analysis presented in this paper is based on twelve hours of recorded speech from six female speakers (i.e., two hours of recorded speech per speaker) and on 1152 tokens of the 3rd plural SCl variable *i/e/Ø* (ca. 200 tokens per speaker).

3.2.1.Circumscribing the variable context

Although most studies in NIDs (Poletto, 2000; among others) focus on the comparison between main and embedded clauses in order to study whether different variation patterns occur in these two sentence-types crosslinguistically, I restrict the analysis of the *i/e/Ø* SCl variable to main clauses. This is because in embedded clauses Ligurian SCls generally cliticise onto complementisers and wh-items, and the phonological form of the latter (namely, that of complementisers *che* 'that' and *se* 'if', and that of most wh-items, e.g., *quande* 'when', *cumme* 'how', *dunde* 'where' etc.) does not allow one to distinguish whether a phonological from /ke/ corresponds to a variant *e* cliticized onto the complementiser (*ch'e*), or whether the complementizer is followed by the null variant Ø (*che Ø*) (as in (6.a) for complementizers, and (6.b) for wh-elements). For this reason, tokens of embedded clauses with SCl variant *i* and tokens with (phonetically distinguishable) wh-items with a final stress (such as *perchè* 'because') were not included in the analysis in order not to generate a context disparity among the variants (Blake, 1997).

(6) a. E so *ch'e* / *che* Ø nu ghe van (E02#2#20.15)
SCl KNOW.Pr.1sg Comp-SCl / Comp (SCl) Neg Cl GO.Pr.3pl
I-know that not there they-go
'I know that they are not going (there)'

b. *Quand*'e / *Quande* Ø vegn-an lì (G01#2#10.25)
when-SCl/ When (SCl) COME.Pr-3pl here
when they-come here
'When they come here'

Similarly, if a SCl occurs after the adverbs *peui* 'then', *magari* 'maybe', *difeti* 'indeed', *quindi* 'then', 'so', and *ormai* 'now, 'nowadays', the SCl variant *i* could not be distinguished (as in (7)) and, consequently, all tokens preceded by these adverbs were removed.

(7) *Peu(i) i / peui Ø* sun reste-i là (M01#3#08.45)
TempAd SCl / TempAd (SCl) BE.Aux.3pl REMAIN.pp-pl Loc
then they-are remained there
'Then they remained there'

Cases in which the verb morphology is ambiguous (non-agreeing for number) and the subject is singular (but with a plural meaning as in 'the family of…') were not coded because of ambiguity for what concerns the subject referent of the SCl (as in (8)).

(8) *A mamma* i *gh'ajev-a* e tere lì (I01#1#34.05)
Subj.*sg*.f. SCl.3***pl*** Cl HAVE.Imp-***3*** Obj Loc
the mum they/she-had the allotments there
'My mum('s family) had (her/their) allotments there'

Tokens involving a generic plural referent 'they' (as in 'they say…') (as in (9)) were coded and considered in the first stage of the analysis. However, since they showed no effect on the general pattern of SCl variability, and since their large number could have led to bias in the overall results, they were eventually dropped from the analysis.

(9) Ina vota *i* u *dijev-an* (E01#1#40.25)
TempAd SCl OCl SAY.Imp-3pl
one time it they-said
'In the past they used to say that'

False starts were omitted, and a completed token following a false start was coded only if the SCl variant uttered was the same as the one in the false start. Also, repetitions by the same speaker were coded only once, unless interrupted by a turn from another speaker.

3.2.2. Factor group specification

The SCl variable *i/e/Ø* was coded for a number of internal factors that are argued to have an effect in determining crosslinguistic variation (Benincà, 1983; Poletto, 2000; Renzi & Vanelli, 1983). These internal factors are: (i) subject-related factors (gender, pronominal vs. nominal status, definiteness); (ii) verb-related factors (verb class, non-finite verb agreement, finite verb morphology); (iii) syntactic factors (SCl-verb adjacency, intervening object clitics or negation); (iv) phonological context (preceding and following the SCl). Tokens were also coded for one psycholinguistic factor, that is, recency of the variable in the discourse, and for one external factor, namely, age.

Gender. According to Brandi and Cordin (1989:113), SCls share all features with the subject referent, thus including gender. Given the identity of surface forms attested in Ligurian between the overt SCls *i* and *e* and the definite plural articles, masculine *i* (as in Lig. *i pari* 'the fathers') and feminine *e* (as in Lig. *e mari* 'the mothers'), I coded the variable *i/e/Ø* according to gender of the subject referent. In particular, I coded for feminine (10.a) and masculine (10.b) grammatical gender, and I distinguished uses of masculine as a default form for semantic gender (such as cases in which the subject involved both male and female referents, as in 'a couple' (10.c)), for unspecified gender (such as the case of specific members of a group whose gender was not specified (10.d)), and for generic subjects (as in the expression 'people say…'(10.e)).

(10) a. *E campane* 'the bells' (f.pl) (feminine)
b. *I purtui* 'the front doors' (m.pl.) (masculine)

c.	*Me mare e me pare*	'my mum and my dad'	(semantic)
d.	*I parenti*	'the male and female relatives'	(unspecified)
e.	*pro* i m'han ditu	'people told me'	(generic)

Pronominal vs. nominal subject. Previous research involving another variety of Ligurian (Parry, 2005 on Cairese) has shown that SCls are always present when the subject is a pronoun. Moreover, it has been claimed (Poletto, 2000) that subject pronouns always occur with SCls that show a complex feature specification, as opposed to lexical or null subjects that may occur with less specified SCls. Tokens were coded according to whether they occurred with a pronominal subject (11.a), a lexical subject (11.b,c), a quantifier (11.d), or a null subject (11.e). Furthermore, following Adger and Harbour's (2007) distinction in person specification between 3rd person animate referents (with a zero person feature) and inanimate referents (lacking person feature altogether), I coded lexical subjects on the basis of animacy (11.b,c). Animacy is strictly related to gender, in that it has been shown (Di Domenico, 1997) that animate referents have specified gender features while inanimate referents require to have their gender feature specified by another element. That is, if gender of the subject referent is a significant factor in the choice of SCls this should also be evident from the behaviour of the SCl variable with animate vs. inanimate subjects.

(11)	a. *Velli* i sun bravi	'they SCl are good'	(pronoun)
	b. *I mei nonni* i sun là	'my grandparents SCl are there'	(animate noun)
	c. *E cà* i l'ean belle	'the houses SCl were nice'	(inanimate noun)
	d. *Tanti* Ø ghe l'han	'many SCl Cl have it'	(quantifier)
	e. *pro* Ø sun vegnüi	'SCl they-came'	(null subject)

Definiteness. Suñer (1992) claims that SCls match the features of their referent only when the latter is definite or presupposed in the discourse. In order to code for definiteness of the subject referent, I adopted Enç's (1991) subdivision of definiteness in relation to specificity. Tokens were coded according to their identity relation with previous referents in the sentence, namely, definites (full identity with a previous referent (12.a)), specific indefinites (whose referent was included in, or "part of", a previous one, similarly to Prince's (1981) notion of inferables (12.b)), and non-specific indefinites (with no relation to previous referents in the discourse (12.c)).

(12)	a. *I matetti* e sun rivei	'the kids SCl arrived'	(definite)
	b. Inte sta famiia *dui fieui* Ø sun morti	'in this family two children SCl died'	(specific indefinite)
	c. Ø sun rivei *di papei*	'SCl arrived some documents'	(indefinite)

Verb class. This factor group was included to determine whether the original structural position of the subject impact on the patterns of SCl variability. It distinguished between two verb structures: verbs whose subject originates in the specifier of the verb phrase, that is, transitives and unergative verbs (13.a), and verbs whose subject is base-generated as the complement of the verb (i.e., as object of the verb), namely unaccusatives, reflexives, and passives (13.b) (Burzio, 1986).

(13)	a. *E mestre* i ciamman	'the teachers SCl call'	(VP-external subject)
	b. I sun steti sarvei *tütti*	'SCl they-have been saved all'	(VP-internal subject)

Finite verb morphology. In previous studies (Brandi & Cordin, 1989; Renzi & Vanelli, 1983) it has been claimed that despite being the phonological expression of the verbal inflection, the occurrence of SCls is not related to the presence of syncretic forms in the verb paradigm, namely, to ambiguity in the verb morphology. In Ligurian, 3rd person plural presents both an unambiguous form morphologically specified for person and number (ending *–an*, *–en* (14.a)) and an ambiguous form (ending *–a*, *–e* (14.b)) that is syncretic with 3rd person singular in the present tense, and with 1st and 3rd singular in the imperfect tense.

(14) a. (pro) i *parlan* sempre 'SCl they-talk always' (unambiguous)
b. (pro) i *mira* a televijun 'SCl they-watch the telly' (ambiguous)

Non-finite verb morphology. As is the case in many Romance languages, in Ligurian the past participle agrees in number and gender with the subject referent when it occurs with verbs which have a VP-internal subject, namely unaccusatives (such as *ndà* 'to go' (15.a)), reflexives (such as *spusase* 'to get married' (15.b)), and passives (such as *esse inseriu* 'to be placed' (15.c)).

(15) a. *I fratt-i* i sun *ndet-i* via (E01#2#33.20)
Subj-m.pl SCl BE.Aux.3pl *GO.PP-m.pl* away
the friars they-are gone away
'The friars left'

b. (*pro*) i se sun *spuze-i* (I01#1#22.30)
pro(m.pl) SCl ReflCl BE.Aux.3pl *MARRY.PP-m.pl*
themselves they-are married
'They (= all brothers) got married'

c. *E campan-e* e l' ea-n *lighè-e* (E01#2#30.40)
Subj-f.pl SCl Cl BE.Aux.Impf-3pl *TIE UP.PP-f.pl*
the bells they-were tied up
'The bells were tied up together (= they were not ringing)'

Alongside the standard (fully agreeing) past participle form, Ligurian also presents cases in which a feminine subject may co-occur with a past participle that agrees only in number (and not in gender) with the subject. In such cases, the past participle has a morphological ending *–i*[2] that it shares with the form of the past participle that fully agree with masculine referents. In (16) are some examples of this phenomenon.

(16) a. (*pro*) e ghe sun *ndet-i* (E01#5#38.55)
pro(f.pl) SCl Cl BE.Aux.3pl *GO.PP-pl*
there they-are gone
'They (all females) went there'

b. *E gente* i se sun *miss-i* a cavà (T01#1#29.55)
Subj.f.pl SCl ReflCl BE.Aux.3pl *PUT.PP-pl* to-dig.Inf
the people themselves they-are put to dig
'People started to go digging'

c. (*pro*) i sun *tütt-e taiie-i* (T01#2#35.10)
pro(f.pl) SCl BE.Aux.3pl *Quant.Subj-f.pl CUT.PP-pl*
they-are all cut
'(The hands (f.pl)) are all cut'

Past participle agreement was coded for the following factors: plural masculine agreement (ending *–i*) (17.a), plural feminine agreement (ending *–e*) (17.b), and only plural agreement with feminine referents (ending *–i*) (17.c). Moreover, as for the factor gender, the use of past participle ending (*–i*) for masculine (and feminine) referents was distinguished from its use as a default

[2] This past participle form is categorical for verbs of the first conjugation (infinitives in *–à*, such as *taiià* 'to cut', PP.pl. *taiiei*; *arrivà* 'to arrive', PP.pl. *arrivei*) and variable with all other verbs which, with feminine subject referents, may show a fully specified past participle *-e* (*mettì* 'to put', PP.fem.pl. *misse* 'put') or an underspecified past participle ending *–i* (PP.pl. *missi* 'put') lacking gender features.

ending for agreement with referents that carried a semantic gender (17.d), or that were unspecified for gender (17.e).[3]

(17)	a. I fratti i sun *andet-i* via	'the friars SCl left'	(pp: masculine, plural)
	b. E campane e l'ean *ighè-e*	'the bells SCl were tied up'	(pp: feminine, plural)
	c. I sun tütte *taiie-i*	'SCl they-are all(f.) cut'	(pp: plural)
	d. I seui nonni i sun *mort-i*	'his grandparents SCl died'	(pp: semantic, plural)
	e. I parenti e sun *rive-i*	'the relatives SCl arrived'	(pp: unspecified, plural)

Adjacency. SCls occur immediately before the finite verb. The sequence SCl-finite verb can only be interrupted by another clitic element or a negative element (for an argument on the clitic nature of negation see Poletto (2000) and Zanuttini (1997), among others). Other elements, such as adverbs, are not allowed to do so. In this group I coded for the following factors: SCl-verb adjacency (18.a); intervening negation *nu* (SCl-*nu*-verb) (18.b); intervening object clitic (SCl-OCl-verb), namely *me* 'me/to-me', *te* 'you-to-you', *ne* 'us/to us', *ve* 'you/to you (pl.)' *se* 'themselves/to themselves', 3rd person direct OCls followed by a consonant, namely *u* 'him/it(m.)', *a* 'her/it (f.)', *i* 'them (m.pl.)', *e* 'them (f.pl.), and 3rd person indirect OCl *ghe* 'to him/to her/to them' (18.c); intervening 3rd person direct OCl *l'* (SCl-l'OCl-verb) in front of vowel initial (main and auxiliary) verbs (18.d); intervening locative/possessive clitic *ghe* 'there' (SCl-ghe-OCl) (18.e); and, finally, intervening auxiliary clitic *l'* (SCl-l'-Aux) in front of vowel initial auxiliaries (18.f).

(18)	a. (pro) *i vegne* doppu	'(pro) SCl they-come later'	(SCl-V)
	b. (pro) *Ø nu* rivan ciü	'(pro) SCl they not come anymore'	(SCl-Neg)
	c. (pro) *e ne* mira	'(pro) SCl us they-look'	(SCl-OCl)
	d. (pro) *i l'*affittava	'(pro) SCl it they-rented'	(SCl-OCl l')
	e. (pro) *i ghe* van	'(pro) SCl there they-go	(SCl-ghe)
	f. (pro) *Ø l'*ean belle ste cà	'(pro) SCl they-were nice these houses'	(SCl-l'Aux)

Phonological context. Phonological factors were divided into preceding and following phonological context. In the preceding phonological group tokens were coded for preceding high vowels [+HIGH] *–i* and *–u*, for preceding mid/low vowels [–HIGH] *–e*, *–o*, and *–a*, in order to test for vowel coalescence effects, and for preceding pause.

As for following phonological context, tokens were coded for following fricative, plosive, nasal, trill, lateral, [+HIGH] vowel, and [–HIGH] vowel.

Recency. Besides the internal linguistic factors, data were also coded for one psycholinguistic factor, that is, recency of the SCl variable *i/e/Ø* within the previous ten sentences in the discourse (Scherre & Naro, 1991, 1992). Each variant was coded as a distinct factor, namely recent SCl *i*, recent SCl *e*, and recent SCl *Ø*, in order to test whether recency of the same SCl form had an impact on the variability pattern of the single variants. Tokens which were not preceded by a recent 3rd plural SCl were included in the group and coded for absence of a recent SCl variable *i/e/Ø*.

Age. In this study most sociolinguistic factors were controlled for, as was the case for gender. The only external variable that was included in the analysis is age. Previous research on the impact of age on the use of SCls (Moretti, 1999) has suggested that in some dialects, such as those spoken in the Italian-speaking part of Switzerland, there is a tendency to omit SCls among younger generations. For these varieties this result suggests that the exposure to Standard Italian, a language that does not make use of SCls, generates, at least in the younger generations, an

[3] Generic subjects did not occur with verbs which have a VP-internal subject, and they generally did not occur with compound tenses, which imply the completion of an action, and therefore a specified subject referent.

ongoing shifting process in the dialect from a SCl-system to a non-SCl system like that of the standard.

For the Ligurian variety spoken in the town of Albenga the investigation of the impact of age met some limitations due to two historical reasons, namely the large diffusion of the standard language and immigration. During the period between the two World Wars the influence of Standard Italian began to grow stronger in the region of Liguria (Parry, 2002:52) and by end of the 1950s Ligurian had lost its status of everyday language to the standard, so that following generations developed only a passive competence of the dialect. Moreover, during the late 1950s and early 1960s the town experienced large waves of immigration from southern Italy and the contact between two (or more) unintelligible dialects favoured the use of the standard variety in more and more social contexts.

For these reasons, the age groups analysed in this study were only two and involved an older group (70 to 80 year-olds) and a younger group (50 to 60 year-olds), as a potential third group would consist of passive speakers only. Although the age gap between the two groups is rather small, these two generations of speakers differ for a crucial aspect. Older speakers grew up using the dialect as their main language and made use of it also in their adulthood, while acquiring the standard variety at school and, later, via the influence of the media. Younger speakers were born in a decade when the region was in a linguistic situation of diglossia and they maintained the use of the two varieties distinct, thus using the dialect within the family (and in particular with old family members) and the standard in their working and social life.

The investigation on the impact of age on SCl variability, and in particular on the variable pattern of SCl deletion, aims to determine whether the influence of language contact between the dialect and the standard for the younger generation is reflected in their use of the variable, and, furthermore, whether their dialect is drifting towards the SCl-less system of the standard.[4]

The data were analysed using GOLVARB X (Sankoff, Tagliamonte & Smith, 2005) in order to determine which of the factor groups has a statistically significant effect on the choice of the variants *i*, *e*, and Ø, and what the internal factor ranking of a given group is. The results of both the distributional and multivariate analyses contribute to the development of a syntactic analysis of SCl variation in Ligurian.

3.3. Results

The distributional phase of the variationist analysis examines the behaviour of the variable in general, as well as in relation to single factors. Table 1 presents the overall distribution of the *i*/*e*/Ø variable: SCl *i* is the most favoured variant occurring in 68.8 per cent of the tokens, while the other overt variant *e* and SCl deletion (null variant Ø) are less favoured occurring, respectively, in 13.4 per cent and 17.8 per cent of the overall tokens.

Table 1. Overall distribution of the variable *i*/*e*/Ø

SCl variable	N	%
variant *i*	793	68.8
variant *e*	154	13.4
variant Ø (deletion)	205	17.8
Total Ns	1152	

[4]The analysis of the impact of age needs to take into account that, over the course of their life, older speakers may indeed change their grammar in order to accommodate to younger speakers. It may be that younger speakers are moving towards the standard whereas older speakers simply accommodate to the speech of the younger. However, in the case of this study, this distinction is difficult to detect in results from apparent time data.

SCl deletion and overt SCl variability are analysed separately. First, a variationist analysis is carried out to determine which are the factors that favour SCl deletion, as opposed to the use of any of the two overt forms *i* and *e*. Subsequently, a distinct analysis investigates which are the factors that favour the choice of one overt SCl variant over the other (*i* vs. *e*). The rationale behind the distinction of these two aspects of the variability lies in the fact that an analysis of SCl deletion needs to consider the impact of the standard language, while the investigation of choice of the overt SCl variants involves factors that are related to the dialect feature.

3.3.1. Deletion

An initial run of the multivariate analysis for SCl deletion shows that the significant groups for this variant involve phonological factors, namely preceding and following phonological contexts, and syntactic factors, i.e., pronominality and past participle agreement, as well as recency of the same variant. The nonsignificant factors for SCl deletion, whose results are presented among parentheses, are adjacency, definiteness of the subject referent, gender of the subject referent, verb morphology, verb class, and the external variable age (Table 2).

Each factor group has an internal order of factors that ranges from the most favouring to the least favouring factors for the variant under investigation. Factors that have a weight above .5 favour the variant, factors with a weight below .5 disfavour it, whereas factors with a weight of around .5 do not show any effect on the variability. Significant factor groups are ordered according to their range, that is, the difference between the most favouring and the least favouring factor. For SCl deletion, the group with the highest range is following phonological

Table 2. VARBRUL results for SCl deletion.

Variable	Tokens (N)	deletion (N)	deletion (%)	VARBRUL weight
Following phonological context				
Nasal	168	40	24	.638
Fricative	341	80	23	.569
Vowel [–HIGH]	24	4	17	.509
Plosive	298	48	16	.504
Trill	19	3	16	.465
Liquid	273	29	11	.369
Vowel [+HIGH]	29	1	3	.171
Range				467
Pronominality				
Pronoun	47	19	40	.779
Lexical (inanimate)	132	28	21	.593
Null subject	723	119	16	.481
Lexical (animate)	206	33	16	.453
Quantifier	44	6	14	.425
Range				354
Past participle (subject) agreement				
Semantic, plural	53	19	36	.598
Masculine, plural	44	14	32	.540
Unspecified, plural	25	5	20	.405
Feminine, plural	17	2	12	.250
Range				348
Recency				
Recent variant Ø	77	25	32	.697
Recent variant *i*	549	93	17	.507
Recent variant *e*	62	10	16	.471
No recent *i*/*e*/Ø variable	335	48	14	.446
Range				251
Preceding phonological context				
Pause	138	37	27	.654
Vowel [–HIGH]	315	67	21	.533
Vowel [+HIGH]	610	86	14	.447
Range				207
Adjacency				
Negation	97	25	26	[.594]
Locative *ghe*	82	13	16	[.555]
Verb	380	84	22	[.549]
Object clitic	322	55	17	[.518]
Auxiliary clitic *l'*	194	23	12	[.391]
Object clitic *l'*	77	5	6	[.292]
Range				302
Definiteness				
Indefinites	58	13	22	[.565]
Definites	186	42	23	[.496]
Specific indefinites	29	4	14	[.398]
Range				167
Gender of the subject				
Semantic	228	52	23	[.559]
Unspecified	363	58	16	[.506]
Masculine	248	47	19	[.469]
Feminine	222	36	16	[.464]
Range				95
Verb Morphology				
Unambiguous	906	173	19	[.513]
Ambiguous	246	32	13	[.451]
Range				62
Verb class				
VP- external subject	450	68	15	[.519]
VP-internal subject	281	62	22	[.469]
Range				50
Age				
Old	709	121	17	[.518]
Young	443	84	19	[.489]
Range				29

Note. Input value: .195; significance threshold: .05; values in brackets are nonsignificant.

context, and within this group the factors that favour SCl deletion are following nasal and following fricative.

The results of following phonological context are tested further in the distributional analysis. The distribution of the data involving following nasal and following fricative is shown to involve mostly functional elements and only a small number of lexical elements. For nasality, following functional items involve negation *nu* and object clitics *me* ('me/to me') and *ne* ('us/to us'). Table 3 shows that almost all nasal-initial tokens are also functional elements (38 out of 40 tokens).

Table 3. Distribution of SCl deletion with adjacent nasal-initial functional and lexical elements

Adjacent element	deletion (N)
Functional	
Negation *nu*	25
Object clitic *me*, *ne*	13
Lexical	
Finite verb	2
Total Ns	40

The same is true for fricative-initial items. Table 4 shows that functional elements, such as fricative-initial forms of auxiliary 'be' and copula (i.e., *sun* 'they are', *sareva* and *sarevan* 'they would be'), and the reflexive clitic *se* ('themselves/ to-themselves') constitute the majority of fricative-initial elements (67 out of 80 tokens), whereas lexical elements, in which a pure phonological factor is involved, represent less than one fifth of the fricative-initial tokens.

Table 4. Distribution of SCl deletion with adjacent fricative-initial functional and lexical elements

Adjacent element	deletion (N)
Functional	
Auxiliary 'be' (*sun, sareva, sarevan*)	23
Copula 'be' (*sun, sareva, sarevan*)	26
Reflexive clitic *se*	18
Lexical	
Finite verb	13
Total Ns	80

The multivariate results for following phonological context must take into account that most tokens considered for this factor group as favouring SCl deletion, alongside showing specific phonological features, also have a syntactic functional role. The group following phonological context is omitted from the analysis because the group that involves adjacency includes the favouring phonological factors nasality and fricativity in the specification of the syntactic adjacent elements. That is, within the group involving adjacency tokens are coded for both their syntactic and the phonological features. Among the disfavouring factors in the group involving following phonological context in Table 2 is liquid. This feature is also captured by the adjacency group, which distinguishes between adjacent auxiliary clitic *l'* and OCl *l'*. As Table 5 shows, these two functional elements constitute the majority of the liquid-initial items (28 out of 29).

Table 5. Distribution of SCl deletion with adjacent liquid-initial functional and lexical elements

Adjacent element	deletion (N)
Functional	
Auxiliary clitic *l'*	23
Object clitic *l'*	5
Lexical	
Finite verb	1
Total Ns	29

Following the omission of following phonological context (and its consequent inclusion in the adjacency group), a new regression is carried out that shows that adjacency is indeed a significant factor for SCl deletion (Table 6). As expected from the previous results for nasality and fricativity, when a SCl is adjacent to a negative element negation or to a verb SCl deletion is favoured, whereas when the SCl is followed by a clitic *l'* (an auxiliary clitic, or an OCl) deletion is disfavoured. The factor adjacent verb (with a total of 84 Ns) includes adjacent auxiliary 'be' (23 Ns), copula (26 Ns), that represent the majority of the tokens, and main verb (35 Ns). The factor adjacent object clitic (with a total of 55 Ns) involves 1st person OCls *me* and *ne* (13 Ns), reflexive clitic *se* (18 Ns), and other plosive-initial OCls (2nd person OCl *te* and indirect 3rd person OCl *ghe*) (24 Ns). All other adjacent clitics disfavour SCl deletion.

Table 6. VARBRUL results for SCl deletion (without following phonological context).

Variable	Tokens (N)	deletion (N)	deletion (%)	VARBRUL weight
Adjacency				
Negation	97	25	26	.658
Verb	380	84	22	.564
Object clitic	322	55	17	.506
Locative *ghe*	82	13	16	.485
Auxiliary clitic *l'*	194	23	12	.385
Object clitic *l'*	77	5	6	.278
Range				380
Past participle (subject) agreement				
Semantic	53	19	36	.596
Masculine	44	14	32	.547
Unspecified	25	5	20	.406
Feminine	17	2	12	.242
Range				354
Pronominality				
Pronoun	47	19	40	.784
Lexical (inanimate)	132	28	21	.581
Null subject	723	119	16	.481
Lexical (animate)	206	33	16	.455
Quantifier	44	6	14	.436
Range				348
Recency				
Recent variant *Ø*	77	25	32	.705
Recent variant *i*	549	93	17	.508
Recent variant *e*	62	10	16	.467
No recent *i*/*e*/*Ø* variable	335	48	14	.443
Range				262
Preceding phonological context				
Pause	138	37	27	.647
Vowel [–HIGH]	315	67	21	.532
Vowel [+HIGH]	610	86	14	.450
Range				197

Note. Input value: .204; significance threshold: .05. Nonsignificant factor groups: gender of the subject, verb morphology, verb class; definiteness, age.

The second significant factor group is past participle agreement with the subject referent. In the multivariate analysis for SCl deletion one factor, namely feminine plural agreement with only plural morphological specification (the Ligurian past participle ending *–i* for feminine referents), had to be omitted because no tokens were recorded in which the application occurs with this factor (knockout) (Table 7). This case of categoricality of overt variants with morphologically underspecified past participles will be the focus of the syntactic account of Ligurian SCl variation based on the feature composition of the variants that I propose in section 4.1.2..

Table 7. Distribution of overt vs. null SCl variable with past participle agreement with the subject

	Overt (*i*/*e*) (N)	deletion (N)
Past participle (subject) agreement		
Plural, semantic *–i*	34	19
Plural, masculine *–i*	30	14
Plural, unspecified *–i*	20	5
Plural, feminine *–e*	15	2
Plural (underspecified feminine) *–i*	6	0
Total Ns	145	

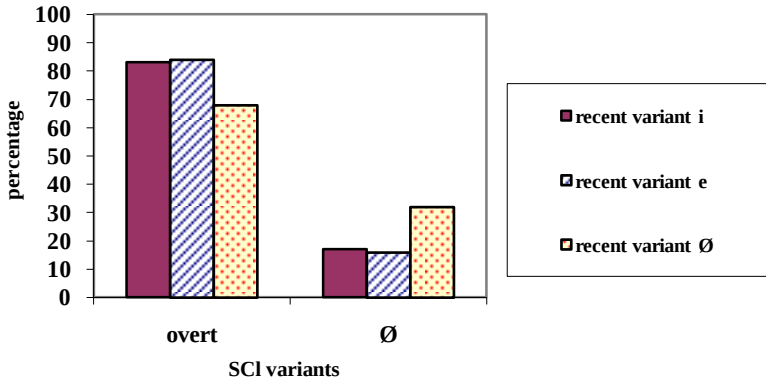
Among the other factors in this group, plural past participles that show a default morphological ending *–i* favour deletion when their referent has semantic gender and disfavour it when the gender of the subject referent is unspecified. Past participles with full agreement, i.e., with plural number and masculine or feminine gender, differ with regards to the impact they have on SCl deletion: while masculine agreement favours the null variant, feminine agreement disfavours it.

The two remaining significant internal groups are pronominality and preceding phonology. The results for pronominality show that pronoun and lexical inanimate subjects favour SCl deletion whereas all other subject types, including the null subject *pro*, disfavour deletion or have no impact on it. The group involving preceding phonological context shows that a preceding pause favours SCl deletion, a mid/low vowel does so but only slightly (weight .532), whereas a preceding high vowel disfavours it. An in-depth account of the significant internal factors pronominality and preceding phonological context is beyond the scope of the present paper. For the purposes of this study the significance of these two factors is taken into account in that it shows that, among the internal factors, syntactic factors are prevalent in the choice of SCl deletion, but the impact of phonological ones must also be considered in an account of SCl variability, as in many cases phonological and syntactic feature interact.

Among the language-external factors only the psycholinguistic factor recency is selected as significant by VARBRUL for the choice of the null SCl variant. Figure 2 shows the distribution of overt and null variants in relation to the quality of a preceding SCl variant (of the same variable *i*/*e*/*Ø*). Recent overt SCl variants, namely, variant *i* and *e*, are followed by an overt SCl in over 80 per cent of the tokens. When the recent SCl is a null variant the number of tokens showing SCl deletion increases.[5]

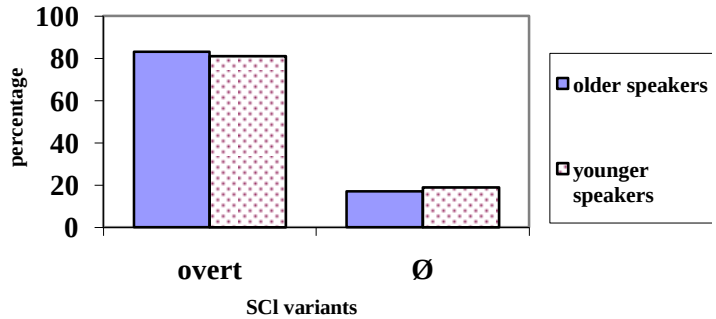
[5] This result was tested further to determine whether the increase in the number of tokens showing SCl deletion with a preceding null variant was due to the fact that they referred to the same subject referent. This was found not to be the case, as the variability pattern was not altered when tokens with the same subject referent were removed.

Figure 2. Distribution of overt and null SCl variants for recency of the variable i/e/ø



The external variable age is found to be nonsignificant for SCl deletion. Figure 3 shows that the distribution of tokens of overt variants and SCl deletion across the two age groups is almost identical. A first hypothesis that the influence of the historical language contact with the standard variety and the diglossic upbringing of younger speakers would be reflected in their use of SCl deletion is not borne out by the Ligurian data. A second hypothesis involving age, i.e., the fact that the dialect is undergoing a process of change towards the SCl-less system of standard Italian, may not be completely ruled out by the results in Figure 3. These results are ambiguous as to whether a shifting process towards the SCl-less system of the standard is ongoing in both generations, or whether the process is taking place among younger speakers (given the initial language contact), and older speakers are simply accommodating to their use of SCl deletion. The mere comparison of apparent time data between these two close age groups does not allow us to provide a definite answer to the hypothesis of SCl deletion as part of an ongoing change in the variety.

Figure 3. Distribution of SCl variants i/e/ø for the independent variable age



To sum up, the multivariate analysis for SCl deletion has shown that syntactic factors are the most significant for the speaker's choice of the null variant over the overt ones. These factors involve adjacency of functional elements such as negation, object clitics, and auxiliary/copula 'be', past participle agreement with the subject referent, and subject pronominality. Although to a lesser extent, phonological factors are also regarded as significant (as is the case for preceding phonological context), or their effect on the variable is shown to converge with that of the syntactic factor adjacency (e.g., for following nasality and fricativity). Besides the language-internal factors, one language-external factor, namely, recency of the same variant, favours the occurrence of SCl deletion.

3.3.2. Overt SCl variability

Table 8. VARBRUL results for overt SCl *e*.

Variable	Tokens (N)	SCl *e* (N)	SCl *e* (%)	VARBRUL weight
Past participle (subject) agreement				
Semantic	34	11	32	.778
Feminine	15	3	20	.582
Feminine (only plural morphology)	6	1	17	.570
Unspecified	20	2	10	.435
Masculine	30	1	3	.187
Range				591
Preceding phonological context				
Vowel [–HIGH]	524	120	23	.624
Vowel [+HIGH]	248	22	9	.334
Pause	101	7	7	.280
Range				344
Adjacency				
Negation	72	24	33	.718
Object clitic *l'*	72	13	18	.548
Object clitic	267	41	15	.510
Verb	296	42	14	.493
Locative *ghe*	69	11	16	.447
Auxiliary clitic *l'*	171	23	13	.401
Range				317
Recency				
Recent variant Ø	52	13	25	.686
Recent variant *e*	52	11	21	.606
No recent *i*/*e*/Ø variable	287	52	18	.541
Recent variant *i*	456	55	12	.440
Range				246
Verb class				
VP-external subject	382	62	16	.555
VP-internal subject	219	28	13	.404
Range				151
Definiteness				
Definites	144	29	20	[.594]
Indefinites	45	4	9	[.338]
Specific indefinites	25	2	8	[.275]
Range				319
Following phonological context				
Trill	16	3	19	[.678]
Nasal	128	36	28	[.597]
Fricative	261	37	14	[.517]
Vowel [+HIGH]	28	4	14	[.517]
Plosive	250	36	14	[.507]
Vowel [–HIGH]	20	2	10	[.447]
Liquid	244	36	15	[.414]
Range				264
Pronominality				
Quantifier	38	6	16	[.648]
Lexical (inanimate)	104	22	21	[.556]
Null subject	604	102	17	[.502]
Lexical (animate)	173	23	13	[.425]
Range				223
Gender of the subject				
Feminine	186	36	19	[.540]
Masculine	201	25	12	[.514]
Semantic	176	34	19	[.502]
Unspecified	305	44	14	[.465]
Range				75
Verb Morphology				
Unambiguous	733	123	17	[.503]
Ambiguous	214	31	14	[.488]
Range				15
Age				
Young	359	59	16	[.507]
Old	588	95	16	[.496]
Range				11

Note. Input value: .153; significance threshold: .05; values in brackets are nonsignificant.

The multivariate analysis for the variability of overt SCl forms *i* and *e* was carried out including in the regression only tokens that showed an overt SCl. That is, all tokens that presented SCl deletion were omitted in order not to be considered as part of the non-application value for the overt SCl variable *i* vs. *e*.

Table 8 presents the results of the multivariate analysis for overt SCl variant *e*, the overall least frequent variant (see Table 1). The significant internal factors for this variant are again mostly syntactic ones, namely, past participle agreement, adjacency and verb class. Among the phonological factors, preceding context is significant for the choice of this variant, whereas, unlike the case of SCl deletion, following phonology is not selected as significant despite being included in the regression. As for the language-external factors, only the psycholinguistic factor recency is selected as significant. All other factors are nonsignificant for this variant.

The overlap between following phonological context and adjacent functional element does not represent a problem for the multivariate analysis of overt variant *e*. This is due to the fact that adjacency captures the difference in weight between a following negative element (.718) and a following object clitic (.510), the latter showing no effect on the variability, whereas the factor following nasality fails to do so by providing an average weight between the two (.597). As Table 9 shows, the only following nasal-initial elements that occur in the corpus with an overt variant *e* are functional elements, namely, negation *nu* (two thirds of the total tokens) and object clitics *me*, *ne* (the remaining one third).[6], [7]

Table 9. Distribution of SCl deletion with adjacent nasal-initial functional and lexical elements

Adjacent element	SCl *e* (N)
Functional	
	24
Negation *nu*	12
Object clitic *me*, *ne*	
Lexical	0
Finite verb	
Total Ns	36

The group involving past participle agreement is selected as the factor group with the highest range. All factors for this group are taken into account in this regression, that is, also the underspecified feminine past participle ending *–i* because of the attested variability between the two overt SCl forms. As was the case for SCl deletion, overt variant *e* is favoured when the past participle has semantic gender specification (i.e., the default form *–i*), but unlike SCl deletion, it is largely disfavoured by a past participle with specified masculine gender. Feminine agreement, either specified or unspecified in the non-finite verb morphology, favours SCl *e*, a result that

[6] I exclude the hypothesis that the increase of variant *e* in front of clitic elements (such as OCls and negation) is due to the phonological phenomenon of vowel change in front of sonorants which occurs in some types of clitic clusters in Romance (Cardinaletti, 2008; Cinque, 1995; Kaisse, 1985). This phenomenon involves a vowel change, namely *-i* > *-e*, in certain types of clitic cluster (Cardinaletti, 2008:18ff.) in which the second element begins with a sonorant, i.e., a nasal or a liquid, for example St.Italian *mi+lo* = *me lo* 'to-me it', *mi+ne* = *me ne* 'to-me of-it'. Following this analysis of clitic clusters we could claim that in clusters such as SCl-Neg and SCl-OCl, the SCl *i* changes to *e* when the following clitic begins with a sonorant. The reasons for rejecting this hypothesis are twofold: (i) while a SCl can form a clitic cluster with negation (SCl-Neg) it cannot do so with an object clitic (*SCl-OCl), hence the vowel change in this case would remain unexplained; (ii) vowel change should also occur when the following clitic begins with (or is) the liquid *l*, contrary to facts.

[7] It has been pointed out to me (David Adger, p.c.) that, especially as far as SCl deletion is concerned, the role of functional items may be linked to the fact that they do not bear stress. The elements tested in this analysis of SCl variability did not include prosodic factors. However, if stress were proved to have an impact on SCl deletion this would not weaken my claim that SCl variability is not free but related to language-internal factors.

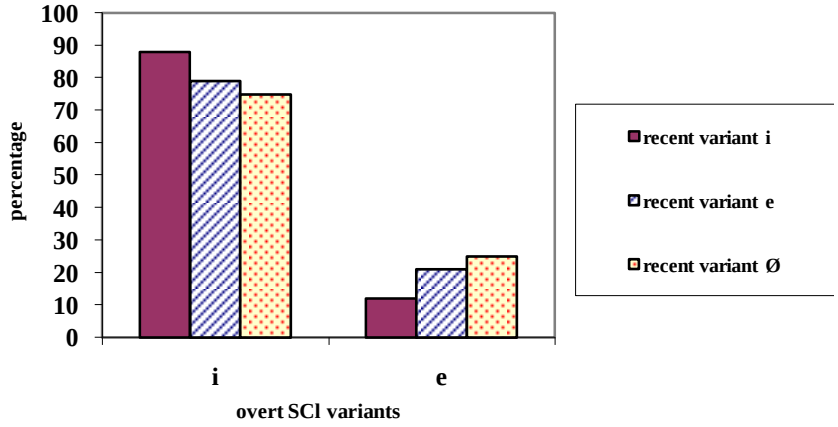
could lead us to assume that gender plays a role in the choice of the two overt variants. This assumption is contradicted by the results for the group involving gender of the subject referent: not only this group is not selected as significant, but it also shows that feminine gender has very little effect on the variability ([.540]).

The remaining significant internal factors are verb class and preceding phonological context. The results for verb class show that SCl variant *e* is favoured by transitive and unergative verbs, while it is disfavoured by unaccusative-like verbs. The effects of verb class will not be dealt with in this paper.

As for preceding phonology, the regression shows that the phonologically [–HIGH] variant *e* is favoured only by preceding mid/low vowels (weight .624) and disfavoured in any other preceding phonological context (with a range of 344). This result may lead us to assume that the difference between the two overt variants is purely allophonic and that the presence of the allophone SCl *e* is triggered by vowel coalescence in these contexts. However, given the significance of the many syntactic factors for variant *e*, and given also the fact that these are shared also by SCl deletion, in a formal analysis of SCl variability I propose (section 4.1.2.) that each SCl variant differs from the others on the basis of its feature specification, hence the two overt variant may not be considered as allophones, and that a given phonological context may impact on the variability by favouring the phonological form of one SCl variant over another.

The remaining significant group for the overt variant *e* is the psycholinguistic factor recency. However, as Figure 4 shows, while overt variant *i* occurs more frequently with the same preceding variant, variant *e* increases its frequency not only when it is preceded by a recent SCl *e* but, and to a slightly greater extent, when it is preceded by a null variant, as it also confirmed by the factor ranking for this group in the multivariate analysis (Table 8).

Figure 4. Distribution of overt SCl variants i and e for recency of the variable i/e/ø



A preceding null variant favours overt variant *e* (weight .686) but not overt variant *i* (weight .314). This result could not be explained by an account that considers the two overt variants as allophones. If we adopt the hypothesis of a different feature specification for each variant (see section 4.1.2.), the unexpected effect of recency of a null variant on overt SCl *e* may tentatively be accounted for. If we assume the null variant to be the most specified variant and SCl *e* the least specified one, the results in Figure 4 can be explained by claiming that the null variant can either favour the same phonological form (*Ø*), or the form with the least morpho-syntactic content (that is, *e*), while disfavouring the phonologically full and morpho-syntactically specified variant *i*.

Table 10. VARBRUL results for overt SCl *i*

Variable	Tokens (N)	SCl *i* (N)	SCl *i* (%)	VARBRUL weight
Past participle gender agreement				
Masculine	30	29	97	.813
Unspecified	20	18	90	.565
Feminine	15	12	80	.430
Feminine (only plural morphology)	6	5	83	.418
Semantic	34	23	68	.222
Range				591
Preceding phonological context				
Pause	101	94	93	.720
Vowel [+HIGH]	248	226	91	.666
Vowel [–HIGH]	524	404	77	.376
Range				344
Adjacency				
Auxiliary clitic *l'*	171	148	86	.599
Locative *ghe*	69	58	84	.553
Verb	296	254	86	.507
Object clitic	267	226	85	.490
Object clitic *l'*	72	59	82	.452
Negation	72	48	67	.282
Range				317
Recency				
Recent variant *i*	456	401	88	.560
No recent *i*/*e*/Ø variable	287	235	82	.459
Recent variant *e*	52	41	79	.394
Recent variant Ø	52	39	75	.314
Range				246
Verb class				
VP- internal subject	219	191	87	.596
VP-external subject	382	320	84	.445
Range				151

Note. Input value: .847; significance threshold: .05. Nonsignificant factor groups: gender of the subject, pronominality, verb morphology, following phonology; definiteness, age.

To conclude the analysis of overt SCl variability I provide the multivariate analysis of the most frequent variant, namely SCl *i*. Table 10 shows that the factors that are significant for the choice of overt variant *e*, that is, past participle agreement, adjacency, verb class, preceding phonology, and recency, are also significant for the choice of overt SCl *i*, while the internal factor rankings appear in the reverse order.

In Table 11 I summarize the findings of the variationist analysis for the variable *i*/*e*/Ø. The significant language-internal factors adjacency, past participle agreement with the subject, and preceding phonology are shared by all three variants, as well as the psycholinguistic factor recency. Two internal factors distinguish the null variant from the overt variants, namely, pronominanlity of the subject referent (significant for deletion but not for overt SCl variability) and verb class (significant for the overt variants but not for deletion).

Table 11. Significant factor groups for the SCl variable *i*/*e*/Ø

Variant	Significant factor groups (VARBRUL)
Ø:	*adjacency, past participle subject agreement*, pronominality, *recency, preceding phonology*.
e:	*past participle subject agreement, preceding phonology, adjacency, recency*, verb class.
i:	*past participle gender agreement, preceding phonology, adjacency, recency*, verb class.

The formal analysis that follows (section 4.1.2.) generates from one of the shared significant factors, i.e., past participle subject agreement, and in particular from the attested cases of SCl categoricality vs. variability with feminine referents. Drawing on minimalist notions and operations, this analysis provides us with a unique syntactic account for the two aspects of SCl variation, i.e., deletion and overt SCl variability, on the basis of the feature specification of the single variants. The significance of all other remaining factors is subsequently accounted for by adopting a non-structural approach to variation.

3.4. Informant judgment test

Given the small number of tokens (6 Ns) that presented overt SCl categoricality, an informant judgment test (cf. Cornips & Poletto, 2005) was carried out in order to determine whether the lack of null SCl variant with a past participle that is morphologically underspecified for gender was to be attributed to the non-occurrence of this combination in the corpus, or whether it could be considered as a genuine case of categoricality.

The test consisted of 40 sentences to be translated from Standard Italian into the dialect by the same informants whose speech was the object of the variationist analysis. Each sentence presented a past participle that agreed with a feminine plural subject referent (as in (19).

(19) Sara e Michela sono andat-e al mare (St. Italian)
Subj.3f.pl BE.Aux.3pl GO.PP-f.pl to-the beach
Sara & Michela are gone to-the beach
'Sara and Michela went to the beach'

The two attested translations of the sentence in (19) are given in (20). When speakers produced a fully specified past participle (20.a) all SCl variants were recorded. However, when they produced the morphologically underspecified past participle only overt SCl variants were uttered (20.b).

(20) a. Sara e Michela *i/e/Ø* sun *andete* a-a maìna
Subj.3f.pl SCl BE.Aux.3pl GO.PP-*f.pl* to-the beach

b. Sara e Michela *i/e* (*Ø) sun *andeti* a-a maìna
Subj.3f.pl SCl BE.Aux.3pl GO.PP-*pl* to-the beach

The same outcome occurred across all sentences, thus proving it to be a genuine case of overt SCl categoricality. Only two counterexamples to the hypothesis of categoricality were recorded and both sentences involved a reflexive verb (and an adjacent reflexive clitic). Rather than contradicting the hypothesis of overt SCl categoricality, these rare cases confirm the results of the variationist analysis which sees reflexive clitics as a favouring factor for SCl deletion.

4. Formal analysis

The variationist analysis of SCl variation in Ligurian provides us with data involving *variability*, that is, cases in which each of the three variants may occur in a given context and their occurrence is influenced by internal and non-internal factors, and *categoricality*, that is, cases in which the grammar allows only the use one of the variants, such as the categorical use of overt variants in contexts involving past participle agreement. In order to develop a syntactic analysis of the former (SCl variability), it is necessary to investigate the latter (SCl categoricality) and, in particular, to account for the absence of SCl deletion in such contexts.

Following Adger and Smith (2005) and Adger (2006), I develop a formal analysis of SCl variability and categoricality in Ligurian by adopting the minimalist model of linguistic theory (Chomsky, 1995, 2000, 2001), and I provide further evidence that minimalist principles and

operations represent a particularly suitable system for the purpose of accommodating the phenomenon of variation within an individual's I-language.

4.1. Categoricality vs. variability

4.1.1. Some key notions of minimalist theory

Generativist theory has long argued for the existence of a universal linguistic structure (a Universal Grammar) and for the fact that individuals are endowed with this mental linguistic structure from birth. The latest development of generative theory, namely, the Minimalist Program (Chomsky, 1995, 2000, 2001), offers a refined account of how the faculty of language operates in the individual's mind.

Each individual speaker has available a set of lexical items (the lexicon) which also includes functional categories, such as Tense and Agreement. Lexical items are characterized by morpho-phonological, semantic and syntactic features, and the form of each lexical item is mapped to one, and one only, feature specification. Syntactic features may be semantically interpretable or uninterpretable, and, if uninterpretable, they need to be assigned a value (or 'checked') before the derivation process is completed, namely, before they are spelled out to the phonological and semantic components (Chomsky 1995).

In the linguistic process, speakers choose lexical items from the lexicon and combine them according to their checking requirements by means of two basic operations. One such operation is Merge, that combines two syntactic elements into a more complex one, and allows lexical items to check their uninterpretable features within the newly formed syntactic element (via sisterhood) (Adger, 2003; Epstein, Groat, Kawashima & Kitahara, 1998). The other checking operation is Agree, which applies between two lexical items that are in a long distance relation (and not in sisterhood) and require checking their uninterpretable features (Chomsky, 2000). Both Merge and Agree generate syntactic dependencies between the lexical items involved.

One last notion that requires mentioning for the aims of the present analysis is that of feature underspecification (Adger, 2006). Two distinct lexical items may present feature specifications that differ only for their uninterpretable feature(s). Since their semantic interpretation is provided by their interpretable features, if these are identical so is their meaning. However, since different feature compositions (involving both interpretable and uninterpretable features) map onto different morpho-phonological forms of lexical items, the two lexical items involved generate two variant forms with the same semantic meaning, that is, variation. Adger (2006) terms this method for generating variant forms 'Combinatorial Variability'.

4.1.2. A syntactic account of SCl categoricality

The syntactic analysis of the cases of SCl categoricality involving past participle agreement, that were attested in Ligurian (section 3.3.1., Table 7), leads me to propose that: (i) SCl deletion with an agreeing past participle involves a phonologically null SCl variant; (ii) this null variant differs from overt variants because it is fully specified for number and gender features; (iii) the past participle may be underspecified for gender feature; (iv) the categoricality of overt variants with an underspecified past participle is due to the impossibility for a null variant to check its gender feature; (v) full SCl variability is only possible with a fully specified past participle.

I begin by considering the feature specification of the two past participle forms involved in the categoricality vs. variability contexts. In compound tenses of unaccusative-like verbs (i.e., unaccusatives, passives and reflexives), feminine subject referents may occur with two different forms of past participle, one that agrees in number and gender with the subject (pp. ending *–e* in (21)), and is therefore fully specified, and one that agrees only for number (pp. ending *–i* in (22)), hence underspecified (for gender).

(21) Subject [fem:+, plur:+] … pp. *–e* [fem:+,plur:+]

(21)´
Ste gamb-e e sun *vegnü-e* russ-e
Subj.f.pl SCl BE.Aux.3pl *COME.PP-f.pl* red-f.pl
These legs they-are come red
'These legs became red'

(22) Subject [fem:+, plur:+] … pp. *–i* [plur:+]

(22)´
pro i sun *tütt-e* *taüe-i*
pro.f.pl SCl BE.Aux.3pl *Quant.Subj-f.pl* *CUT.PP-pl*
they-are all cut
'(The hands (f.pl)) are all cut'

In Ligurian, in unaccusative-type verbs the subject and the past participle share all their features (21) or a subset thereof (22).

The SCl is a lexical item that has uninterpretable features that need to be interpreted (i.e., 'checked') by matching semantically interpretable ones that are present on some other element. In compound tenses of unaccusative-type verbs this checking element is the past participle. SCl and past participle enter in an Agree-relation by which means the SCl can check its uninterpretable features before being spelled out to the other components.

A past participle that is fully specified for number and gender features may occur either with one of the overt variants or with a deleted SCl (full variability), whereas a past participle that is underspecified for gender does not allow SCl deletion (categoricality). I propose that this difference can be explained if, following Renzi and Vanelli (1983:129, fn.6), we take deletion not to be lack of content material but occurrence of a phonologically null form of SCl, namely, a lexical item with a feature specification and no overt form. Moreover, I propose that the null variant differ from the overt variants not only for its phonological form but also for its feature specification. While the overt SCl variants *i*, *e* are only specified for number, the null SCl Ø has a full feature composition, i.e., it is specified for number and gender features, as it is illustrated in (23).

(23)

SCl form	Feature specification
i	[plur:]
e	[plur:]
Ø	[plur: ,fem:]

The difference in feature specification between overt and null form is explained by the fact that underspecified SCls (the overt forms) can established a syntactic relation with an underspecified past participle, whereas the fully specified form (the null variant) fails to do so because its uninterpretable gender feature would remain unchecked.

The feature-specification account of SCl variation also provides us with an explanation for the cases of full SCl variability (all variants allowed) when the past participle is fully specified for both number and gender (section 3.3.1.,Table 7). Variability originates when all variants can check their uninterpretable feature(s).

The analysis of SCl variability with feminine subject referents is shared by masculine referents, in which full SCl variability and an increase in the frequency of the null variant are accounted for by the full feature specification of the past participle, although there is no independent evidence for this, as the fully specified lexical item (24.a) and the underspecified one (24.b) have the same phonological form (i.e., ending *–i*).

(24) a. Subject [fem:–,plur:+] … pp. *–i* [fem:–,plur:+]
b. Subject [fem:–,plur:+] … pp. *–i* [plur:+]

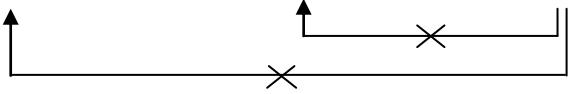
(24)′ I nu sun *rive-i* *i bumbardamenti* lì
SCl neg BE.Aux.3pl *ARRIVE.PP-(m).pl* *Subj.m.pl* LocAdv
not they-are arrived the bombings there
'The bombings did not touch that area'

There are two agreement relations involved in this process, that is, subject/past participle and SCl/past participle. A closer look at how these two relations are realized illustrates which are the underlying motivations for the non-occurrence of null SCl variants with past participle ending *–i* for feminine referents (in (25)), and for its occurrence with masculine referents, provided that the past participle is fully specified for number and gender (in (26)).

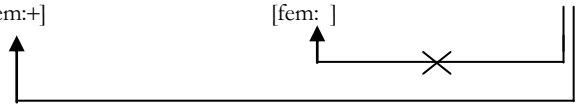
In (25.b) the fully specified past participle leads to the wrong semantic interpretation for the null SCl variant and fails to agree with the subject. In (25.c), although agreement between the subject and the past participle takes place because the feature specification on the latter is a subset of the one on the former, the underspecified past participle fails to check the gender feature on the SCl and the sentence is ungrammatical.

(25) a. * Anna e Carla Ø sun zà *arrive-i*
Subj.f.pl SCl Be.Aux.3pl TempAdv ARRIVE.PP-***pl***
Anna and Carla they-are already arrived
'Anna and Carla arrived already'

b. * Subj Ø pp-*i*
[plur:+] [plur:+] [plur:+]
[fem:+] [fem:–] [fem:–]



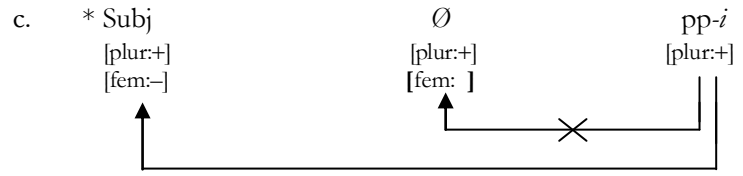
c. * Subj Ø pp-*i*
[plur:+] [plur:+] [plur:+]
[fem:+] [fem:]



As for masculine referents, the structure with a fully specified past participle in (26.b) is grammatical because both syntactic relations carry out their structural functions, whereas the structure with an underspecified past participle in (26.c) is ungrammatical because the gender feature on the SCl remains unchecked.

(26) a. I purtui Ø sun tütti *sere-i*
Subj.m.pl SCl BE.Aux/Cop.3pl Quant.m.pl CLOSE.PP-m.pl
The main doors they-are all closed
'All main doors are closed'

b. Subj Ø pp-*i*
[plur:+] [plur:+] [plur:+]
[fem:–] [fem:–] [fem:–]



In sentences that lack a past participle agreeing with the subject, such as simple tenses and compound tenses of transitive and unergative verbs, the SCl enters in a syntactic relation with the subject, that is generated outside the VP, and checks its uninterpretable features against it because no other potential checking element intervenes between the two. Full SCl variability is accounted for in these contexts because the overt variants can check their number feature and the null variant can check both its number and gender feature against the subject.

The main verb (or auxiliary) does not enter in a syntactic relation with the SCl because its lack of gender feature would leave the null SCl with an unchecked uninterpretable feature. This claim (see also Renzi & Vanelli, 1983) is supported by the results of the variationist analysis for SCl variability in Ligurian that show that the complexity of the verb morphology (namely, its feature specification) is not a significant factor in the occurrence of SCl deletion.

Finally, an extra piece of evidence in support of the feature-specification analysis of SCl variation in Ligurian is provided by the fact that overt subject pronouns favour the null variant. According to the standard view (Poletto, 2000), subject pronouns tend to occur with fully specified SCls, a claim that is confirmed by the results of the variationist analysis of Ligurian data when we consider the null variant as the most specified among the three 3rd plural SCl variants.

4.2. SCl variability

The feature-specification analysis outlined in the previous section provides us with a structural explanation for cases in which the categoricality of one SCl variant (overt vs. null) is involved. However, taken as it is, this formal analysis does not allow us to determine why the occurrence of one variant increases over another in certain attested cases of full variability, that is, in cases which show a following negation, object clitic or auxiliary/copula 'be'.

In this section I outline a tentative interpretation of SCl variability in these syntactic contexts that ultimately aims at a better understanding of the mechanisms behind such variability. After illustrating the limitations of a possible structural explanation, I interpret the results of the variationist analysis by following a non-structural approach to variability that takes into account both properties of the language and properties of the speaker as elements that may influence the choice, and the probability of occurrence, of the variants (Adger, 2007).

4.2.1. A structural account

Deletion. The occurrence of SCl deletion in cases that present a following functional element, such as negation, object clitic and auxiliary/copula 'be', can be structurally motivated by economy principles (Chomsky, 1995).

According to Chomsky's (1981:65) Avoid Pronoun Principle, the omission of a subject pronoun requires less effort than its overt production, therefore a pronoun should always be omitted when its features can be recovered by another element (i.e., the finite verb), unless its presence is required for other functions, such as that of receiving stress (Haegeman, 1994:217) . To explain the attested cases of SCl deletion, we could hypothesize that since a SCl bears (a subset of the) subject features it can be omitted whenever possible, in particular when the following element in the structure is a functional head, in order to generate a less costly derivation.

A second hypothesis that may structurally account for SCl deletion in a minimalist framework involves economy of syntactic operations. If we assume that the formal analysis of SCl feature specification is correct, we must also assume that the null variant, being fully specified for number and gender, must occur in a SCl position within the inflectional layer, that is, below an occurring negation (Poletto, 2000). In Ligurian overt SCls that are generated below negation

tend to raise and precede the negative element (Zanuttini, 1997:36). This implies that, once it is generated in its base-position, an overt SCl requires an extra operation to move to a position above negation; a derivation that involves a null SCl does not need this further operation as the null element may remain below negation, and is therefore less costly.

Although structurally coherent, these two structural hypotheses fail to account for the key issue at the basis of this discussion, namely, that of variability among more than one SCl form, as, being both economy-based accounts, they would ultimately incorrectly predict the choice of one single variant in such contexts (i.e., categorical deletion). Moreover, the second hypothesis fails to account for contexts involving other functional elements (such as object and reflexive clitics, and auxiliary/copula 'be') that necessarily occupy a syntactic position below that of inflectional SCls.[8]

Variability of overt variants. For the sake of simplicity, in the formal analysis of 3rd plural SCl variants in Ligurian (section 4.1.2.) I have assumed that the two overt variants present the same feature specification, namely, that they are specified for number. However, the SCl form *e* occurs not only as a 3rd person plural SCl, but also a 2nd plural SCl and as a 1st singular and plural SCl (Ciarlo, forthcoming). This leads me to hypothesize that this SCl form may indeed be the phonological output of an even less specified lexical item than the one previously proposed. [9]

According to Benincà (1983) and Poletto (2000), such invariable clitics have no referential features and they are merged above the inflectional layer in a position where they can either mark the sentence and/or license *pro*, if the verb requires them to do so. On economy grounds, in such contexts a speaker would favour a derivation with a lower number of operations, namely, Merge *e*, instead of a more complex one, that is, Merge and Move *i*. However, as it is the case for deletion, the choice of the most economical derivation would ultimately lead to the grammaticality of a single overt variant, contrary to what is observed in the data.

4.2.2. A non-structural account

Having illustrated some of the limitations of a purely structural approach to language-internal variation, I tentatively propose here that the attested variability patterns may be better accounted for by adopting a non-structural, and more comprehensive, approach (Adger, 2007) that takes into account not only the syntactic characteristics of the variants, but also other language- and speaker-related factors.

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[8]A possible way to account for SCl deletion in syntactic contexts involving object clitics is by considering the null variant indeed as absence of material. Bianchi (2006) argues that OCls occupy a layer of fuctional positions that are a reduplication of the set of positions occupied by SCls. Manzini and Savoia (2004:227) claim that when an OCl realizes a nominal feature within these two clitic layers, there is no need to project the higher positions and the sentence may lack an overt SCl (as no position is available for it). This argument appears to be made stronger by the fact that reflexive clitics, which occur in the lower clitic layer, but share their features with (and realize the features of) the subject referent, also favour deletion. The distintive character of reflexive clitics was made explicit by the results of the informant judgment test (section 3.4.), in which sentences with reflexive clitics were the most likely to represent an apparent counterexample to the claim that a null variant may not co-occur with an underspecified past participle. However, the analysis put forward by Manzini and Savoia (2004) to account for the absence of SCl, and regarding the realization of a nominal feature, weakens if we take into account that not all OCls trigger the same results in the variationist analysis, and that 3rd plural OCls, despite realizing a nominal feature, tend to disfavour SCl deletion. The exceptional functional role of participant-related OCls (including reflexive clitics) requires a deeper investigation that is beyond the scope of this article.

[9] The claim of a different feature specification for the SCl variant *e* supports the argument (Adger, 2006) that each lexical item is mapped to one, and one only, feature specification, and SCl variation originates when lexical items (SCls) with different uninterpretable feature specifications form syntactic dependencies with a lexical item that provide them with the same semantic interpretation.

According to Adger (2007:696), the grammar, which is not sensitive to any external factor, produces the set of variants that constitute the variable; however, it is not the grammar but a complex linguistic function (that Adger labels U(se)) that chooses from this set. This linguistic function is sensitive to properties of the language (properties of the variants and internal factors), to properties of the speaker (such as recency effects, frequency of the variant in the life of the speaker, sociolinguistic connotations, etc.), and to properties of the context (information structure of the discourse, expectations about the interlocutor's knowledge, etc.). At any given time, each factor may equally activate the function U (that is seen as a "dynamically changing function" (2007:697)) and pick one of the variants from the set. The probability of occurrence of one form increases over another when more factors select variants that have the same phonological output (or simply the same variant, if the grammar produces only one variant with that phonological form).

If we apply this approach to interpret SCl variability in the Ligurian data, we observe that both cases of categoricality and full variability can be accounted for.

In categorical contexts with underspecified past participles, the grammar produces only overt variants (*i* and *e*) as only these variants are justified on syntactic grounds, whereas the null variant is not. In such cases, the function U (namely, each factors it is sensitive to) can choose its variant only among this restricted set.

In the case of full variability, the grammar generates all thee variants (the overt variants *i* and *e*, and the null variant *Ø*), and U can select a variant from this complete set. The results of the variationist analysis allow us to determine the nature of the properties U is sensitive to in the choice of the SCl variant and also the rates of the impact of these properties on the choice function U (i.e., the factor weights). The frequency of SCl deletion increases when the function U is affected by internal linguistic properties like following functional elements (negation, OCls, reflexive clitics, auxiliary/copula 'be'), semantic and masculine past participle agreement, and a preceding phonological pause, and by properties of the speaker like recent production of the same variant. Among the overt variants, SCl *e* increases its frequency when U is influenced by internal properties such as adjacent negative items, semantic and feminine past participle agreement, transitive and unergative verbs, and preceding mid/low vowels, and to the property of the speaker involving recent production of a null or a SCl *e* variant. In both cases, the impact of these properties on U generates a decrease in the production of the most frequent variant *i*. An increase in the frequency of the SCl variants in different contexts depends on the greater number of properties that select them in such contexts.

This non-structural approach is particularly suitable to explain variability within a single variety because it takes into account all aspects involved in the linguistic process, that is, syntactic and phonological configuration of the variants, language-related factors, and speaker-related factors. Crucially, unlike the structural hypotheses illustrated above, this non-structural approach accounts for the variability of as many variants as the grammar generates, and, moreover, it predicts differences in the distribution of the variants on the basis of the internal and external factors involved. Such a comprehensive approach to variability succeeds in interpreting the results of the variationist and formal analyses carried out in this study, however, further research is needed to broaden our understanding of the mechanisms that operate behind the choosing function U.

5. Conclusion

In this paper I provided evidence for the fact that SCl variation is present not only at crosslinguistic level but also within a single variety, and I analysed such variation with regard to two distinct aspects, that is, SCl deletion and variability among overt SCl variants.

I showed that SCl variation within a single variety is not free, as previously argued, but is affected by language-related factors. In particular, variation patterns such as SCl deletion and overt SCl variability are influenced mainly by syntactic factors and, to a lesser extent, by phonological factors. Alongside internal linguistic factors, processing effects have an impact on both aspects of SCl variation, and they must be taken into account when analysing variation as

they may alter the results that are predicted by the influence of the internal factors. On the contrary, at least in the variety under investigation, SCl variation is not influenced by the external variable age, although the fact that age does not impact on SCl deletion does not rule out the possibility of an ongoing change in the younger speakers' dialect towards the SCl-less system of the standard language, to which older speakers simply accommodate.

The variationist analysis provided us with cases of SCl categoricality vs. full variability that were, subsequently, formally analysed by using principles and operation of minimalist theory, in particular the notion of feature underspecification combined with the operation of feature checking. The formal analysis of cases of SCl categoricality offered evidence for the fact that SCl deletion does not imply absence of syntactic content (as it is the case for the standard language), but involves a phonologically null element with full feature specification. Overt SCl variants differ from the null variant in that they are underspecified for gender (and possibly for both gender and number in the case of SCl *e*).

In order to explain cases of full SCl variability in which the overall less favoured variants increase their occurrence, a tentative non-structural account was proposed in which the choice of the variants (that are produced by the grammar) is sensitive to both properties of the language and properties of the speaker. In such contexts, the probability of occurrence of one SCl form over another increases when more (internal and external) properties select a variant with the same phonological form.

Overall, the combination of variationist methodology and syntactic theory, in the form of the Minimalist Program, proved successful in attempting to characterize the language-internal mechanisms that regulate variation, and, crucially, to account for these within a single variable grammar.

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