

Subject Clitic Variation in a Northern Italian Dialect

Chiara Ciarlo

Submitted to Queen Mary, University of London,
for the degree of Doctor of Philosophy

School of Languages, Linguistics and Film

June 2010

ABSTRACT

This study investigates the phenomenon of subject clitic (henceforth, SCl) variation in Ligurian, a variety spoken in the north-west of Italy. Through the examination of empirical data, this work shows that variation can be incorporated in the theory of a single grammar. In particular, this study determines which linguistic and extra-linguistic factors influence SCl variation and whether these factors vary among individual speakers, and it applies notions of minimalist theory to account for variable and categorical cases.

Three variables in the Ligurian SCl paradigm are examined, where overt variants alternate with a zero form. These are: 3rd singular *u, a/Ø*, 3rd plural *i/e/Ø*, and 1st person *e/a/Ø*. In these variables, the zero form is always affected by adjacent negation and object clitics, by processing factors, and occasionally by following phonological context, though never by age of the speaker. In contrast, factors that influence overt SCl alternation vary: subject-verb agreement in 3rd singular contexts, morpho-phonological factors in 3rd plural contexts, and phonological, syntactic, and extra-linguistic factors in 1st person contexts.

Following the general view that SCls in northern Italian dialects express subject agreement features (e.g., Poletto, 2000), I propose that SCl variants are phonological expression of different phi-feature combinations of two categories of Agreement (Number and Person) which include underspecification of features and feature values (Adger, 2006). Overt variants may show underspecification of the number and/or gender features of Number, whereas a null underlying variant always has unvalued number and gender. In variable cases, all variants in the set are formally satisfied and significant factors trigger the choice of the variant. In categorical cases, only one SCl variant in the set has its feature requirements fulfilled. Furthermore, I propose a four-fold interpretation of the zero form, namely, as null underlying variant, as nonpronounced SCl projection due to blocking by syntactic elements, as absence of phi-features, and as phonological deletion of overt variants (inter-speaker variation).

ACKNOWLEDGEMENTS

Many people have made all this possible, consciously and unconsciously. The first person I would like to thank is my supervisor Prof. David Adger, for endless thoughts-provoking discussions and for his patience, guidance and invaluable feedback. His great expertise and true passion for linguistics have been a real inspiration, and I feel privileged to have been able to work with him.

One of the many positive aspects of working at Queen Mary has been the support I received from academic staff who were always ready to collaborate and contribute with their own precious feedback. Among these people, I want to thank in particular my second supervisor Prof. Jenny Cheshire, Daniel Harbour, Devyani Sharma, Sue Fox, Erez Levon, Paul Elbourne and the participants to the Queen Mary Postgraduate Discussion Group.

Among academics outside the department, I want to thank in particular Roberta D'Alessandro, Jennifer Smith, Mair Parry, Theresa Biberauer and Nancy Kula.

I was lucky to share much of my PhD experience with some great fellow students working in the Linguistic Lab: the old linglabbers Anja, Jenny, Julia, Simone, Reiko and Bea, and the current ones Ollie, Jad, Eva, Ahmad, James and John, among others. And then there is Ruth: we started together, we laughed and cried together, we finished it together... *al grido di 'Forza e Coraggio!'*. We made it, Ruth!

The support I received from the non-linguistic people in my life was extra-ordinary. In my English life, a big *grazie* goes to Enza, Chiara and especially Rita, who patiently listened to my rehearsings and who looked after me “silently” but was ready to grab me every time I was about to fall. In my Italian life, I could not have done this without the unconditionate support of my mum and dad and of my grandparents (also those who keep an eye on me from the sky), whose love was the real drive for me to complete this work and to whom this thesis is dedicated. And I cannot fail to mention zia Lucia, zia Alma, zia Leda, zia Lucilla, zia Mari and zia Gianna who provided me with the strength I needed by

means of nice home-made (imported) food! And to the girls I left behind: Mara, Alessia, Elos, Laura and Eleonora, *perché l'amicizia vera va oltre il tempo e lo spazio* (because true friendship goes beyond time and space).

I could not have started this work without my speakers. Although they thought I was a bit crazy with a voice-recorder in Liguria in the middle of August taping *u dialettu*, they showed immense pride in their roots: “*Ina ‘otta u l’ea impurtante savé l’italian, aurra u l’è impurtante savé u dialettu*” (“In the past the important thing was to be able to speak Italian, now the important thing is to be able to speak the dialect”). Knowing that my work could contribute to keep this feeling alive made it even more worthwhile for me!

There are also a few people who are no longer there, but who made all this possible, not least because their loss strengthened in me the desire to accomplish this goal in my life. Nonno Angiulin, Nino and zio Franco, *grazie per aver creduto in me fino alla fine*. Marco, *non dimenticherò mai le nostre risate. Ciao amico mio*.

The little people who unconsciously helped me through these years are Luca, Niccolò, Giacomo and Anna, because by coming into this world they have given me the joy I needed.

Finally, without you at my side I wouldn’t have found the courage and the strength to do this. Thanks for going through all the stressful situations with me, and thanks for putting things into perspective when I wasn’t able to. Thanks Mark.

This work was financially supported by the School of Languages, Linguistics and Film with the Queen Mary, University of London Research Studentship (059596842) and by the Arts and Humanities Research Council (award number 2005/117678).

DECLARATION

I hereby declare that this thesis and material presented herein have not previously been submitted to this or any other institution and are solely the product of the present author.

Signature:

Date: 30/06/2010

The copyright of this thesis rests with the author and information derived from it should be acknowledged.

Ai miei nonni, a mamma e papà.

TABLE OF CONTENTS

Abstract	ii
Acknowledgements	iii
Author's declaration	v
Dedication	vi
Table of Contents	vii
List of Abbreviations	xii
Chapter 1 INTRODUCTION	1
1.1 The phenomenon	1
1.1.1 Previous studies on northern Italian SCIs	5
1.1.2 Problems posed by Ligurian data	13
1.1.3 Aims of this work	14
1.2 The syntactic framework	15
1.2.1 Minimalist theory	15
1.2.2 Some further assumptions	20
1.3 Intra-language variation and variability	27
1.3.1 Variable rules	28
1.3.2 Multiple grammars	29
1.3.3 Minimalist theory and the single grammar approach	30
1.3.4 The “sites” of linguistic variation (Adger, 2006, 2007; Labov, 2008)	33
1.4 A study of subject clitic variation and variability in Ligurian	36
1.4.1 The variety	36
1.4.2 The subject clitic variables under study	38
1.4.3 The data	43
1.4.3.1 The speakers	44
1.4.4 Methodology	45
1.4.4.1 Data collection	45
1.4.4.2 Data manipulation	47
1.4.4.3 Variationist analysis	47
1.4.4.4 Syntactic analysis	48
1.4.5 Main findings	48
1.5 Structure of the thesis	52
Chapter 2 THEORETICAL BACKGROUND	54
2.1 Language-internal factors	54

2.1.1 Internal properties of the subject	55
2.1.1.1 Person and Number	55
2.1.1.2 Gender	60
2.1.1.3 Pronominality	67
2.1.1.4 Null subjects	69
2.1.2 External properties of the subject	71
2.1.2.1 Position of the subject	71
2.1.2.2 Definiteness and information status	79
2.1.3 Properties of the verb	88
2.1.3.1 Finite verb morphology	88
2.1.3.2 Nonfinite verb agreement	89
2.1.4 Adjacency	91
2.1.4.1 Clitics of auxiliaries	92
2.1.5 Phonological context	94
2.2 Processing effects	95
2.3 Age	95
Chapter 3 THIRD PERSON SINGULAR SUBJECT CLITIC VARIATION	97
3.1 Data analysis	103
3.1.1 Circumscribing the variable context	103
3.1.2 Factor groups specification	107
3.1.2.1 Internal linguistic factors (referential contexts)	107
3.1.2.2 Internal linguistic factors (non-referential contexts)	112
3.1.2.3 Phonological factors	114
3.1.2.4 External linguistic factors	115
3.2 Results	117
3.2.1 Referential variable <i>u, a/∅</i>	118
3.2.1.1 Default agreement	119
3.2.1.2 Definiteness	121
3.2.1.3 Multivariate analysis for the referential variable <i>u, a/∅</i>	124
3.2.1.3.1 A few remarks on nonsignificant factors	128
3.2.1.4 Inter-speaker variation	130
3.2.2 Nonreferential variable <i>u/∅</i>	135
3.2.2.1 Lexicalized expressions	136
3.2.2.2 Impersonal <i>se</i> constructions	137

3.2.2.3	Multivariate analysis for the nonreferential variable <i>u/∅</i>	139
3.2.2.4	Inter-speaker variation	143
3.3	Formal analysis of <i>u, a/∅</i> variation	147
3.3.1	Feature specification and realization of the SCl variants	150
3.3.2	Subject-verb agreement and SCl variation in compound tenses	154
3.3.3	Default verb agreement and SCl categoricity in compound tenses	160
3.3.4	<i>U/∅</i> variation in nonreferential contexts	168
3.4	SCl variability	171
3.4.1	Zero form as nonpronunciation of the SCl position	174
3.4.2	Zero form as phonological deletion (inter-speaker variation)	177
3.5	Conclusion	181
Chapter 4	THIRD PERSON PLURAL SUBJECT CLITIC VARIATION	182
4.1	Data analysis	187
4.1.1	Circumscribing the variable context	188
4.1.2	Factor groups specification	189
4.1.2.1	Internal linguistic factors (referential contexts)	189
4.1.2.2	Internal linguistic factors (generic contexts)	194
4.2	Results	195
4.2.1	Variable <i>i/e/∅</i> in referential contexts	197
4.2.1.1	Defective subject agreement on the past participle	198
4.2.1.1.1	Elicitation task	199
4.2.1.2	Multivariate analysis (zero SCl form)	202
4.2.1.2.1	A note on some nonsignificant factors	208
4.2.1.3	Multivariate analysis (overt SCl variants)	210
4.2.1.3.1	Overt SCl variant <i>i</i>	210
4.2.1.3.2	Overt SCl variant <i>e</i>	212
4.2.1.3.3	Remarks on two nonsignificant factors	215
4.2.1.4	Inter-speaker variation	216
4.2.2	Variable <i>i/e/∅</i> in generic contexts	225
4.2.2.1	Quantifiers	226
4.2.2.2	Multivariate analysis (zero SCl form)	226
4.2.2.3	Multivariate analysis (overt SCl variants)	230
4.3	Formal analysis of <i>i/e/∅</i> variation	233
4.3.1	Feature specification of the SCl variants	237
4.3.2	<i>I/e/∅</i> variation and past participle agreement	239

4.3.3	<i>I/e/Ø</i> variation with generics	250
4.4	Conclusion	255
Chapter 5	FIRST PERSON SUBJECT CLITIC VARIATION	257
5.1	Data analysis	262
5.1.1	Circumscribing the variable context	263
5.1.2	Factor groups specification	264
5.1.2.1	Internal linguistic factors	264
5.2	Results	269
5.2.1	Overt/zero SCl variation	271
5.2.1.1	Inter-speaker variation	279
5.2.1.2	Zero SCl form and fillers	285
5.2.2	Overt SCl variation (variant <i>e</i>)	287
5.2.2.1	Inter-speaker variation	296
5.2.3	Overt SCl variation (variant <i>a</i>)	304
5.2.3.1	Inter-speaker variation	311
5.3	Formal analysis of <i>e/a/Ø</i> variation	315
5.3.1	Feature specification of the SCl variants	316
5.3.2	Past participle (subject) agreement in first person contexts	318
5.3.3	<i>E/a/Ø</i> variation and past participle agreement	321
5.4	SCl variability	323
5.4.1	Variability of zero SCl	323
5.4.1.1	Zero form as absence of author feature	324
5.4.2	Variability of overt SCl <i>e</i>	325
5.4.2.1	SCl <i>e</i> and plural number	327
5.4.3	Variability of overt SCl <i>a</i>	327
5.4.3.1	SCl <i>a</i> as formal underlying variant	328
5.4.3.2	SCl <i>a</i> as allophone	329
5.5	Conclusion	330
Chapter 6	AGREEMENT SUBJECT CLITICS AND SUBJECT CLITIC POSITIONS	331
6.1	The feature composition of Ligurian SCl variants	332
6.1.1	Syncretisms in the Ligurian SCl paradigm	334
6.1.2	Adger's (2006) algorithm revisited	337
6.1.3	Determining the underlying form of the SCl variants	339
6.2	The position of Ligurian (agreement) SClS	345

6.2.1 Two projections of Agreement: PersonP and NumberP	348
6.2.2 SCl syncretisms	351
6.2.3 NumberP and finite verb agreement	356
6.2.4 Post-negative <i>ti</i>	360
6.3 Conclusion	363
Chapter 7 CONCLUSION	364
References	367
Appendix	375

LIST OF ABBREVIATIONS

Formal analysis

A:	head of AP	ModP:	Modality Phrase
Acc:	accusative case	N:	head of NP/ nominal feature
Adj:	adjective	Nom:	nominative case
Adv:	adverb	NP:	Noun Phrase
Agr:	head of AgrP/Agreement	NSL:	null subject language
AgrP:	Agreement Phrase	num:	number
AP:	Adjectival Phrase	Num:	category Number/Number category feature
auth:	author	Obj:	object
aux:	auxiliary	OCl:	object clitic
AuxCl:	clitic of auxiliary	P:	Prepositional head
C:	head of CP	part:	participant
Cl:	clitic	Part:	partitive
Comp:	complementizer	PartCl:	partitive clitic
CP:	Complementizer Phrase	Pers:	category Person
D:	head of DP/Determiner Determiner feature	PL:	plural number
DATCl:	dative clitic	pp:	past participle
DE:	Definiteness Effect	ppP:	past participle Phrase
DOCl:	direct object clitic	RefCl:	reflexive clitic
DP:	Determiner Phrase	SCL:	subject clitic
Expl:	expletive	SG:	singular number
F:	feminine gender/unlabeled feature	Subj:	subject
FP:	functional projection	SubjPron:	subject pronoun
gen:	gender	T:	head of TP/Tense
I:	head of IP/Inflection	TOP:	head of TOP/Topic
IOCl:	indirect object clitic	TOPP:	Topic Phrase
IP:	Inflectional Phrase	TP:	Tense Phrase
Loc:	locative (adverb)	V:	head of VP/Verb
LocCl:	locative clitic	<i>v</i> :	head of <i>v</i> P/little <i>v</i>
M:	masculine gender	<i>v</i> P:	little <i>v</i> (erb) Phrase
Mod:	Modality head	VP:	Verb Phrase
1:	first person	?:	ambiguous
2:	second person	*:	ungrammatical
3:	third person		

Variationist analysis

N(s):	number of tokens
↓:	disfavouring
??:	not recorded in the corpus

Languages

AAVE:	African American Vernacular English
BEV:	Black English Vernacular
Lig.:	Ligurian
St. Fr.:	Standard French
St. It.:	Standard Italian

CHAPTER 1

INTRODUCTION

1.1 The phenomenon

Most varieties that are spoken in the north of Italy feature the presence of subject clitics (henceforth, SCls). The present work investigates the phenomenon of SCls in a variety spoken in Liguria (in the north-west of Italy) in the coastal town of Albenga (1).¹

- (1) a. *e miru e futugrafie* (Ligurian)
SCI look.1SG the pictures.Obj
'I look at the pictures'
- b. *ti me fei riè*
SCI me.OCl make.2SG to.laugh
'you make me laugh'
- c. *Maria a vegne duman*
Maria.Subj SCI comes.3SG tomorrow
'Maria is coming tomorrow'
- d. *i matetti i van a scheura*
the children.Subj SCI go.3PL to school
'the children go to school'

Like other clitic elements, SCls share their features with those of a nominal referent (i.e., the subject), and they can be vocalic (cf. (1.a,c,d)) or consonantal in nature (cf. (1.b)) (Brandi & Cordin, 1989).

SCls may occur with nominal and pronominal subjects, including the null pronominal subject (*pro*), and with quantifiers. Moreover, SCls may appear when nominal, pronominal, and quantifier subjects are either preverbal or postverbal, and when nominal

¹ Unless otherwise indicated, all examples reported in this work are taken from the corpus of spoken Ligurian, which involves data I collected for the present study via recording of spontaneous speech and sociolinguistic interviews.

and pronominal subjects are topicalized.² Northern Italian dialects show cross-linguistic variation with regard to the presence or absence of SCIs with different types of subject and their position.

The Ligurian variety allows SCIs to occur with all types of subject, when they occur both pre- and postverbally. Nominal subjects co-occur with a SCI when they appear in preverbal (2.a), postverbal (2.b) and topicalized position (2.c).

- (2) a. *i zueni* *i* nu ghe creddan
 youngsters.M.PL SCI not to.it believe.3PL
 ‘young people do not believe it’
- b. *a* m’ha ditu *Maria* che...
 SCI to.me.has.3SG told Maria that...
 ‘Maria told me that...’
- c. *i fieni*, pro *i* sun vegnüi cun mi
 the kids.M.PL pro SCI are.3PL come.M.PL with me
 ‘the kids, they came with me’

Pronominal subjects occur with a SCI when they occur all three positions, as in (3).

- (3) a. *Gigi*, *vellu u* me giütta
 Gigi.Subj.M.SG he SCI me.OCl helps.3SG
 ‘Gigi, he helps me’
- b. *a* ghe va *vella*
 SCI there.LocCl goes.3SG she
 ‘she is going there’
- c. *velli*, pro *i* nu ghe sun ciü
 they pro SCI not there.LocCl are.3PL anymore
 ‘them, they are not there anymore’

SCIs also occur with null subjects, with a referential *pro* or an expletive *pro*, as in (4).

- (4) a. *pro* *i* vegnan ancheui
 pro.3PL SCI come.3PL today
 ‘they are coming today’
- b. *pro* *u* vegne tardi
 pro_{expl} SCI comes.3SG late
 ‘it’s getting late’

² Following Rizzi (1986b), I will assume that quantifiers are never topicalized (but for a hypothesis that locates all subjects, thus including quantifiers, in a topic position in Italian and the dialects, see Manzini & Savoia, 2002:fn.4; Poletto, 1993).

Quantifiers occur with a SCI whether they occur in pre- or postverbal position, as in

(5) (for the lack of quantifiers in topicalized position, see fn.2).

- (5) a. *nisciün u me l'ha ditu*
 nobody SCI to.me Cl.has.3SG told
 'nobody told me'
- b. *u ghe vegnirà quarcün*
 SCI here.LocCl will.come.3SG someone
 'someone will come (here)'

In most northern Italian varieties, overt SCI forms alternate with absence of an overt SCI in some or all the contexts that I have outlined above. I will refer to the absence of an overt SCI form in the output as 'zero SCI form' or 'zero form'. The contexts that allow overt SCIs to alternate with a zero form vary across dialects.

The Ligurian variety allows a zero SCI form to occur with all types of subject, whether they appear in pre- or postverbal position. We see this with nominals in (6);

- (6) a. *a matetta Ø gh'ha sett'anni*
 the little.girl.F.SG (SCI) Cl.has.3SG seven.years
 'the little girl is seven'
- b. *Ø ghe l'ajea me mamma*
 (SCI) Loc.Cl OCl.had.3SG my mum.Subj.F.SG
 'it was my mum's'
- c. *me seu, pro Ø l'ha duvertu u negossiu*
 my sister.Subj.F.SG pro (SCI) Cl.has.3SG opened the shop
 'my sister, she opened her shop'

with overt pronominals in (7);

- (7) a. *velli Ø gh'ajea e tere li*
 they (SCI) Cl.had.3PL the allotments there
 'they had their allotments there'
- b. *Ø ghe l'han cattu velli*
 (SCI) to.him it.OCl.have bought they
 'they bought it to him'

with referential and expletive null subjects in (8);

- (8) a. *pro Ø l'è ciü zuenu che mi*
 pro.M.3SG (SCI) Cl.is.3SG more young.M.SG than me
 'he is younger than me'

- b. *pro* \emptyset l'è giüstu cuscì
 pro_{expl} (SCI) Cl.is right so
 'it's right like that'

and with quantifiers in (9).

- (9) a. *quarciin* \emptyset ghe l'ha ditu
 someone (SCI) to.her it.OCl.has.3SG told
 'someone told her'
- b. \emptyset nu gh'ea *nisciün*
 (SCI) not there.LocCl.was nobody
 'there was nobody (there)'

A further characteristic of the Ligurian variety is that in some grammatical persons two overt SCI forms alternate:

SCI *i/e* for 2nd and for 3rd person plural, as in (10);

- (10) a. *pro* *i/e* gh'ajevi famme
 pro.2PL SCI Cl.had.2PL hunger
 'you(pl.) were hungry'
- b. *pro* *i/e* gh'han a cà li
 pro.3PL SCI Cl.have.3PL the house there
 'they have their house there'

and SCI *e/a* for 1st person singular and plural, as in (11).

- (11) a. *pro* *e/a* miru in cine
 pro.1SG SCI look.1SG a movie.Obj
 'I'm watching a movie'
- b. *pro* *e/a* vegnimmu doppu
 pro.1PL SCI come.1PL later
 'we're coming later'

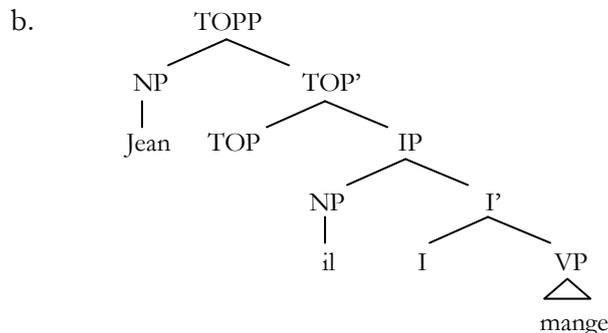
The examples in (10) and (11) show overt SCI alternation with null subjects. The same phenomenon is also found with pronominal subjects and with nominal subjects (for 3rd person plural) both in pre- and postverbal position, although it is not attested with (plural) quantifiers which show only variant *i*.

1.1.1 Previous studies on northern Italian SCls

During the last three decades, much research has been devoted to the topic of subject clitics (among others, Renzi & Vanelli, 1983; Rizzi, 1986b; Brandi & Cordin, 1989; Poletto, 1993, 2000; and more recently, Gorla, 2004; Manzini & Savoia, 2005; and Manzini, 2008).

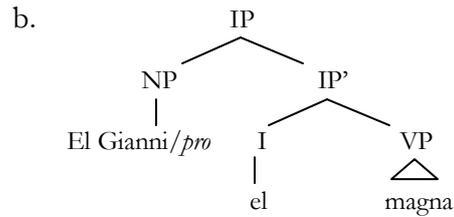
The early studies aimed at defining the nature of these clitics in northern Italian dialects and in other languages, e.g., French (cf. Rizzi, 1986b; Brandi & Cordin, 1989). In French, SCls are widely taken to be nominal elements because they co-occur with an overt subject only if this does not occupy the canonical subject position (e.g., if the subject is topicalized). SCls in French are real subjects and fulfill the requirements of nominal subjects, such as that of bearing the external theta role (cf. Kayne, 1983; Rizzi, 1986b; De Cat, 2005). Example (12) is adapted from Rizzi (1986b:400).

(12) a. Jean, il mange (French)



Rizzi (1986b) argues that, unlike French SCls, SCls in the northern Italian dialects are agreement elements, because they co-occur with an overt nominal or pronominal subject when this appears in subject position. The example in (13) is from Trentino, a north-eastern variety (adapted from Rizzi, 1986b:400).

(13) a. El Gianni/*pro* el magna (Trentino)



According to Brandi and Cordin (1989) and Rizzi (1986b), northern Italian dialects express the inflectional head via a morpho-phonological element, that is, a SCl, which shares its phi-features, namely, person, number (and gender), with the subject. The subject position is filled with a nominal or pronominal subject, overt or null (*pro*).

Like Italian, northern Italian varieties are null subject languages. The trait that differentiates northern dialects from the standard is the fact that the former overtly express the inflectional head with an independent morpheme (i.e., the SCl), as well as on the finite verb, whereas the latter only realizes inflection on the verb morphology.

Poletto's (2000) Agreement Field. In two subsequent studies, Poletto (1993, 2000) carries out an analysis of SCls in around a hundred northern Italian varieties. She investigates SCl variation with regard to the position of SCls in relation to negation, SCls in interrogatives and embedded clauses, and SCl-verb inversion. With this large scale analysis, Poletto provides a detailed description of the cross-linguistic variation that characterizes the use of SCls in the contexts under investigation, and she offers an account of SCl variation (or lack of it) across varieties, which is based on notions of minimalist theory (Chomsky, 1995).³

The system that Poletto proposes develops further the hypothesis that SCls in northern Italian dialects are agreement elements as she locates SCls on the Agreement head of the inflectional layer (Pollock, 1989) (cf. Rizzi, 1986b; Brandi & Cordin, 1989).

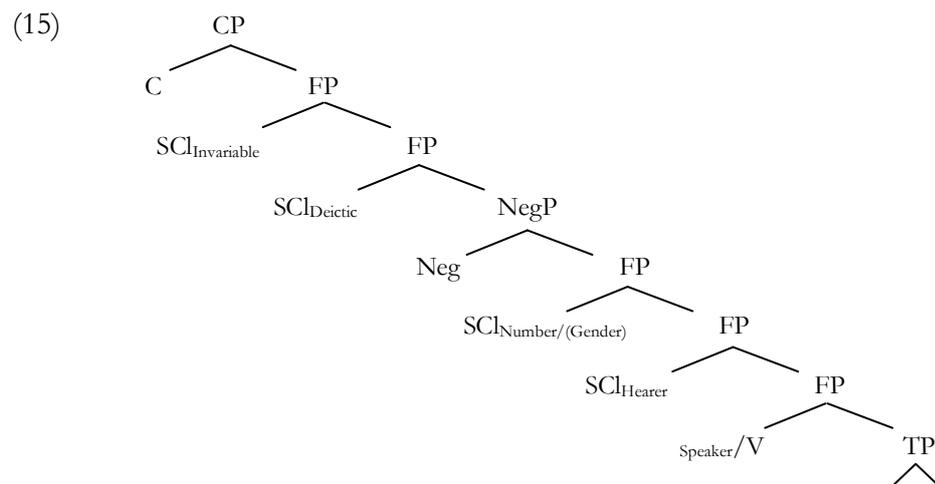
³ Although it is developed by adopting the minimalist framework as outlined in Chomsky (1995), Poletto's analysis diverges from the Minimalist Program for two main reasons: (i) it assumes the presence of the functional category Agreement, and the fact that Agreement is split in multiple projections; (ii) it makes use of the notion of feature strength, but not of that of feature (un)interpretability (Poletto 2000:4).

Poletto (2000) begins by considering the position of SCIs in relation to a strong negative element. In many varieties, SCIs occur both before and after a strong negative marker. The examples in (14) are from Basso Polesano, a north-eastern variety (Poletto, 2000:18).

- (14) a. *a no vegno* (Basso Polesano)
 SCI not come.1SG
 ‘I do not come’
- b. *no la vien*
 not SCI comes.3SG
 ‘She does not come’

In order to account for the cross-linguistic variation in the position of the SCI in relation to negation, Poletto proposes a structure (that she labels as ‘Agreement Field’) where Agreement is split into multiple projections. According to Poletto, SCIs positions spread from the layer of inflection (IP layer) to the layer of the complementizer (CP layer), and each position hosts a type of SCI on the basis of the morphological features it encodes. The two layers are divided by the functional projection that hosts the strong negative marker (cf. also Zanuttini, 1997).⁴

The structure proposed by Poletto is given in (15).



⁴ In Poletto’s analysis, besides their position in relation to negation, other factors that determine the position of the SCI are, for SCIs in the inflectional layer, their presence or absence in the three types of coordination (cf. Kayne, 1975) and, for SCIs in the CP layer, their compatibility with wh-elements and with SCI-verb inversion.

The higher functional projection in the CP layer hosts a type of SCl that appears with all subject referents (Invariable SCls), and which determines the theme/rheme character of the sentence (cf. also Benincà, 1983). The lower functional projection in the CP layer, and immediately above negation, hosts a type of SCl whose form distinguishes between participant (1st/2nd person) and nonparticipant referents (3rd person) (Deictic SCls).

The functional projections in the inflectional layer, that is, below the negative marker, host SCls that encode some phi-feature specification. The higher functional projection in the inflectional layer hosts SCls that carry a number (and a gender) feature (Number SCls). The remaining functional projections in the inflectional layer host elements that express the person feature, and distinguish between ‘hearer’ and ‘speaker’ (Poletto, 2000:36) (cf. also Manzini & Savoia, 2002). However, only the higher of these two positions hosts a SCl, namely, 2nd person SCls (Hearer SCls). According to Poletto (2000:36), there are no SCls that are “distinctively marked” as speaker, and the element that expresses the feature ‘speaker’ in the lower functional projection is the finite verb.⁵

Northern Italian varieties may have some or all of these types of SCls. Poletto claims that SCls are Merged from the bottom up, namely, if a variety has SCls in the CP-layer, it also has SCls in the inflectional layer; instead, if a variety that has only one type of SCls, this will be Hearer SCls, and so on (cf. also Renzi & Vanelli, 1983). If a variety has both agreement and invariable/deictic SCls for the same grammatical person, when the invariable/deictic SCl is expressed in the Comp-layer the agreement SCl must also be realized in the Inflection-layer.

In the inflectional layer, SCls may be Merged in the lower SCl position, and later move to the higher SCl position of that layer if they encode in their morphology, person, number and, optionally, gender.

⁵ Following Belletti’s (1990) analysis of finite verbs in Standard Italian, Poletto (2000) assumes that the inflected verb moves as high as the inflectional position above TP.

In order to account for varieties that show inflectional SCIs (i.e., SCIs that encode phi-features) occurring before negation (e.g., Ligurian, Florentine), she assumes that these SCIs have moved from a functional position in the inflectional layer, where they are Merged, to a position inside the CP layer (Poletto, 2000:35) (for an hypothesis of SCI movement as diachronic change, see Zanuttini, 1997).

SCIs as elements of T and Optimality Theory. Gorla (2004) provides an analysis of SCIs in northern Italian dialects which differs strongly from Poletto's Agreement Field. The system that Gorla proposes lacks an Agreement projection and presents SCIs as heads which are adjoined to T. These heads, which in Gorla's words are "...morphologically independent agreement elements..." (Gorla 2004:15), encode and morphologically realize the subject phi-features that are assigned to T on selection from the lexicon. However, their function is not that of checking the EPP, a function that is assigned to lexical (or pronominal) subject.

According to Gorla, the grammaticality of a same sentence which shows presence or absence of SCI within the same variety is due to the fact that, in the latter case, the SCI is phonologically not realized. Since SCIs are not responsible for EPP checking, their omission does not generate changes in the sentence structure. Crucially, in Gorla's analysis, the underlying syntactic structure does not change in cases of presence vs. absence of a SCI.

Gorla claims that deictic and agreement SCIs share the same position inside the TP, on the basis of the unmarked position of preverbal subjects below the Left Periphery (Brandi & Cordin 1989; Rizzi 1986b). Invariable SCIs are not included in this analysis of SCIs as agreement elements, as they have no agreement features: they are the only elements to climb up in the Left Periphery in exclamatives and new information contexts. However, the convergence of deictic and agreement SCIs to a single position inside TP presents a problem for Gorla's analysis, namely, the fact that in some varieties (e.g., Ligurian) negation

occurs between SCl and the verb, thus acting as obstacle to the SCl adjunction to T. In her analysis, Goria (2004:169) attempts to solve this problem by considering negation as a clitic-like element able to cliticise onto the verb in the SCl-Neg-V order, or onto the SCl (and form a clitic cluster) in the Neg-SCl-V order (contra Zanuttini, 1997).

In order to account for SCl variation in Piedmontese, a north-western Italian dialect, Goria embraces an Optimality Theory approach (Prince & Smolensky, 1993). She carries out an analysis of Piedmontese data on the basis of constraints re-ranking, and she obtains three different SCls paradigms. The speaker can choose among these three independent systems which, according to Goria, are three different grammars available within the same variety.

While the minimalist analysis partly succeeds in reducing the complexity of previous hypotheses on the position of SCls in northern Italian varieties, the OT analysis, although it allows to account for variation in the use of SCls without changes in the underlying structure, as Goria also claims, fails to explain the processes regulating variation within a single grammar of the individual (I-language) (Goria, 2004:15).

SCls as D elements. Another hypothesis that differs radically from the main analysis is one that considers SCls as determiner elements that (like nominals) realize phi-features, on a par with French SCls. Manzini and Savoia (2002; 2005) and Manzini (2008) propose an analysis that characterizes SCls as determiners. The SCl realizes the functional head D of the DP projection that is Merged above Tense. The D feature of this projection must be overtly realized either by an element in its head (i.e., the SCl) or by the subject DP in its specifier, but not both. In northern Italian dialects, the element that realizes the D feature is the SCl. However, SCls can co-occur with an overt subject because, according to Manzini and Savoia, (pro)nominal subjects are always topicalized, as in the structure in (16).

(16) [TOPP SubjectDP [TOP [DP [D SCl [TP [T V [VP]]]]]]]

In French, SCIs are realized in the same position as they are in the northern Italian dialects, namely in D (17.a). French (pro)nominal subjects occur either in the specifier of the DP or in topicalized position. When the subject occurs in the specifier of DP, it does not co-occur with a SCI (17.b) because the D feature can only be realized by one element, hence the ungrammaticality of (17.c). When the subject is topicalized, it is the SCI that realizes the D feature in the head D (17.d).

- (17) a. $[_{DP} [_D \text{SCI} [_{TP} [_T \text{V} [_{VP}]]]]]$
 b. $[_{DP} \text{SubjectDP} [_D [_{TP} [_T \text{V} [_{VP}]]]]]$
 c. $*[_{DP} \text{SubjectDP} [_D \text{SCI} [_{TP} [_T \text{V} [_{VP}]]]]]$
 d. $[_{TOPP} \text{SubjectDP} [_{TOP} [_D \text{SCI} [_{TP} [_T \text{V} [_{VP}]]]]]]]$

SCI as phonological elements. Alongside the syntactic analysis, other hypotheses have been proposed on the nature of SCIs in northern Italian varieties. One of these positions involves the idea that some SCIs are pure phonological elements (Cardinaletti & Repetti, 2004). Cardinaletti and Repetti (2004) argue for the existence of two series of SCIs in northern Italian dialects. One is that of “true subject clitic”, namely, morphological elements that constitute part of the verb inflection. The other involves “functional vowels”, that is, phonological elements that overtly realize syntactic positions (in the IP layer and CP layer), which are filled with deictic features (Cardinaletti & Repetti, 2004:fn.23; cf. also Gorla, 2004).

SCI presence vs. absence and optionality. Renzi and Vanelli (1983) study the phenomenon of SCIs in thirty northern Italian varieties, and provide a classification of these varieties on the basis of their use of SCIs in some or all grammatical persons, and in relation to the subject type (i.e., nominal, pronominal, quantificational) and position (pre- or postverbal). Moreover, they classify varieties according to whether they show syncretisms in the SCI

form across persons, and to whether they make use of SCIs with impersonal and weather verbs.

In their classification of northern Italian varieties, Renzi and Vanelli (1983:128-9) identify a number of varieties (including coastal Ligurian – Ligurian I, in their terminology) where the presence of a SCI is optional, and consider the presence vs. absence of an overt SCI as free variation. They 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).⁶

According to Renzi and Vanelli (1983:fn.6), absence of an overt SCI in the dialects does not imply that the clitic does not exist at all, as is the case for Italian. Moreover, they distinguish between the optional presence of an overt SCI, which occurs in free variation, from occasional omission in fast speech, and from categorical or partial omission when the SCI is followed by negation or by other clitics, as happens in two north-eastern varieties (i.e., Friulian and Istrioto).

In her study of SCIs in Paduan, Benincà (1983:fn.1) claims that presence vs. absence of a SCI in the same variety is related to grammatical person. In particular, 1st person singular and plural, and 2nd person plural occur without an overt SCI, whereas 2nd person singular, and 3rd person singular and plural regularly appear with a SCI (on the lack of SCIs with 1st person, see also Poletto, 2000:30).

More recently, following Renzi and Vanelli (1983), and Benincà (1983), Heap (2002) investigates the presence vs. absence of overt SCIs in relation to person specification in Gallo-Italo-Romance varieties. He shows that the split in the person paradigm (cf. Benincà, 1983) is reflected in the feature geometry that characterizes each grammatical person (cf.

⁶ “...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*...” (Renzi & Vanelli, 1983:128-9).

also Harley & Ritter, 2002), in that, more feature-complex persons favour absence of a SCl, whereas least specified persons favour or require the presence of a SCl (as in the case of 2nd person singular).

1.1.2 Problems posed by Ligurian data

The previous accounts of SCls and SCl variation in northern Italian varieties fail to account for a number of issues that raise from Ligurian data. First, Ligurian SCl always occur in a prenegative position, as shown in (18) and (19).

- | | | | |
|------|----|---|------------|
| (18) | a. | <i>e</i> nu vegnu
SCl not come.1SG
'I do not come' | (Ligurian) |
| | b. | * nu <i>e</i> vegnu
not SCl come.1SG
'I do not come' | |
| (19) | a. | <i>a</i> nu vegne
SCl not comes.3SG
'She does not come' | |
| | b. | * nu <i>a</i> vegne
not SCl comes.3SG
'She does not come' | |

According to Poletto's (2000) system, prenegative SCl are either invariable or deictic SCls. However, Ligurian SCls cannot be invariable SCl because the same SCl form is not found across all grammatical persons, nor can they be deictic SCls because the form of these clitics does not distinguish between participants and nonparticipants, but rather between author and nonauthor (1st vs. 2nd/3rd person).

Second, Ligurian shows overt SCl variation in the same grammatical person (e.g., *i/e* for 2nd and 3rd plural; *e/a* for 1st person). Provided that Ligurian does not show invariable and deictic SCls, and even if it did these would not be in complementary distribution with agreement SCls, the alternation between two overt forms of SCls for the same person remains unexplained in Poletto's agreement structure. The only system that attempts to

account for overt SCIs variation is the OT analysis proposed by Gorla (2004), but this triggers the unwanted result of having to hypothesize for the availability of multiple grammars for the individual speaker (see further section 1.3 and subsections therein).

Finally, as shown at the beginning of this chapter, Ligurian SCIs are optional in most contexts, and not only with certain grammatical persons. Given their crosslinguistic scope in the investigation of presence vs. absence of SCIs and SCI optionality, previous studies do not provide an exhaustive analysis of the factors that may determine SCI categoricity and optionality in a single variety.

1.1.3 Aims of this work

This study investigates variation and variability of SCIs in spontaneous data from the same variety. Moreover, SCI variation and variability are analysed at the level of individual speakers in order to determine whether there is inter-speaker variation in the use of SCI variants.

Overt SCI variation and overt/zero SCI alternation are investigated by analysing categorical and variable contexts. Variability of the SCI variants is tested with regard to the effect of linguistic, processing and extra-linguistic factors.

There are two levels of investigation, namely, variation at the level of the variety and at the level of the individual. The former intends to identify microvariation in the use of SCIs in the variety as a whole. The latter aims to determine whether all speakers conform to the norm of the variety, or whether some individuals show a different pattern of variation and/or variability in the use of SCIs.

As in other studies, the ultimate goal of this work is that of determining how variation can be accounted for within a single system (e.g., Poletto, 2000). However, in order to do so, this study does not widen the perspective of a single variety to include a

comparison with other varieties, but narrows it down to the level of the individual speakers and of their individual grammar (I-grammar) (cf. Adger, 2006, 2007).

1.2 The syntactic framework

The formal approach I adopt in the analysis of SCl variation is that of the Minimalist Program (Chomsky, 1995; 2000; 2001). In what follows, I briefly outline the main aspects of minimalist theory (section 1.2.1), and I introduce a number of assumptions that I make in my analysis of variation, which depart somewhat from the standard view (section 1.2.2 and following subsections).

1.2.1 Minimalist theory

The Minimalist Program, as outlined in Chomsky (1995, 2000, 2001), proposes that languages involve a set of lexical items which match with meaning-sound pairs. Lexical items are elements that consist of morpho-phonological, syntactic, and semantic features, and the set of lexical items in a language is known as the lexicon.

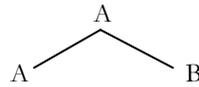
In order to generate a sentence, the relevant lexical items are taken from the lexicon to form a numeration. Lexical items are selected from the numeration, and combined via the means of syntactic operations, in a process known as derivation. The syntactic operations that manipulate lexical items are universal across languages. These are the operation Merge, Move/Copy and Merge, and Agree (Chomsky, 2000, 2001). Given that syntactic operations are cross-linguistically uniform, language variation is attributed to the different feature specification of lexical items, which are language-specific (cf. Adger & Smith, 2005).

The operation Merge combines two lexical items from the numeration (20.a) to form a new syntactic object, and gives the new object a label, which is identical to that of one of

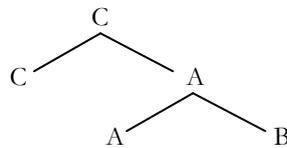
the two Merged lexical items (20.b). Merge is a recursive operation which combines small syntactic objects with newly formed objects to form even bigger objects (20.c).

(20) a. set of lexical items (numeration): {A, B, C...}

b. Merge \rightarrow A, B



c. Merge \rightarrow C, [_A A, B]



The operations Agree and Move/Copy and Merge concern not only lexical items, but also the individual features that constitute them. Features include: lexical categories (that is, categories that derive from word classes, namely, N, V (including *v*), A, P); functional categories (i.e., categories that form the spine where lexical categories can establish syntactic relations, namely, T, C, D); phi-features (i.e., person, number and gender); and the case feature. Other features (e.g., the *wh*-feature) are not relevant here.

Features can be semantically interpretable (e.g., generally all categorial features (lexical and functional), and phi-features of nominals), or semantically uninterpretable (e.g., phi-features of verbs and adjectives, and the case feature). Uninterpretable features must be checked before the syntactic derivation reaches the point of Spell-Out, that is, before the information is sent to the semantic component, where its meaning is interpreted, and to the phonological/morphological component, where it is assigned a morpho-phonological form. Feature checking deletes uninterpretable features, which are invisible at the interface levels. The constraint on feature interpretability at the interface levels is known as Full Interpretation. If Full Interpretation is not met, the derivation does not converge, thus leading to ungrammaticality (Chomsky, 1995:220).

Checking of uninterpretable features takes place via the operation Agree. Two category items establish a syntactic dependency via Agree if one item (i.e., the Probe) has a feature $\#F$ that requires checking, and the other item (i.e., the Goal) has the same feature F that is semantically interpretable.⁷ Moreover, in order to take part in the Agree relation, the Goal must be active, that is, it must have an uninterpretable feature in its specification (for nominals, this is usually the case feature K) (Chomsky, 2000, 2001)(21).

$$(21) \quad [\#F, \dots] \dots [F, \#K] \quad \rightarrow \quad \text{Agree} \quad \rightarrow \quad [\#F, \dots] \dots [F, \#K]$$

Categorial features (e.g., D, T, V, N, etc.) are privative, that is, they have no value. In an Agree relation, an uninterpretable privative feature on the Probe is checked simply by matching with the corresponding interpretable feature on the Goal (cf. (21)).

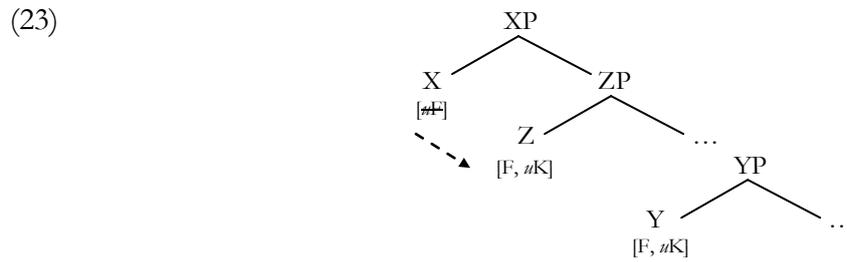
Other features include an attribute and a value (Attr:Val). This is the case of phi-features. When they enter in an Agree relation, the uninterpretable phi-features of the Probe require that both their attribute and their value match those of the interpretable features on Goal, as in (22). One way of representing feature values in standard minimalist theory is to interpret features as binary, namely, their value is taken from a set $\{+, -\}$ (cf. Adger, 2008; Harbour, 2009). This is partially the valuation system I will adopt in my analysis of SCl variation. However, within the minimalist framework, there is no consensus on the use of a unique valuation system of features (for a theory that deals with multi-valent features, see e.g., Adger, 2003).

$$(22) \quad [\#F:-, \#G:+, \dots] \dots [F:-, G:+, \#K] \quad \rightarrow \quad \text{Agree} \quad \rightarrow \quad [\#F:-, \#G:+, \dots] \dots [F:-, G:+, \#K]$$

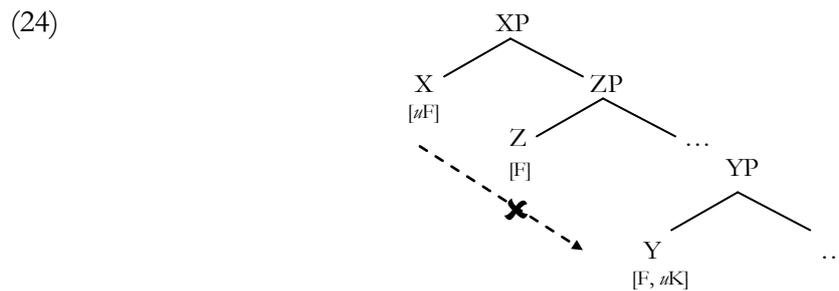
Agree between a Probe X and a Goal Y takes place within the checking domain of the Probe. Moreover, the operation Agree is subject to a locality condition. That is, a Probe X with a feature $\#F$ can establish an Agree relation with an element Y with a feature F only if there is no intervening element Z with a matching feature F , which can act as an active

⁷ The prefix $\#$ in the feature notation indicates uninterpretability (cf. Pesetsky & Torrego, 2001).

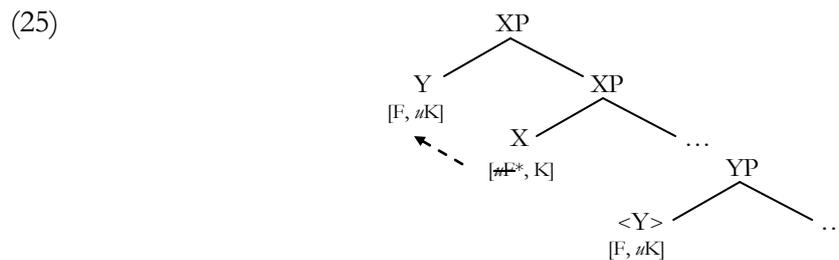
Goal. In such case, the Goal in the Agree relation is the element that is closer (i.e., local) to the Probe in the structure, that is, Z (23).



If the intervening element Z has a matching interpretable feature F but has no uninterpretable features in its specification (i.e., it is inactive), this element cannot Agree with the Probe X, but, in virtue of having a matching feature F, it blocks the Agree relation between X and Y. This is known as the Defective Intervention Effect (24) (Chomsky, 2000:123).



Furthermore, features differ for their strength, namely, they can be weak or strong. To distinguish features for their strength, strong features are marked with the notation F*. Unlike weak features, strong features require Agree to take place locally. That is, the element in the Agree relation that has a strong feature causes the other element to Move in order to realize the syntactic dependency in a locality condition (25).



The operation Move is therefore triggered by the presence of a strong feature that requires checking before Spell-Out. Chomsky (1995:232) restricts the set of strong features to categorial features (e.g., D, T, etc.). That is, phi-features and case features are never strong, and never trigger Move.

In the light of Copy Theory (Chomsky, 1993:34-5), Move is re-interpreted as an operation that copies the element which has to check a strong feature, and Merges this copy onto a position that is local to the element which contains the strong feature (cf. (25)). The copy that remains in the original position does not receive a phonological form, but it is visible for semantic interpretation (for cases in which the lower copy can be phonologically expressed, see Nunes, 2004).

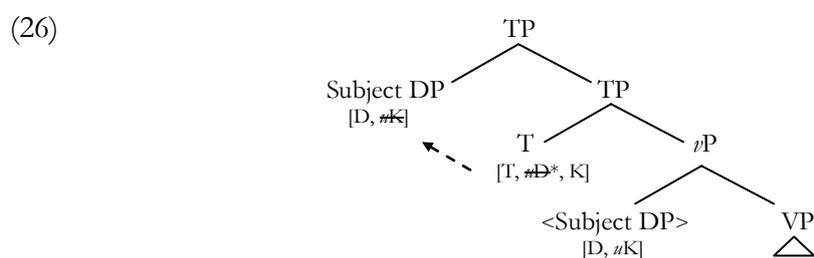
The derivation converges when all uninterpretable features are checked (Full Interpretation), and, via Spell-Out, it feeds the phonological component, which includes also a morphological module. Spell-Out “strips away” the elements in the derivation that are relevant to the interface and passes them on to the phonological/morphological component, which assigns them a form. These elements include morpho-phonological features, and interpretable syntactic and semantic features, but not uninterpretable features, which have been checked, and are not visible to the A-P interface (Chomsky, 1995:229).

After Spell-Out, the derivation goes on, without phonological features, to reach the semantic/covert component. Syntactic (i.e., formal) and semantic features are interpreted at the interface. Despite being deleted, by virtue of being checked by interpretable features, uninterpretable features are visible to the semantics.

One final aspect of minimalist theory is the lack of the functional category Agr(ement). Agr is the only functional category not to show interpretable features. Thus, its features do not provide information to the interface levels, and its presence is not reflected by the phonological/morphological form that is assigned to the derivation, nor in its meaning. The main function of Agr is that of establishing an Agree relation with either

the subject or the object, and triggering Move of one of these elements via a strong feature in its specification (Chomsky, 1995, Chapter 4) .

In minimalist theory, the functional category Agr is dispensed with because it has no effect at the interface levels. The function of triggering Move of the subject or the object can be carried out by the functional categories T and *v*, respectively, by assuming that they include a strong μD^* (or a strong μN^*), and that this feature must be checked in a local Agree relation (Adger, 2003). The EPP feature (Chomsky, 1995) is reinterpreted as a strong μD^* on T that triggers movement of the subject to the specifier of TP (26).



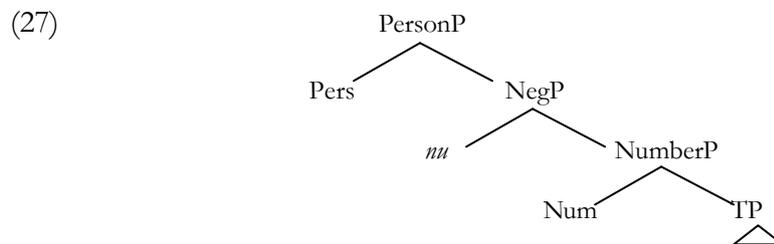
The structure in (26) shows movement of the subject from the specifier of *v*P to the specifier of TP. The subject DP moves in order to check the strong μD^* (or μN^*) feature of T.

In the next section, I introduce a few restrictive assumptions that I will apply to the notions of standard minimalist theory, which I outlined above. These involve: the role of Agreement; underspecification of features and feature values; different types of Agree; and, finally, the phonological expression of uninterpretable features and their values.

1.2.2 *Some further assumptions*

In the analysis of Ligurian SCl variation, which I carry out in this work, I adopt the minimalist approach. However, in my analysis, I make a number of assumptions some of which depart somewhat from current standard notions of minimalist theory. These assumptions are illustrated below.

Agreement projections, feature specification and SCLs. Unlike what is proposed in standard minimalist theory (Chomsky, 1995), I will claim that Agreement cannot be dispensed with, and SCLs in the northern Italian varieties are the overt realization of Agreement (cf. e.g., Poletto, 2000). I will argue for a subdivision of Agreement into multiple agreement projections above TP, which occur before and after a strong negative element *nu* (for a similar analysis see Poletto, 2000; Manzini & Savoia, 2002, 2005). These projections host the functional categories of Agreement, namely, Person and Number (D. Adger, p.c.), and they are labeled according to the relevant category. The structure I propose is provided in (27).



Following the standard view of northern Italian SCLs as agreement elements (cf. section 1.1.1), I will consider SCLs to be the morpho-phonological realization of the phi-features of Person and Number (cf. also Manzini & Savoia, 2005, 2010; Roberts, forthcoming). The functional category Person has either an uninterpretable participant feature [$\mu\text{part}:\pm$] and/or an uninterpretable author feature [$\mu\text{auth}:\pm$], whereas Number occurs with an uninterpretable number feature [$\mu\text{sing}:\pm$].⁸

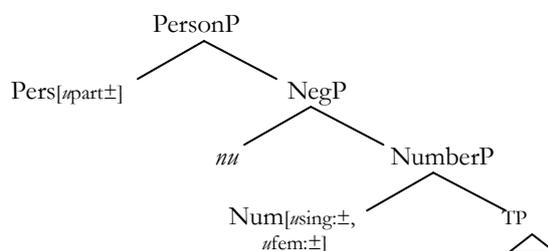
Unlike person and number, gender does not occur as an independent functional projection. Following Poletto (2000:37), I will assume that Number includes also an uninterpretable gender feature [$\mu\text{fem}:\pm$] in its feature specification if this feature is present in the numeration (cf. also Harley & Ritter, 2002). A numeration that includes functional

⁸ In this analysis, the phi-feature specification of Person and Number may be reduced to just the corresponding phi-feature, respectively, participant/author and number. This aspect of these functional categories remotely resembles the notion of f-morpheme that is typical of Distributed Morphology (cf. Halle & Marantz, 1993; Harley & Noyer, 1999).

categories with all three phi-features for subject agreement, namely person (i.e., participant/author), number and gender (28.a), has the structure in (28.b).

(28) a. Numeration: {Pers[μ part: \pm]/ μ auth: \pm];...Num[μ sing: \pm , μ fem: \pm];...}

b.

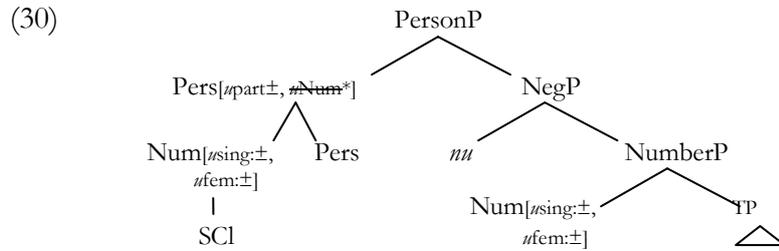
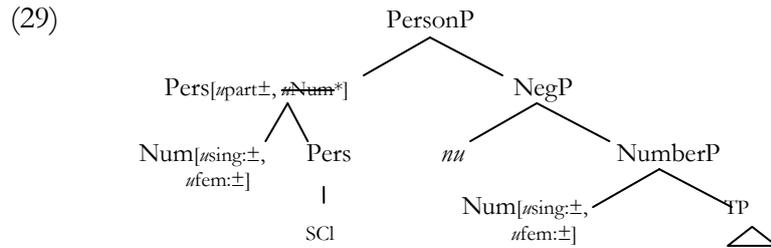


The SCl is the morpho-phonological realization of the phi-feature of Pers, or of those of Num, or of both categories (cf. also Poletto, 2000).

In many northern Italian dialects, a SCl that occurs after negation is interpreted as the realization of the features of Num in the position where they are merged (Poletto, 2000). In Ligurian, instead, all SCls appear before negation, with the exception of 2nd singular *ti*, which can occur both pre- and post-negation.

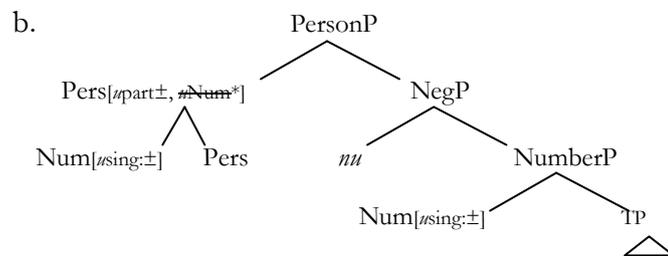
In order to account for the crosslinguistic variation in the realization of the SCl with regard to negation, I will propose that Pers has an uninterpretable μ Num feature that varies for its strength across varieties. In dialects that realize the SCl both above and below negation the μ Num feature on Pers is weak, and the SCl expresses either Pers or Num respectively (cf. (28.b)).

In varieties where all SCls occur above negation (e.g., Ligurian), this feature is strong (μ Num*) and triggers movement of Num and its features, which adjoin to Pers. Whether the SCl realizes Pers as in (29), or Num as in (30), or indeed phi-features from both categories, this will always be above negation (for the analysis of post-negative *ti*, see Chapter 6, section 6.2.4).



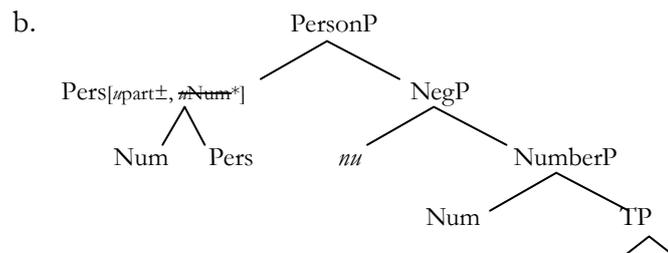
Underpecification of features. In the analysis of SCl variation in Ligurian, I will claim that the category Number may be underspecified for the gender feature or for both number and gender. Compare the structure in (29)-(30) where gender is specified, with the one in (31) where Number does not include gender,

(31) a. Numeration: {Pers[μpart:±/μauth:±];...Num[μsing:±];...}



and with that in (32) where Num contains no phi-features.

(32) a. Numeration: {Pers[μpart:±/μauth:±];...Num;...}



In (31.b), Agreement is phonologically realized by expressing either the phi-feature of Num or that of Pers, or both. In (32.b), only the person feature on Pers can realize Agreement, as Num lacks phi-feature specification.

Following Adger & Smith (2005) and Adger (2006), I will argue that SCIs are the phonological expression of different underlying feature specifications of Agreement that originate due to underspecification of uninterpretable features, in particular of number and/or gender. If two or more of these underlying feature specifications are found to syntactically Agree with a same element that has interpretable features, SCI variation arises as the form of the variant is given by the former (i.e., SCI variants) but the semantics is provided by the latter (i.e., the subject referent).

Underspecification of feature values and the operation(s) Agree. In order to provide an account of SCI variation, I will assume that feature values include not only a positive and a negative value, but also the lack of value, thus implying a set of values $\{+, -, \}$ (cf. also Adger’s (2008) empty set).⁹

I will assume that uninterpretable features may occur with a value, namely, $\mu F:+$ and $\mu F:-$, or they may lack a value in the numeration, namely, $\mu F:$. That is, in the numeration the phi-features of the categories Pers and Num may be valued features, i.e., $[\mu \text{auth}:\pm]$, $[\mu \text{part}:\pm]$, $[\mu \text{sing}:\pm]$, $[\mu \text{fem}:\pm]$, or unvalued features, i.e., $[\mu \text{auth}:]$, $[\mu \text{part}:]$, $[\mu \text{sing}:]$, $[\mu \text{fem}:]$.

Following the standard theory of features, I assume that if Pers and Num have valued uninterpretable phi-features in the numeration, after being merged these features are checked via an instance of Agree that “controls” that the Probe (Pers/Num) and the Goal (the subject) have matching features with matching values, and finally deletes the

⁹ In the notation I adopt throughout the analysis, I express unvalued feature as $[\mu F:]$ and not as $[\mu F:\emptyset]$ (cf. Adger, 2008) in order to avoid ambiguity, as the symbol \emptyset is used to indicate the zero SCI form.

uninterpretable features on the Probe (33). This operation is also referred to as Agree-check or “pure checking” (Adger, 2003:168).¹⁰

$$(33) \quad \text{Pers}[\#auth:-] \text{Num}[\#sing:+] \dots \text{subj}[auth:-, sing:+] \rightarrow \text{Agree-check} \rightarrow \\ \text{Pers}[\#auth:-] \text{Num}[\#sing:+] \dots \text{subj}[auth:-, sing:+]$$

The same operation Agree has a different interpretation if we assume that the uninterpretable features on the Probe lack a value in the numeration. In the case of Pers and Num, Agree first values the uninterpretable phi-feature(s) on the Probe by copying the value of the matching interpretable feature(s) on the Goal, and then checks and deletes the uninterpretable phi-features on the Probe (34). We can refer to this notion of Agree as Agree-value or “checking by valuing” (Adger, 2003:169).

$$(34) \quad \text{Pers}[\#auth:] \text{Num}[\#sing:] \dots \text{subj}[auth:-, sing:+] \rightarrow \text{Agree-value} \rightarrow \\ \text{Pers}[\#auth:-] \text{Num}[\#sing:+] \dots \text{subj}[auth:-, sing:+]$$

I will make use of both notions of Agree, namely, Agree-check and Agree-value (cf. Di Sciullo & Isaac, 2003; Baker, 2008), because my analysis of variation will be based on the presence also of uninterpretable features that are underspecified for value. Hence the need for an Agree operation that assigns a value to features which require one. However, in the course of the analysis, I will not distinguish between Agree-check and Agree-value, as the nature of the operation will be evident from the syntactic requirements of the feature(s) in the Agree relation. I will refer to both aspects of this operation simply as Agree.

The realization of SCls (Spell-Out). According to standard minimalist theory, once they are checked, uninterpretable features are deleted at the interfaces, and they are not visible to the morpho-phonological component, that is, they are not overtly realized.

If we follow the main view (e.g., Brandi & Cordin, 1989; Poletto, 2000), and consider SCls in the northern Italian dialects as the overt expression of inflectional/agreement

¹⁰ For ease of exposition, in the structures that follow (cf. (33) and (34)) I only consider phi-features and I do not take into account the feature $\#Num^*$ in the specification of Pers.

elements, the standard minimalist notion that entails that uninterpretable (ϕ -)features are not phonologically realized requires some amendments. In her analysis, Poletto (2000:4) avoided the issue by not taking into account feature interpretability, and by considering features only for their strength.

I have claimed that in languages that express subject agreement on an (overt) preverbal element (i.e., an agreement SCL), this element is the phonological realization of the functional categories Person and/or Number, which, at least for Ligurian, are both realized on the head of PersP due to the strong μ Num* feature on Pers. I will propose that, in these languages, the phonological realization of Person and/or Number is due to the fact that the ϕ -features that characterize these functional categories have a phonological index, which is already associated with the individual features in the numeration. This index remains visible to the morpho-phonological component after Spell-Out, despite the fact that the uninterpretable feature is checked (via Agree with the (pro)nominal subject) and deletes in the course of the derivation.

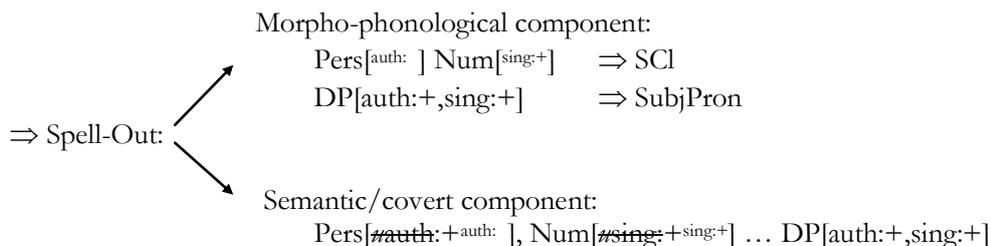
Furthermore, I will assume that the phonological index of an uninterpretable feature, which is visible to the phonology, maintains the original value of the feature like it appears in the numeration, namely, a value from the set $\{+, -, \}$, as in (35).¹¹

(35)

Numeration: $\{\text{Pers}[\mu\text{auth}: \text{auth}:], \text{Num}[\mu\text{sing}: +\text{sing}: +], \dots \text{DP}[\text{auth}: +, \text{sing}: +]\}$

Derivation: $\text{Pers}[\mu\text{auth}: \text{auth}:], \text{Num}[\mu\text{sing}: +\text{sing}: +], \dots \text{DP}[\text{auth}: +, \text{sing}: +] \rightarrow \text{Agree} \rightarrow$

$\text{Pers}[\cancel{\mu\text{auth}}: +\text{auth}:], \text{Num}[\cancel{\mu\text{sing}}: +\text{sing}: +], \dots \text{DP}[\text{auth}: +, \text{sing}: +]$



¹¹ In (35) the feature specification of the Goal, namely, the subject (pro)noun, is exemplified for ease of exposition. Features are not included, which do not take part in the Agree relation.

In (35), the phi-features of Pers and Num are (valued and) checked against the matching features of the subject via Agree. The number feature is already valued in the numeration and it appears with a valued phonological index. The author feature is unvalued in the numeration, and despite being assigned a value by Agree it retains its original lack of value in the phonological index that feeds the morpho-phonological component.

To summarize, the analysis of SCl variation in Ligurian is developed following the principles and operations of the Minimalist Program (Chomsky, 1995, 2000, 2001). A number of assumptions that depart from the standard theory are introduced, in order to account for the fact that: (i) lexical items whose uninterpretable features express subject agreement are phonologically expressed as SCl; and (ii) the phonological realization of these features is subject to variation.

1.3 Intra-language variation and variability

Two aspects characterize the study of variation within the same language. One is the alternation of variants within the same variable context, which convey the same meaning despite having different forms (i.e., variation). The other is the frequency of a single variant across contexts (i.e., variability).

One question that arises from the study of variation and variability in a single language is how these two phenomena come to be accounted for, if at all, within an individual's I-language.

A number of approaches have tackled this issues by combining views and methodologies of variationist sociolinguistics with notions of generative theory. These include, on the one hand, the variable rule approach (Labov, 1969, 1972; Cedergren & Sankoff, 1974) and, on the other hand, the competing grammars approach (Kroch, 1994;

Embick, 2008), the multiple grammars or parametric approach (Henry, 1995, 2002, 2005; Wilson & Henry, 1998), and the minimalist or single grammar approach (Adger & Smith, 2005, to appear; Adger, 2006, 2007). Below, I briefly outline the main points of each proposal.

1.3.1 Variable rules

In his early work, Labov (1969) investigates the phenomenon of free variation, and argues that optionality in a language is due to the existence of “probabilistic rules” in the grammar of the community, and of the individual, which are described, reproducible, and well-patterned.

Labov (1972) and Cedergren and Sankoff (1974) propose that variation is subject to regular constraints, that is, to “variable rules”, which include the probability of their application as part of the rule itself in relation to the context in which a variant appears.

The sequence in (36) shows the rule that describes the contexts for copula deletion in Black English Vernacular (BEV) (Labov, 1972).

$$(36) \quad z \rightarrow \langle \emptyset \rangle \langle [+Pro], [+cons] \rangle \#\# ___\# \#\# \langle [+Vb], [+Fut], [-NP] \rangle$$

In essence, the copula may be deleted in BEV only when it occurs with a certain preceding context and/or a following preceding context.

Probabilities of the choice of variants are part of the linguistic competence, whereas frequencies of individual variants are part of the linguistic performance. The variable rule approach uses observed (and variable) frequencies to estimate fixed probabilities, namely, numbers that are not subject to random variation. The observation of frequencies and, although indirectly, the calculation of probabilities take into account not only the effect of internal linguistic factors, but also that of processing and extra-linguistic factors.

1.3.2. *Multiple grammars*

Two distinct approaches propose that intra-linguistic variation, and morpho-syntactic variation in particular, is due to the fact that multiple grammars are available to the speakers. According to one of these views, variation arises because different grammars produce variants that compete for the same function (cf. Kroch, 1994; Embick, 2008). For the other, both values of a parameter are available to speakers of the same language, thus triggering variation (cf. Henry, 1995, 2002, 2005; Wilson & Henry, 1998).

Competing grammars. Kroch (1994) argues that optionality in a language is due to alternating forms which are generated not within a single grammar but by distinct grammars. Two forms that have the same syntactic function are in competition as they are mutually incompatible. Diachronically, the two forms undergo a period of transition at the end of which one form prevails over the other to become the only form used for that function.

Variants distinguish between morphological and syntactic. Two morphological variants (or ‘doublets’) are both retained at the end of the period of transition only if they acquire a distinct function, or if they develop different semantic meanings. Two syntactic variants, on the other hand, are less likely to be both retained because they rarely show meaning differentiation. At the end of the period of transition, competing syntactic variants co-exist only if they acquire different syntactic functions.

Embick (2008) extends the notion of competition, and distinguishes between competition for grammaticality (i.e., the type described by Kroch (1994)) and competition for use. According to Embick, variants that are generated by different grammars compete at the level of use, as the choice of one variant over another is determined by the speaker on the basis of factors related to the utterance. Unlike competition for grammaticality, competition for use excludes one of the two variants only with regard to the single utterance, and does not affect its grammatical status.

Individual grammars and parameters settings. The application of the theory of Principles and Parameters (Chomsky, 1981) is extended from the analysis of variation across languages, and across varieties of a single language, to account for variation and variability within the same variety and in the speech of individual speakers.

In her work on variation in Belfast English, Henry (1995) argues that language variation within the same community, and in individuals' speech, is motivated by the interaction of social constraints and internal grammatical processes.

Henry (1995) proposes that in the grammar of a variety that is spoken by the same community different parameters settings are available to the speakers.

Changes in the parameters settings are independent from one another. Thus, speakers of the same community have available a range of grammars. The number of grammars is sufficiently restricted for acquisition to take place, and restrictions are determined by linguistic factors (namely, the parameters and their values), and by extra-linguistic factors (e.g., the degree of frequency of a variant, and its status as a sociolinguistic marker). Individual grammars exist as a result of parameter setting on the basis of the variable input.

According to Henry (2002), and Wilson and Henry (1998), true optionality is present in the grammar. In the process of acquisition, the child's grammar sets the value of parameters on the basis of the stimulus provided by the grammars of different speakers in the same community. The acquisition device is able to capture and quantify frequencies of use of a given variant, so that the child's grammar is not altered in the setting of parameters by very rare occurrences.

1.3.3 Minimalist theory and the single grammar approach

Adger and Smith (2005, to appear) argue that intra-language variation can be incorporated within a single grammar. They develop an account of variation that draws on principles and

operations of minimalist theory, in particular, feature specification and underspecification, and the operation Agree. The minimalist approach to variation is the model I will adopt in the present study to account for SCl alternation in Ligurian (cf. section 1.2 and subsections therein).

According to Adger and Smith (2005), the lexicon may include two (or more) distinct lexical items that show different feature specification, but that require checking via Agree with the same element (i.e., the same Goal), which has matching features. The two Agree relations give the same semantic meaning, as this is determined by the interpretable features of the Goal, but have different morphological form, on the basis of their different underlying feature specification.

One of the variables that Adger and Smith (2005) account for is the *was/were* variation in Buckie, a Scottish variety of English. An example of this alternation in first person plural contexts is given in (37) (from Adger & Smith, 2005:156).

- (37) a. There was one night *we were* lyin' at anchor (Buckie)
 'There was one night we were lying at anchor.
- b. We played on 'at beach 'til *we was* tired, sailin' boaties...
 'We played on that beach until we were tired, sailing boats...'

They use a minimalist feature-based approach to account for the *was/were* alternation in Buckie. The two derivations in (38) show how the *was/were* alternation in first plural contexts is obtained (Adger & Smith, 2005:165-6).

- (38) a. Numeration 1:
 T[tense:past, #case:nom, #num: , #pers:]... pronoun [num:pl, pers:1, #case:]
- Merge and Agree → T[tense:past, #case:nom, #num:pl, #pers:1]... pronoun
 [num:pl, pers:1, #case:nom]
- Spell-Out → pronoun [num:pl, pers:1, #case:nom] *we*
 → T[tense:past, #case:nom, #num:pl, #pers:1] *were*

- b. Numeration 2:
 T[tense:past, #case:nom, #pers:]... pronoun [num:pl, pers:1, #case:]
 Merge and Agree → T[tense:past, #case:nom, #pers:1]... pronoun
 [num:pl, pers:1, #case:nom]
 Spell-Out → pronoun [num:pl, pers:1, #case:nom] *we*
 → T[tense:past, #case:nom, #pers:1] *was*

In (38.a), the numeration includes a lexical item for T that has uninterpretable number and person features, and a lexical item that has matching interpretable features, namely, the subject pronoun. In the course of the derivation these lexical items establish an Agree relation whereby the uninterpretable features of T are valued and checked, as is also the case feature on the subject. At Spell-Out, the pronoun is expressed as *we*, and T realizes copula/auxiliary *be* as *were*.

In (38.b), the lexical item for T lacks the number feature (i.e., it is underspecified for number), whereas the lexical item for the subject pronoun has both interpretable person and number features in its specification. After Merge, the two lexical items Agree. Only the person feature on T is valued and checked, and case is valued and checked on the subject. At Spell-Out, the pronoun is still morphologically expressed as *we*, whereas copula/auxiliary *be* is realized as *was*, because T has a different underlying form involving only person.

The meaning of the two outcomes is the same as this is conveyed by the interpretable features of the pronoun, which do not change. On the other hand, their morphological form varies because different is the underlying form of T. Hence, variation arises.

Unlike the variable rule approach, which considers probabilities of occurrence of a variant as part of the grammar, the minimalist feature-based approach distinguishes between the grammar, which is the system that generates variants, and a separate mechanism that determines the choice of variant. The selection of a variant among the set of variants is therefore not intrinsic to the grammar, and it is affected by linguistic and

extra-linguistic factors (e.g., processing). A theory that considers the mechanism of the choice of variant as separate from the grammar is suitable: to account for the effect on variation of factors that are external to the language; to determine the degree of significance of the individual factors and of their cooccurrence; and, finally, to explain inter-speaker and intra-speaker variation.

Moreover, the minimalist feature-based approach proposes that variants are lexical items with different feature composition that are generated by a single grammar, the individual's I-language. Unlike the multiple grammars hypotheses, in order to account for variation in the same language the minimalist approach does not need to stipulate that a speaker has more than one grammatical system available. In fact, variation is predicted as a by-product of universal properties of the grammar (e.g., feature specification of lexical items and Agree). The advantage of the single grammar approach to variation is that, since it involves universal principles and operations, it is suitable to account for variation beyond the individual language.

1.3.4 The "sites" of linguistic variation (Adger, 2006, 2007; Labov, 2008)

The approaches to linguistic variation, which I have outlined above, differ for one main trait, namely, the place where variation is located. The variable rule approach entails that variation is probabilistically determined by the linguistic contexts described by the rules. On the other hand, other approaches, such as the parametric multiple grammars approach and the minimalist approach, locate variation at more than one level, namely, in the grammar (i.e., where variants are generated) and outside the grammar (i.e., where variants are chosen due to the effect of linguistic and extra-linguistic factors).

According to Adger (2006:506),

“...The grammar produces variants in a way that predicts particular probability distributions, but those probabilities can be perturbed at the point of use by

factors such as ease of lexical access, recency effects, metalinguistic or social judgments on the form, etc. ...”

In the account of variation that Adger (2006, 2007) proposes, the grammar generates a set of variants, which is identified as the “Pool of Variants” (cf. also Adger & Smith, to appear). Some variants may present the same phonological outcome. Probabilities of occurrence are not intrinsic to the variants, but can be predicted by taking into account whether the same phonological form occurs for more than one variant. The higher the number of variants with the same phonological outcome, the greater the probability of occurrence of a variant with that form.

Grammar is, therefore, the first site where variation is found, in the form of the set of variants. Variation at the level of grammar is due to the fact that the I-language generates lexical items with different feature combinations. The mechanism that generates the Pool of Variants, that is, the grammar proper, is not affected by linguistic or extra-linguistic factors.

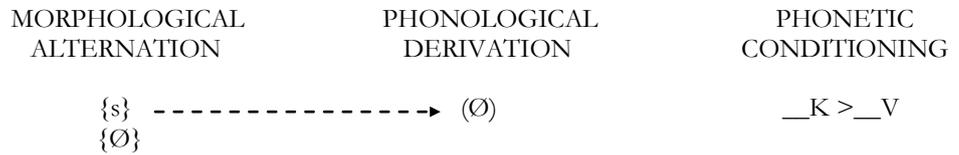
From the Pool of Variants, variants are extracted via a dynamic function, which Adger (2007) labels as $U(\text{sage})$, in order to be used in an utterance.

The function U , which determines the speaker’s choice of variant, is subject to the influence of a number of factors, including language-related, processing, and sociolinguistic factors. The impact of these factors on the choice of a given variant affect its variability. The level at which the function U operates in determining the choice of variant is the second site where variation (and variability) occurs.

In a way that slightly departs from his early work, Labov (2008) proposes a similar two-level account of variation in which he argues for the presence of variation at a morphological level, and at a phonological level. The two levels are distinct in that morphological variation does not feed into phonological variation, and phonological variation only occurs in relation to a single morphological form. One example is the

account of the presence or absence of verbal *-s* in African American Vernacular English (AAVE) (39).

(39) Verbal *-s* in AAVE:



The grammar of AAVE presents an underlying form that occurs with morphological form $\{s\}$, and a form that is morphologically null $\{\emptyset\}$. In the case of AAVE, the morphological form $\{s\}$ can undergo phonological deletion when it appears in a certain phonological context.

Thus, variation is present at two distinct levels, and the site of variation (that is, morphological or phonological) for a given variable can be determined by taking into account the phonological context and a number of speaker-related factors, such as hypercorrection, style shifting, ease of lexical access, and search for morpho-phonemic alteration.

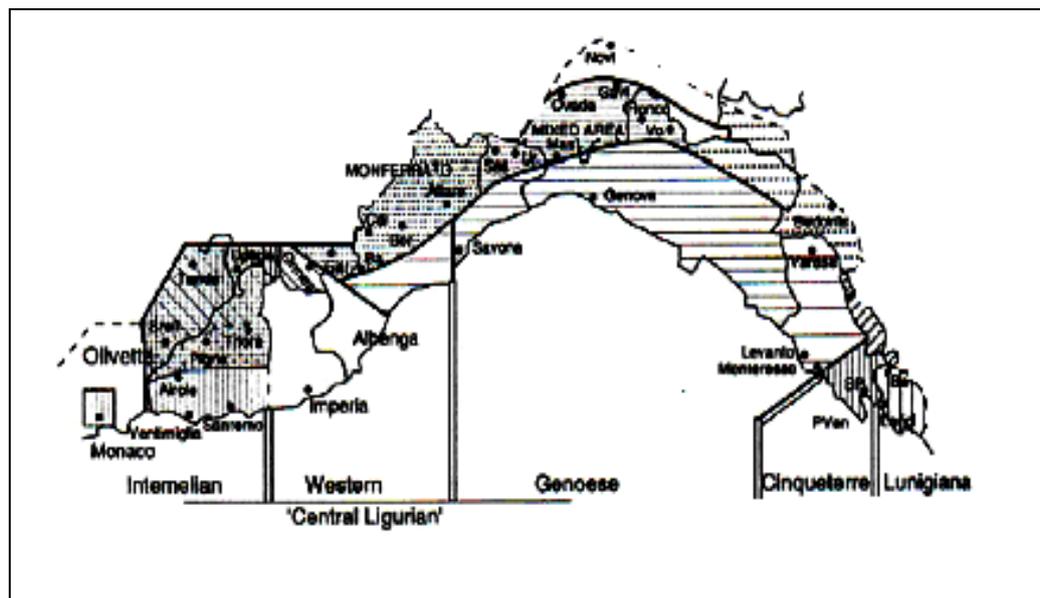
To sum up, a number of hypotheses have been proposed in order to account for variation in a single language. Earlier work focused on the role of probabilities as part of the grammar. In the light of developments in generative theory, more recent approaches have determined that variation is present at multiple levels, namely, in the grammar proper, and at surface level, and only the latter is influenced by speaker-related and extra-linguistic factors. These approaches differ in the way variation at the level of grammar is interpreted, namely, as the availability of multiple grammars to an individual speaker, or as the choice of multiple variants generated by a single mechanism.

1.4 A study of subject clitic variation and variability in Ligurian

1.4.1 The variety

The region of Liguria stretches along the north-western coast of Italy as a *trait-d'union* between the south-east of France on one side, and the north of Tuscany on the other. The difference between the narrow hilly hinterland and the long coastal area is reflected in a division of the dialectal varieties spoken in the region. Even though all Ligurian varieties belong to the Gallo-Italic branch of Italian dialects (along with Piedmontese, Lombard, Emilian, and Sardinian), there is a linguistic border that splits the region across horizontally. Figure 1 is taken from Forner (1997:246).

Figure 1. Linguistic map of Liguria (Forner, 1997:246)



In Figure 1, the main isogloss between hinterland and coastal varieties does not involve only superficial levels of the language (i.e., phonological and lexical), but also deep levels (i.e., morphological and syntactic). The varieties of the Ligurian hinterland, which are above the isogloss, share some of their syntactic traits with Piedmontese dialects (e.g., enclitic pronouns on the past participle, and post verbal negation) (Parry, 1991:54-6). The

coastal groups of ‘Central Ligurian’ (i.e., Intemelian, Western, and Genoese), whose varieties are spoken below the isogloss, do not share the syntactic features of Piedmontese dialects, and constitute a “bridgehead to central Italian” (Forner, 1997:245).

Coastal dialects vary in the phonology and the lexicon, but share the same syntactic traits. For this reason, coastal dialects are mutually intelligible despite a considerable geographical distance.¹² On the other hand, the strong influence of Lower Piedmontese on the inland varieties hinders the mutual understanding of speakers from geographically close areas that are internally divided by the isogloss.

The variety that is investigated in the present work belongs to the coastal group ‘Western Central Ligurian’ and it is spoken in the town of Albenga, in the western province of Savona (Figure 2). Due to its syntactic similarities with other coastal varieties below the isogloss, and for the sake of simplicity, I will refer to this variety as ‘Ligurian’.

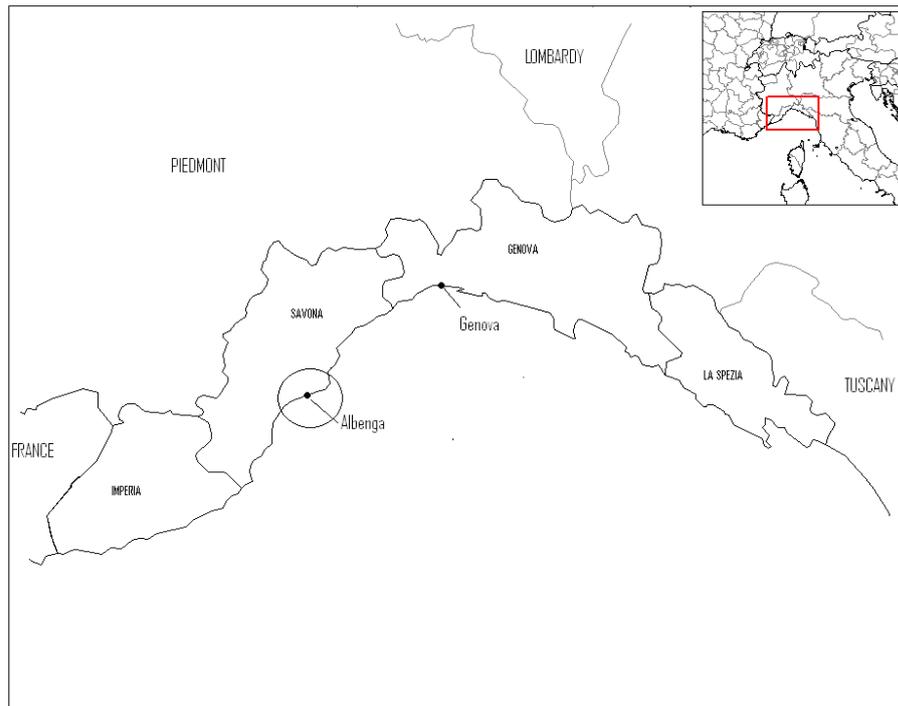
Liguria is one of the regions in which the influence of Italian became stronger during the period between the two World Wars and onwards (Parry, 2002:52).

During this period, mainly thanks to the spread of education, young generations of dialect speakers began to use a regional variety of Italian as their second language; because of the rapid change in the linguistic scenario, the generations born during the 1940s and 1950s were raised in a situation of diglossia, as they learnt and used the ‘high variety’ (regional Italian) at school and in more and more social contexts, and they spoke the ‘low variety’ (the dialect) at home (De Mauro, 1993; Berruto, 1987, 1989; Parry, 2002).¹³

¹² Forner (1997) stresses the powerful role of the city of Genoa in the process of homogenization of the coastal dialects. In the twelfth century, Genoa began to increase its power over the towns of the two *Riviere*, and Genoese became, first, the language of trade and, subsequently, the language of nobility and prestige. While the varieties of the eastern *Riviera* were already under Genoese political and linguistic influence, for the more conservative western dialects the process of homogenization took longer, and met opposition, especially in rural areas.

¹³ Moretti (1999:11, fn.1) points out that the distinction that Ferguson (1959) makes between ‘high’ and ‘low’ variety of the same language may be adopted to define the linguistic situation of Italy, even though Italian dialects are not varieties of the standard language. The “high”/“low” distinction may be used in a broad sense to indicate that, during the period of diglossia, Italian has acquired a ‘high’ status, whereas the dialects have retained a ‘low’ status, and both are still maintained nowadays.

Figure 2. Map of Liguria



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 Italian for mutual understanding.

Italian rapidly established its status as a first language by replacing the dialect in almost every linguistic context (the dialect was, and still is, used only within the household and in rural areas). In most cases, the generations born in the following decades, acquired Italian as their first language, and developed only a passive competence of the dialect.

1.4.2 The subject clitic variables under study

Ligurian SCIs are all vocalic clitics, apart from one consonantal form that occurs with 2nd person singular referents, namely, *ti*. The Ligurian SCI paradigm, which is provided in (40), shows SCIs and SCI variables as they are attested in the corpus of spontaneous speech that has been collected for the current study.

(40)

Ligurian subject clitic paradigm

	<i>singular</i>	<i>plural</i>
<i>1st person</i>	<i>e/a/∅</i>	<i>e/a/∅</i>
<i>2nd person</i>	<i>ti</i>	<i>i/e/∅</i>
<i>3rd person</i>	<i>masc. u/∅</i> <i>fem. a/∅</i> <i>expl. u/∅</i>	<i>i/e/∅</i>
	<i>default u</i>	<i>default u</i>

In the paradigm in (40), most grammatical persons show variation of two overt forms, as in the case of SCl *e/a* alternation in 1st person singular and plural, and SCl *i/e* alternation in 2nd and 3rd person plural. Moreover, overt SCl forms alternate with a zero SCl form \emptyset in all grammatical persons but 2nd singular.

From the paradigm in (40), we see that in Ligurian the same SCl variable may surface with more than one grammatical person. This is the case for variable *e/a/∅*, which is used in 1st person singular and plural contexts, and variable *i/e/∅*, which occurs in 2nd and 3rd plural contexts.

Third person singular presents a single overt form for masculine referents (SCl *u*), and for feminine referents (SCl *a*), and both forms alternate with a zero form. In impersonal constructions, namely, structures that lack a subject referent, an expletive SCl *u* is used. Also expletive *u* alternates with the zero SCl form.

Finally, when 3rd singular and plural subjects occur with default subject-verb agreement, the default SCl form used is *u*, and it is never found to alternate with a zero form.

In this study, I carry out a quantitative and qualitative analysis of three SCl variables.

These variables are:

- (i) 3rd person singular: *u, a/∅*, expletive *u/∅*, and default *u*
- (ii) 3rd person plural: *i/e/∅*

(iii) 1st person (singular and plural): *e/a/∅*

Second person singular *ti* and 2nd person plural *i/e/∅* are not included in the quantitative analysis of variation. Second person singular is not taken into account because SCl *ti* shows no alternation with another overt variant, nor with a zero SCl form.¹⁴ As for 2nd person plural, the little occurrence of this variable context in the corpus does not allow us to carry out a quantitative analysis of the data.

Although no quantitative analysis of variation is carried out for these grammatical persons, 2nd person singular and plural SCls are considered in a final qualitative analysis of Ligurian SCls, in relation to their underlying form and their position in the syntactic structure (see Chapter 6).

Below, I provide an overview of the three SCl variables under investigation, and their uses.

Third person singular. Third person singular contexts are divided into contexts that involve a subject referent, and impersonal contexts. For ease of exposition, I will refer to the former as ‘referential contexts’, and to the latter as ‘nonreferential contexts’.¹⁵

Referential contexts show overt/zero SCl alternation with both masculine referents (*u/∅*) (41), and feminine referents (*a/∅*) (42).

- (41) a. u preve u fajeva a scheura nurmale
 the priest.M.SG SCl did.3SG the school of-everyday
 ‘the priest was teaching at school everyday’
- b. so fré ∅ l’ha fetu primmu liceu
 his brother.M.SG (SCl) Cl.has.3SG done first high school
 ‘his brother has passed the first year of high school’

¹⁴ Ligurian data support Renzi and Vanelli’s (1983:130) generalization that “in all varieties the second person [singular] always presents a form which differs from that of the other persons” (my translation).

¹⁵ Notice that in this description the use I make of the terms ‘referential’ and ‘nonreferential’ differs from their standard semantic use, in that they merely imply ‘presence of a subject referent’ and ‘lack of a subject referent’ respectively.

- (42) a. me nonna *a* gh'ajeva sti dui fii
 my grandma.F.SG SCl Cl.had.3SG these two sons
 'my grandma had these two sons'
- b. so seu \emptyset n'ha dui masc-ci
 his sister.F.SG (SCl) of-them.has.3SG two boys
 '(of boys) his sister has two'

Feminine singular referents are also investigated in a separate analysis when they occur with default subject-verb agreement. In these referential contexts, SCl *u* does not alternate with a zero form (43). Masculine referents are not included in the analysis of default subject-verb agreement because the SCl variant used in full agreement contexts and the variant used with default agreement have the same morphological form, namely, *u*.

- (43) a. *u* l'è vegnü-u Maria
 SCl Cl.is.3SG come-M.SG Maria.F.SG
 'Maria came'
- b. * \emptyset l'è vegnü-u Maria
 (SCl) Cl.is.3SG come-M.SG Maria.F.SG
 'Maria came'

Nonreferential contexts involve the use of an expletive SCl *u*. This SCl variant alternates with a zero form (44).¹⁶

- (44) a. *pro u* gh'ea pin cusci
 Expl SCl there.was.3SG full.Adj.M.SG so
 'it was full of people'
- b. *pro* \emptyset gh'è bellu pulittu
 Expl (SCl) there.is.3SG nice.Adj.M.SG clean.Adj.M.SG
 'it's all nice and clean'

¹⁶ The examples in (44) can only have a nonreferential meaning. The same sentences can be assigned both a referential and a nonreferential meaning, but only if the verb is preceded by a clitic *l'*, as in (1), and not by the locative *ghe*.

- (1) a. *pro u/* \emptyset l'ea pin cusci
 pro/Expl (SCl) Cl.was.3SG ful.Adj.M.SG so
 'it/he was very full'/'there were many people'
- b. *pro u/* \emptyset l'è bellu pulittu
 pro/Expl (SCl) Cl.is.3SG nice.Adj.M.SG clean.Adj.M.SG
 'it/he is nice and clean'/'it's all nice and clean'

Third person plural. Third person plural SCIs distinguish between referential and generic use.

In referential contexts, the SCIs variable *i/e/Ø* is found with both masculine plural subjects (45), and feminine plural subjects (46).

- (45) a. *i* fratti *i* sun ndeti via
the friars.M.PL SCI are.3PL gone.M.PL away
‘the friars left’
- b. sti frè *e* l’han decizu de fà sta cà
these brothers.M.PL SCI Cl.have.3PL decided to make this house
‘these brothers decided to build this house’
- c. *i* purtui Ø sun tütti serei
the front-doors.M.PL (SCI) are all.M.PL closed.M.PL
‘the front-doors are all closed’
- (46) a. *e* campane *i* sun lighée
the bells.F.PL SCI are.3PL tied up.F.PL
‘the bells are tied up (= do not ring)’
- b. ste vegge *e* ghe sun sempre
these old ladies.F.PL SCI LocCl are.3PL always
‘these old ladies are always there’
- c. *e* fiie Ø ghe dajevan du vui
the daughters.F.PL (SCI) to.her gave.3PL ‘del voi’
‘the daughters addressed her in a polite way’

SCI variable *i/e/Ø* is also used in contexts where the subject is generic, that is, when it can be interpreted as ‘they/people’. Also with the generic use, both overt SCI variants *i/e* and the zero form are attested (47).

- (47) a. inti paisi *pro* *i* ghe dijeva che
in.the villages pro.3PL SCI LocCl said.3PL that
‘in the country they used to say that...’
- b. anticamente *pro* *e* i mettevan sutt’au maùn
Adv pro.3PL SCI OCl put.3PL under.the brick
‘In the old days, they used to put it (money) under a brick’
- c. *pro* Ø gh’han missu numme ‘xxx’
pro.3PL (SCI) to-them.have.3PL put name ‘xxx’
‘they/people named them ‘xxx’

First person. Overt SCl variants *e/a* and the zero form \emptyset alternate both with 1st person singular referents (48), and with 1st person plural referents (49).

- (48) a. *e* l'ho telefonau au megu
 SCl Cl.have.1SG phoned to-the doctor
 'I have called the doctor'
- b. *a* parlavu de seu nevu
 SCl talked.1SG of your nephew
 'I was talking about your nephew'
- c. \emptyset sentivu piccà
 (SCl) heard.1SG to.bang.Inf
 'I could hear banging'
- (49) a. *e* l'emmu ciammau stu avvucattu
 SCl Cl.have.1PL called this solicitor.Obj
 'we called this solicitor'
- b. *a* ghe semmu zà ndeti
 SCl LocCl are.1PL already gone
 'we went there already'
- c. inte stu bombardamentu \emptyset sentìmu sti curpi
 in this bombardment (SCl) heard.1PL these bangs.Obj
 'in this bombardment, we could hear these bangs'

For all three SCl variables, I investigate overt/zero SCl variation. For 3rd person plural and 1st person I also analyse alternation of overt SCl forms.

1.4.3 The data

This study investigates SCl variation in spoken Ligurian. The corpus of spoken Ligurian consists of ca. 140,000 words and involves data from six speakers, with two hours of recorded speech per speaker, for a total of twelve hours of recordings. Data were gathered by using standard sociolinguistic methodology (i.e., sociolinguistic interviews) and via recording of spontaneous conversations. Data from each of the six speakers consist of approximately one hour of interview and one hour of conversation.

At a later stage in the examination, an elicitation task was carried out with the same group of speakers. The elicitation task aimed at testing a particular grammatical context, namely, SCIs with past participle feminine plural subject agreement (see Chapter 4, and Appendix A). In the corpus, this context shows no overt/zero SCI variation. Since this result proved salient for the overall analysis, speakers were asked to translate a number of sentences involving the same context, in order to determine whether the lack of overt/null SCI alternation was to be attributed to the small number of tokens showing that context in the corpus (cf. Cornips & Poletto, 2005). The elicitation task showed that this was not the case.

Throughout the analysis standard intuition judgements were also required to verify that the lack of a given combination in the corpus, despite the high frequency of the relevant context, was in fact due to ungrammaticality.

1.4.3.1 The speakers

The analysis of Ligurian SCI variation involves data from six female speakers. All speakers were born and raised in the same part of the town, and belong to the same social network (friends or relatives).

The sociolinguistic variable gender was controlled for, and this for two reasons. First, to my knowledge, there are no studies that consider gender as an external factor that may influence SCI variation in northern Italian dialects.

Second, this study investigates not only language at the level of the community, but also at the level of individual speakers. In this type of study, the corpus must include a greater number of tokens per speaker than in a standard sociolinguistic investigation. For this reason, also due to time limitations, I controlled for the potential effect of gender by considering only tokens from female speakers.

While gender is controlled for, the effect of another sociolinguistic variable is investigated, namely, that of age. The impact of this independent external variable is analysed in particular, though not exclusively, in relation to the effect of Italian on younger generations, a language with no SCIs (cf. Marcato, 2002; Moretti, 1999).

Speakers were divided into two age groups, an older group whose speakers were 73, 74 and 80 years old, and a younger group whose speakers were 54, 56 and 60 years old. Speakers who were born after the early 1960s were not included in the study, because such a group would consist of mainly passive speakers of the dialect, for the socio-historical reasons illustrated above (cf. section 1.4.1).

1.4.4 Methodology

Spontaneous Ligurian data were collected by combining a sociolinguistic methodology (Labov, 1984) with an insider-approach (Blom & Gumperz, 1972). Tokens that involved the (potential) use of a SCI were extracted, coded for a number of internal and external linguistic factors, and subsequently analysed by using GOLDVARB. The GOLDVARB analysis allowed us to consider the effect on the dependent variable of a number of independent variables (or factor groups) simultaneously, and to determine what groups significantly favour the occurrence of a single variants, what factors within each group favour or disfavour the variant, and finally to identify any interactions among the factors and the factor groups. Subsequently, the results of the variationist analysis were used to feed the syntactic analysis of SCIs and SCI variation in Ligurian.

1.4.4.1 Data collection

Data were collected via digital recording of sociolinguistic interviews and spontaneous conversations between two speakers, and, at a later stage, by means of an elicitation task (see Appendix A) and of a number of standard grammaticality judgement tests. The

recordings were carried out in six sessions between 2005 and 2006 and the elicitation task was performed in 2007, while intuition tests were run throughout the study.

Although I belong to the same community as the speakers, my status as a passive speaker of the dialect did not allow me to perform as interviewer. Any attempt to imitate the variety would have had an artificial effect on the interview, and it would have made the interviewee feel uncomfortable with the whole experience.¹⁷ For this reason, I adopted an insider-approach (Blom & Gumperz, 1972) and engaged a member of the community to carry out the interviews on my behalf. The close net of kinships and friendships among the informants proved invaluable for the elicitation of natural speech in both interviews and recording of spontaneous exchanges.

The collected data consisted of a total of forty hours of speech from twelve speakers (six males and six females), with three/four hours of recording per speaker. However, due to time limitations, I had to reduce the amount of data to be included in the study, and the number of participants, to two hours of speech per speaker for six speakers (only females), for a total of twelve hours (for restrictions on gender, cf. section 1.4.3.1).

The number of hours of recording to be considered per individual speaker was reduced to two, because the occurrence of tokens with SCl variants proved very frequent in natural speech (on average, 430 tokens per speaker per SCl variable, in two hours of recorded speech).

Furthermore, three speakers for each age group was considered the minimum number in order to consider the effect of age on SCl variation. Given the low number of speakers in comparison to a standard sociolinguistic study, the results for age are indicative rather than conclusive.

¹⁷ The main problem was that all informants knew me as a member of the community, and they knew about my inability to speak the dialect.

Like the main data recordings, also the elicitation task was digitally recorded, and the results later transcribed by taking into account speakers' judgements. Grammaticality judgements on single morphosyntactic issues were simply reported as speakers provided them.

1.4.4.2 Data manipulation

Data recordings were transcribed using TRANSCRIBER 1.5.1 (Barras, 1998). Tokens of the three SCl variables were manually extracted from the transcription files and organized into separate token files. The number of tokens for each SCl variable varied considerably due to different frequencies of the contexts where a variable occurs, namely, 4943 tokens for 3rd person singular, 1127 tokens for 3rd person plural, and 1808 tokens for 1st person (singular and plural).

Subsequently, data were coded for a number of factors. These factors include internal-linguistic factors, processing factors, and sociolinguistic factors whose impact on SCIs and SCl variation had been analysed in previous work, or which were expected to show an effect due to language-specific features of the variety under investigation (see Chapter 2 for an overview of these factors).

1.4.4.3 Variationist analysis

A variationist analysis of each SCl variable is carried out by using GOLDVARB X (Sankoff, Tagliamonte & Smith, 2005). Tokens are tested in order to determine what language-internal and speaker-related factors for which they were coded have an impact on variation and variability of individual variants.

First, a distributional analysis of the data (or analysis of marginals) is carried out, which allows us to identify interactions between factors, differences in the use of the

variables among individual speakers (inter-speaker variation), and cases of categoricity in the use of a variant.

Subsequently, a regression or multivariate analysis is conducted for each variant in the different variables in order to determine the combination of factors that have a statistically significant effect on SCl variability, the relative strength of the significant factor groups (i.e., the range), and their internal factor ranking (i.e., the factor weight) (Tagliamonte, 2006).

1.4.4.4 Syntactic analysis

SCl variation is formally accounted for with an analysis that considers categorical and variable use of SCl variants in the three variables under investigation. This analysis is developed by following standard minimalist notions and operations, and a number of restrictive assumptions (cf. section 1.2 and its subsections).

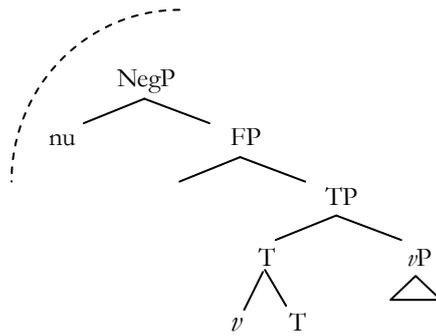
Cases that show SCl variation are accounted for via a feature-based approach which includes underspecification of features and feature values. The occurrence of zero SCl form is assigned multiple interpretations, which include a null underlying form, blocking of phonological expression of part of the syntactic structure, lack of morpho-syntactic material, and phonological deletion.

As for the cases of SCl categoricity that are identified by the distributional analysis, a syntactic explanation is provided that accounts for the ungrammaticality of other variants. The occurrence of such cases of SCl categoricity contributes to support the feature-based approach to SCl variation.

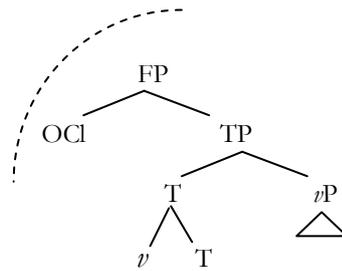
1.4.5 Main findings

The study of Ligurian SCl variation makes a few important conclusions with regard to: (i) the character of the zero SCl form, and the impact of age on the use of the zero form; (ii)

(51) a.

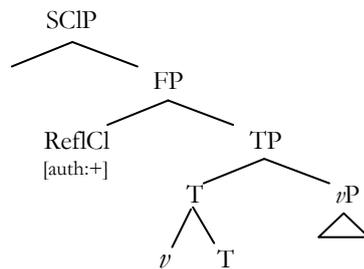


b.



Third, the zero form can be intended as absence of syntactic material (i.e., lack of a lexical item) in the SCl position. This form of zero SCl occurs, in particular, when the SCl realizes the category Person with an author feature, and the same feature is also expressed in the semantics of another element in the structure (e.g., an overt 1st person subject pronoun, a 1st person reflexive clitic, or a verb of opinion). In the structure in (52), an interpretable author feature is expressed by the reflexive clitic. As a consequence, the category Person may fail to occur in the numeration and the SCl position remains empty.

(52)



Fourth, the zero SCl form can be phonological deletion of an overt SCl form. Phonological deletion is favoured only by certain phonological contexts, one of which is following nasal (53).

(53) Spell-Out: overt SCl \Rightarrow ___#nasal \Rightarrow $\{\emptyset\}$

Ligurian realizes the zero form in these four different ways, which are all potentially available to Ligurian speakers. Crucially, though, individual I-grammars can make use of some or all of them, thus generating inter-speaker variation in the frequency of the zero form (cf. Adger, 2006).

Finally, the age of the speaker has no effect on the use of zero SCl form, nor on the choice of type of its realization, although given the low number of speakers in this study and the limited age gap between them this result is merely indicative.

Overt SCl alternation. Variability of overt SCl form is mostly affected by phonological factors, in particular, by preceding vowels with similar phonological traits (i.e., phonological feature spreading and vowel coalescence).

However, the results for individual speakers show that overt SCl variants are not mere allophones with a same underlying form, but have different feature specification (or different feature values). That is, alternating SCl forms are realization of different lexical items, whose choice is affected by phonological context. For instance, SCl *e* and *a* in 1st person contexts realize different lexical items, and the choice of the lexical item that realizes *a* is triggered by a following [+LOW] vowel (54.a), whereas the choice of the lexical item that expresses *e* is affected by a following [-LOW] vowel (54.b).

$$\begin{array}{l}
 (54) \quad \text{a.} \quad \left\{ \begin{array}{l} [\mu\text{auth:}+] a \\ [\text{uauth:}] e \end{array} \right\} \quad \text{---}\#[+\text{LOW}] \Rightarrow [\mu\text{auth:}+] a \\
 \\
 \text{b.} \quad \left\{ \begin{array}{l} [\mu\text{auth:}+] a \\ [\text{uauth:}] e \end{array} \right\} \quad \text{---}\#[-\text{LOW}] \Rightarrow [\mu\text{auth:}] e
 \end{array}$$

Processing effects. The effect of recency is found as significant for most SCl variants, in that the occurrence of a variant in the recent discourse triggers the choice of the same variant in the following token.

As for the zero SCl, if a previous token in the discourse shows a zero SCl form that is triggered by an underlying syntactic phenomenon, the following token can be found to reproduce the same syntactic structure (syntactic priming). The same effect does not occur in the case of phonological deletion, because a certain phonological context triggers deletion only of the relevant overt SCl. Thus, recency of a zero SCl affects the following token depending on the nature of the zero form, namely, only if it occurs as null variant, as unpronounced SCl position, or as lack of morpho-syntactic material.

Inter-speaker variation. The study of SCl variation in individual speakers shows the presence of inter-speaker variation, and involves differences both in the factors that are significant for a given variant, and in the internal ranking of individual factor groups.

The analysis of variation in the language of a community provides information on the overall phenomenon, and on the factors that affect variation in general. The analysis of variation in individual speakers shows how the mechanisms of individual I-grammars deal with variation. That is, whether they conform to the ways in which the grammar of the community generates variation, or whether they do it by using other strategies. In either case, individual speakers of the same community have a tacit knowledge of all ways of generating variation, which makes mutual understanding possible.

1.5 Structure of the thesis

The remainder of the thesis is organized as follows. Chapter 2 outlines the theoretical framework that leads to the choice of factors whose effect on SCl variation is tested in the variationist analysis of Ligurian data, that is, internal linguistic factors, processing and sociolinguistic factors.

Chapter 3 illustrates the analysis of 3rd singular referential SCl variable *u, a/Ø*, invariable default SCl *u*, and 3rd singular nonreferential SCl variable *u/Ø*. First, the variable context is circumscribed, and the factors are outlined, which are tested for these variables. Then, the results of the distributional and multivariate analyses are provided for referential contexts (including default agreement), and for nonreferential contexts. Subsequently, cases of SCl categoricity and of SCl variation are accounted for in a formal analysis. For the variable cases, the analysis takes into account the effect of internal and external factors on the choice of variant. Inter-speaker variation for this variable is shown regarding the use of the zero form.

Chapter 4 provides the analysis of 3rd plural SCl variable *i/e/Ø* when it is used in referential and generic contexts. As for the previous variable, the results of the distributional and multivariate analysis are provided for each context, and the formal account of SCl variation is implemented with the results of 3rd plural contexts, particularly in relation to the presence of an agreeing past participle.

Chapter 5 presents the analysis of SCl variable *e/a/Ø* with 1st singular and plural referents. The variationist analysis shows that the use of overt SCl forms is subject to inter-speaker variation. The multivariate analysis reflects this result as it shows, for some speakers, differences in the significant factors and in their internal ranking. The formal analysis links differences in the variability of overt SCl variants to distinct underlying forms which are subject to linguistic change.

Chapter 6 considers all SCls and SCl variables in Ligurian. The feature specification of each variant is determined or refined via the means of an algorithm, and a system is proposed that allows to account for SCl variation and variation in the position of the SCl variants in relation to negation both crosslinguistically and within the same variety.

Finally, Chapter 7 concludes this work with a short summary of its major findings.

CHAPTER 2

THEORETICAL BACKGROUND

In this chapter, I provide a theoretical overview of a few linguistic and extra-linguistic factors that have been related to SCIs and SCI variation in Ligurian and in other northern Italian varieties, or that have not been previously investigated, but are likely to show an effect on the variability, also due to language-internal features of the variety under study. These factors involve internal and external properties of the subject referent; properties of the verb; the syntactic configuration of SCIs (adjacency); the phonological context; processing effects; and the external variable age.

In section 2.1, I outline the language-internal factors, which include the internal properties of the subject (section 2.1.1); the external properties of the subject (section 2.1.2); the properties of the verb (section 2.1.3); the syntactic factors involving adjacency (section 2.1.4); and the phonological context (section 2.1.5).

In the remaining sections, I take into account the impact of two extra-linguistic factors. In section 2.2, I define the processing effect involving recency of the same variant in the discourse. And finally, in section 2.3, I account for the choice of the sociolinguistic variable age as a factor that potentially affects SCI variability.

2.1 Language-internal factors

In previous studies (e.g., Renzi & Vanelli, 1983; Poletto, 1993, 2000; Cardinaletti & Repetti, 2004), many internal linguistic factors have been related to SCI variation across varieties. These factors involve properties of the subject, both internal (e.g., person, gender and pronominality), and external (position of the subject, definiteness and information status);

properties of the verb (finite verb morphology, nonfinite verb agreement); syntactic configuration (adjacency of different types of clitics, SCl-verb adjacency); phonological context.

2.1.1 Internal properties of the subject

A number of studies (e.g., Renzi & Vanelli, 1983; Poletto, 1993) have looked at SCl variation in relation to subject referent. In particular, cross-linguistic variation in the use of SCls has been investigated with regard to grammatical person, gender of the subject referent, and its nominal vs. pronominal status (including null subjects). The relation between these factors and SCl variation, which has been observed in Ligurian and in other northern varieties, is described below.

2.1.1.1 Person and Number

Renzi and Vanelli (1983) present a classification of the northern Italian varieties on the basis of their relative use of SCls throughout the person paradigm. In this classification, the varieties of ‘coastal’ Ligurian appear split into two main groups, which correspond roughly to a geographical distinction between western and eastern coastal varieties.

One group (the western dialects) makes use of SCls for all persons, whereas the other group (the eastern dialects) shows SCls only for 2nd and 3rd person singular, and for 3rd person plural. The Ligurian variety involved in this study belongs to the first group (LI I in Renzi and Vanelli’s terminology (1983:127-8)). Historically, western varieties have been subject to the political and linguistic dominion of the eastern varieties, particularly Genoese (cf. Chapter 1, fn.12). However, despite an almost complete amalgamation of the main syntactic features, a discrepancy remains in the use of SCls for the 1st person singular and plural, and for the 2nd person plural.

The Ligurian SCl paradigm (cf. Chapter 1, section 1.4.2), which shows the occurrence of (overt) SCls for all grammatical persons, is repeated in (1) for convenience.

(1)

Ligurian subject clitic paradigm

	<i>singular</i>	<i>plural</i>
<i>1st person</i>	e/a/Ø	e/a/Ø
<i>2nd person</i>	ti	i/e/Ø
<i>3rd person</i>	<i>masc.</i> u/Ø <i>fem.</i> a/Ø <i>expl.</i> u/Ø	i/e/Ø
	<i>default</i> u	<i>default</i> u

In their analysis of the Emilian variety of Donceto, Cardinaletti and Repetti (2004) make a distinction in the person paradigm of SCls, which is similar that made by Renzi and Vanelli (1983). They claim that, in this variety, consonantal preverbal SCls occurring in 2nd and 3rd person singular, and the vocalic SCl in 3rd person plural, are true SCls preceded by an epenthetic vowel ə. Instead, preverbal SCls that appear with 1st person singular and plural, and 2nd person plural, are an optional realization of the inflectional head which happens to have the phonological form of the epenthetic vowel, namely ə (cf. on the lack of SCls and person specification, see also Benincà, 1983:fn.1).

The paradigm of SCl forms in Donceto (from Cardinaletti & Repetti, 2004) is given in (2).

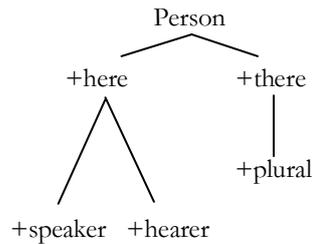
(2)	(ə) be:v SCl drink.1SG 'I drink'	(ə) bu'vum SCl drink.1PL 'we drink'	(Donceto)
	ə t be:v SCl SCl drink.2SG 'you drink'	(ə) bu'vi SCl drink.2PL 'you.pl drink'	
	ə l be:vè SCl SCl drink.3SG 'he drinks'	i be:vøn SCl drink.3PL 'they drink'	

With regard to the role of person, Benincà and Poletto (2005:275-6) (cf. also Benincà, 1983) show that, in varieties that have vocalic clitics, either one SCl is shared by all persons (as is the case for the Lombard dialect of Lugano, in (3)); or, if the vocalic clitic forms differ, 3rd person shows the distinctive form, while 1st and 2nd person share the same form, regardless of number specification (as is the case for the Friulian variety of S. Michele al Tagliamento, in (4)).

(3)	a vegni mi SCl come.1SG I 'I come'	a vegnum (Lugano) SCl come.1PL 'we come'
	a ta vegnat ti SCl SCl come.2SG you 'you come'	a vegnuf SCl come.2PL 'you.pl come'
	a vegn luu SCl come.3SG he 'he comes'	a vegn lur SCl come.3PL they 'they come'
(4)	i mangi SCl eat.1SG 'I eat'	i mangin (S. Michele al T.) SCl eat.1PL 'we eat'
	i ti mangis SCl SCl eat.2SG 'you eat'	i mangè SCl eat.2PL 'you.pl eat'
	a l mangia SCl SCl eat.3SG 'he eats'	a mangin SCl eat.3PL 'they eat'

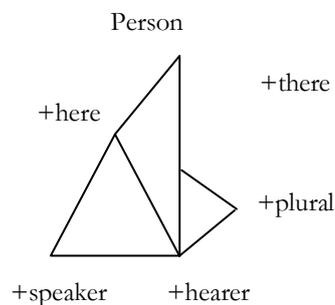
Following Benveniste (1966) and Harley and Ritter (2002), Benincà and Poletto (2005:278-9) claim that this differentiation between 1st and 2nd person, on the one hand, and 3rd person, on the other, is due to a difference in the feature specification of deictic ([+speaker] and [+hearer]) vs. nondeictic person ([−participant]) and, in particular, by “something” akin to the semantic notion [here] vs. [there]. The differentiation they assume is provided in (5) (Benincà & Poletto, 2005:278).

(5)



In the structure in (5), 1st and 2nd person plural have a complex feature configuration, in that they include both the spatial features [here] and [there], since they may involve referents which are not necessarily present in the speech act. For this reason, Benincà and Poletto extend the level external to the discourse (i.e., [+there]) to include, together with 3rd person, also 1st and 2nd person plural. In order to represent the internal specification of the person feature, they propose a three-dimensional model in which the [+speaker] and the [+hearer] features percolate up to the Person node and can optionally activate the [+plural] feature, which also carries the semantic feature of its dominating node, namely, [+there]. Benincà and Poletto's (2005:283) three-dimensional structure is reproduced in (6).

(6)



Benincà and Poletto apply this feature specification model to account for similarities in the vocalic SCl paradigm of many northern Italian varieties, as far as person is concerned. They generate a system in which grammatical persons that share part of their features are likely to have the same phonological output. This scalar system, which they refer to as an 'extension pattern', is provided in (7) (from Benincà & Poletto, 2005:276).

(7) First person → fourth person → fifth person → second person → third person

In the three intermediate positions of the ‘extension pattern’ the specification of the grammatical persons loses one feature at each step: 1st person plural and 2nd plural (fourth → fifth person) differ for the person feature [+speaker]; 2nd person plural and 2nd singular (fifth → second person) differ for the number feature [+plural]. The final outcome is the loss of all the features internal to the specification of person, i.e., 3rd person (cf. the ‘nonperson’ of Benveniste (1966)).

Benincà and Poletto’s analysis of SCl variation draws on this system to explain the discrepancy in the vocalic SCl form of 1st and 2nd person (singular and plural), on the one hand, and 3rd person, on the other (cf. *i* vs. *a* in (4)).

Two aspects of this analysis of grammatical person remain unexplained, namely, (i) why 1st person, with its relatively simple specification [+speaker], is portrayed at the bottom of the ‘extension pattern’, where, supposedly, the most complex feature combination should be located; and (ii) if the [+plural] feature is dropped at the penultimate step of the ‘extension pattern’, 3rd person should not include this feature, contrary to fact.

Furthermore, this analysis of person feature and vocalic SCl forms fails to account for Ligurian vocalic SCl forms for three main reasons.

First, by comparing the results of this analysis with the Ligurian SCl paradigm (cf. (1)), we notice that the step from 1st plural (‘fourth person’) to 2nd plural (‘fifth person’) does not give the identity of forms predicted by Benincà and Poletto’s ‘extension pattern’. In Ligurian, 1st and 2nd person plural occur with different (overt) SCl variables, namely, 1st plural SCl variable *a/e*, and 2nd plural *i/e*. The only SCl that these two grammatical persons share is variant *e*, which occurs also with 3rd plural referents.

Second, if 3rd person plural differs in feature combination from 2nd person plural (as from the last two steps in the ‘extension pattern’), this is not reflected in the vocalic SCl forms in Ligurian, given that both 2nd and 3rd person plural show *i/e* alternation.

Third, by failing to account for the first step in the ‘extension pattern’, Benincà and Poletto’s system does not provide an exhaustive view of the involvement of person and number feature in determining identity of vocalic SCl form, particularly, as far as 1st person singular and plural are concerned.¹

To summarise, studies of cross-linguistic variation in northern Italian varieties show that the form of a vocalic SCl, its internal feature specification, and its function, are determined by grammatical person. In many varieties, vocalic SCls show the same form for 1st and 2nd person, and a different form for 3rd person. Only the 2nd plural SCl forms are found to alternate between the two. This analysis of person feature leaves us with the language-specific issue of determining why Ligurian vocalic SCl forms pattern in exactly the opposite way, i.e., 1st person vs. 2nd and 3rd person (plural).

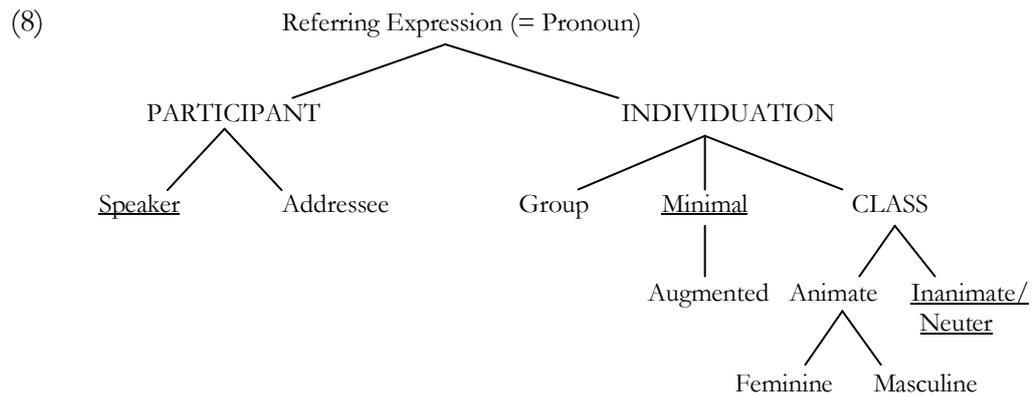
2.1.1.2 Gender

In order to account for existing constraints on feature composition in pronoun and agreement systems, Harley and Ritter (2002) develop a feature geometry based on three main assumptions. First, features are privative and only have a positive value (i.e., a negative value entails absence of such feature). Second, the presence of a feature may be dependent on the presence of another feature (on a dominating node). This may involve logical implications which, unlike dependencies, need not be represented in the geometry.² Third, the more marked features are those involving the higher number of nodes.

Harley and Ritter’s (2002:486) feature geometry is given in (8).

¹ Benincà and Poletto (2005:274) give evidence of two varieties in which a single form for 1st person singular and plural is used, namely *j* for Gruyère and *a* for Ligurian, but they do not suggest any possible structural explanation for this phenomenon. Kayne (2000:136) claims that, in some varieties of French, the clitic *j* can occur with both 1st person singular and plural because it is “fundamentally specified for (first) person but not fundamentally specified for singular”.

² An example of logical implication is the case of the feature [Speaker] which is inherently [Participant].



Under the root node of a nominal feature (Referring Expression) we find three subgroups: the two daughter nodes representing person features (Participant) and number features (Individuation), and, within Individuation, the Class node which encodes gender features on the basis of animacy. Within these subgroups, the underlined feature is taken to be the unmarked one. Taking into account the underlying principles of positive evaluation, dependency, and markedness, natural languages activate these subgroups to represent person, number and gender feature, and their interaction.

In Harley and Ritter’s geometry, gender and number features are in a relation of dependency. In particular, Harley and Ritter begin their analysis following Greenberg’s (1963:95ff.) universals 36, 37 and 45:

Universal 36: “If a language has the category gender, it has always the category number.”

Universal 37: “A language never has more gender categories in non-singular numbers than in the singular.”

Universal 45: “If there are any gender distinctions in the plural of the pronoun, there are some gender distinctions in the singular also.”

Three claims with regard to gender and number follow from their geometry. First, a language may have gender feature specified in the singular and not in the plural, but not vice versa. Second, gender feature specification is, therefore, more marked in the plural than in the singular. Third, gender feature is normally restricted to 3rd person singular and plural. The reason for this is that specification of gender for 1st and 2nd person involves adding an extra node in the geometry, namely, Participant, thus resulting in extremely marked (although not impossible) feature combinations.

Harley and Ritter (2002:505-6, 516) (cf. also Benincà & Poletto (2005:285)) identify an apparent counterexample to the rarity of cases in which 1st and 2nd person plural are specified for gender, and this is found in Romance. In Spanish, the plural forms for ‘we’ are *nosotros* (m.pl.) and *nosotras* (f.pl.), and the forms for ‘you (pl.)’ are *vosotros* (m.pl.) and *vosotras* (fem.). These pronouns consist of two separate morphemes (i.e., *nos* ‘we’ (1st pl.) + *otros* ‘others (m.pl.)’), where the first morpheme expresses person and number feature, and the second expresses number and gender, but not the person feature. Crucially, there is no single morpheme with all three features specified.

Similarly, in Italian personal pronouns *noi* (‘we’) and *voi* (‘you (pl.)’) alternate with the less common form *noialtri/noialtre* and *voialtri/voialtre* respectively. The case of Spanish (and Italian) partially reflects that of Ligurian pronouns. The Ligurian corpus shows the occurrence of a form *niiatri* (*nui* ‘we’ + *atri* ‘others’ (pl.)) for 1st plural, and *viiatri* (*vui* ‘you (pl.)’ + *atri* ‘others’ (pl.)) for 2nd plural, whether the referents are all males (9.a), all females (9.b), or of mixed gender (9.d). The hypothetical form with feminine plural morphology –e, namely, *niiatre/viiatre* is not attested in the Ligurian corpus (9.c).

- (9) a. *viiatri* i gh’ajevi dijeutt’ anni (Ligurian)
 SubjPron.2PL SCI Cl.had.2PL eighteen years
 ‘you (all males) were eighteen’
- b. *quande niiatri* e passàmu da-u cancellu
 when SubjPron.1PL SCI passed.1PL by-the gate
 ‘when we (all females) used to walk by the gate’

- c. ??quande *nüatre* e passàmu da-u cancellu
 when SubjPron.1F.PL SCI passed.1PL by-the gate
 ‘when we (all females) used to walk by the gate’
- d. *nüatri* e se semmu spuzei du cinquanta
 SubjPron.1PL SCI ReflCl are.1PL married.PL in 1950
 ‘we got married in 1950’

In Ligurian, the adjective *atri* ‘others’ in *nüatri* and *vüatri* has masculine plural morphology (–i), but since it occurs with both masculine and feminine referents, its ending –i is considered simply as an indication of plural number.

According to Benincà and Poletto (2005:285), in northern Italian dialects only 1st and 2nd plural pronouns occur in a complex form with the adjective ‘others’, while 3rd plural pronouns do not allow this compound. The Ligurian variety differs in this respect. It shows two distinct subject pronouns for 3rd person, namely, a form *velli* (m.pl.)/*velle* (f.pl.) (10.a,b), and a form *lù* (m.pl. and f.pl.) (10.c,d). The latter may be combined with the adjective *atri* ‘others’, and generate *lüatri* (10.e). As for *nüatri* and *vüatri*, also for *lüatri* no corresponding feminine form *lüatre* is attested in the Ligurian corpus.³

- (10) a. *velli* i ghe ndava (Ligurian)
 SubjPron.3PL SCI LocCl went.3
 ‘they used to go there’
- b. *velle* e l’ean propiu famuze
 SubjPron.3F.PL SCI Cl were.3PL really famous.F.PL
 ‘they (those women) were really renowned’
- c. *lù* i sun ricchi
 SubjPron.3PL SCI are.3PL rich.M.PL
 ‘they are rich’
- d. *lù* i sun zà vegge
 SubjPron.3PL SCI are.3PL already old.F.PL
 ‘they (all females) are already old’

³ The pronoun *lù* ‘they’ is rare in the Ligurian corpus, and it is used by two of the six speakers only. On the other hand, the compound pronoun *lüatri* is much more frequent, and it is used by all speakers.

Singular pronouns show a similar distinction in their forms. The pronoun *vellu* and *vella* express both number and gender, respectively, masculine and feminine singular. These pronominal forms alternate with a pronoun *lé*, which is used for both masculine and feminine singular referents. However, the use of the pronominal form *lé* is only sporadic.

- e. perché *liatri*/??*liatre* i gh'han pùia
 because SubjPron.3PL SCI Cl.have.3PL fear
 'because they (all females) are scared'

In Ligurian, the adjectival suffix *-atri* appears with grammatical persons that have no gender specification in their morphology, namely, 1st plural (*nüatri*) and 2nd plural (*vüatri*), and with 3rd plural *lù*, which is also not specified for gender and gives the form *liatri*. Pronouns that show gender agreement (e.g., *velli/velle*) do not occur with such suffix (**velliatri*/**velleatri*).

Like Spanish *nosotros/nosotras*, the suffix *-atri* in Ligurian (and Italian) forms a compound with pronouns that lack gender, but, unlike Spanish, the absence of gender specification is maintained in these plural pronouns, as the suffix *-atri* fails to show feminine agreement.

Third person plural bears either a pronominal form that conveys number and gender (*velli/velle*), or a form that expresses only number (i.e., *lù* or *liatri*). Gender specification is optional for 3rd plural pronominal subject referents in Ligurian.

Kayne (2000) distinguishes between 1st and 2nd direct object pronouns, and 3rd direct object pronouns on the basis of their morphology. First and 2nd direct object pronouns are only specified for (person and) number (11.a). Third person direct object pronouns or 'determiner pronouns' are specified for number and gender (11.b), as indeed are their determiner counterparts (11.c). The examples in (11) are from Italian, and are partially taken from Kayne (2000:139ff.)

- (11) a. Gianni *mi* / *ti* vede (Italian)
 John OCL.1SG/2SG see.3SG
 'John sees me/you (sg.)'
- b. Gianni *la* / *le* vede
 John OCL.3F.SG/3F.PL see.3SG
 'John sees her/them (f.pl)'
- c. Gianni vede *la* ragazza / *le* ragazze
 John see.3SG the.F.SG girl.F.SG / the girls.F.PL
 'John sees the girl/the girls'

It would appear that 3rd person SCl forms in Ligurian match the case of Italian (and French) ‘determiner pronouns’, in that 3rd singular SClS *u* and *a* have the same form of the singular definite articles *u* (m.sg.) and *a* (f.sg.), and 3rd plural SClS *i* and *e* share the form of the plural definite articles *i* (m.pl.) and *e* (f.pl.). Historically, forms of the definite article as well as those of the third person subject clitics are thought to have derived from the same Latin demonstratives *illu* (m.sg.) and *illa* (f.sg.). More uncertain is, instead, the origin of the plural forms, especially the feminine ones, with two possible demonstrative variants *illas* and *illae* (cf. Parry, 2005:Ch.4, fn.10 and fn.25, on the effect of coastal Ligurian on pronouns and SClS forms in Cairese, a variety of the Ligurian hinterland).

Although SCl forms are believed to have the same historical origin as determiners, SCl variation in singular and plural, masculine and feminine, contexts shows that SCl variants must have lost some of the features that characterize determiners.

The use of determiners and the corresponding SCl forms in Ligurian is illustrated below. The SCl form *u* is used, like the masculine determiner *u* (12.a), with masculine singular referents (12.b), but crucially also with feminine referents (12.c). SCl *a* occurs with feminine singular referents (13.b), on a par with the corresponding determiner (13.a), but it is ungrammatical with masculine singular subjects (13.c).

- (12) a. *i* *Phan* *bumbardau u* *punte* (Ligurian)
 SCl Cl.have.3PL bombed the.M.SG bridge.Obj.M.SG
 ‘they bombed the bridge’
- b. *aù u* *riva* *seu fiu*
 now SCl.M.SG arrive.3SG her son.Subj.M.SG
 ‘now her son arrives’
- c. *u* *riva* *Gemma*
 SCl.M.SG arrive.3SG Gemma.Subj.F.SG
 ‘Gemma arrives’
- (13) a. *i* *fajeva a* *cruje*
 SCl did.3 the.F.SG cross.Obj.F.SG
 ‘they used to sign with a cross’

- b. a quattr'ure *a* riva Alma
 at four SCl.F.SG arrive.3SG Alma.Subj.F.SG
 'at four o'clock Alma arrives'
- c. **a* riva Antoniu
 SCl.F.SG arrive.3SG Antony.Subj.M.SG
 'Antony arrives'

Similarly, SCl variant *i* and *e* have the same phonological form as masculine (14.a) and feminine plural determiners (15.a). However, both SCl variants are used indistinctively to refer to masculine plural subjects (14.b-15b), and feminine plural subjects (14.c-15.c).

- (14) a. *i* l'han cuminsau a fà *i* vapuri (Ligurian)
 SCl Cl.have.3PL begun to.make the.M.PL steamboats.Obj.M.PL
 'they began to build steamboats'
- b. sti tassisti *i* ghe l' ajeva
 these.M.PL taxidriver.Subj.M.PL SCl.PL Cl Cl have.3
 'these taxi-drivers were angry'
- c. e tere *i* l'ea de me mare
 the.F.PL allotment.F.PL SCl Cl.were.3PL of my mother
 'the allotments belonged to my mother'
- (15) a. *i* ghe dijeva *e* fasce (Ligurian)
 SCl Cl said.3 the.F.PL strips.F.PL
 'people called (them) 'the strips''
- b. *i* spareghi *e* sun zà cheutti
 the.M.PL. asparagus.M.PL SCl are.3PL already cooked.M.PL
 '*asparagus are already cooked*'
- c. e cüne *e* custan in muggiu
 the.F.PL cradle.Subj.F.PL SCl.PL cost.3PL a lot
 'cradles are very expensive'

If, as is evident from the Italian examples in (11), pronouns which derive from determiners also share their number and gender features, we should be able to postulate that also 3rd person SClS deriving from determiners share their same features; that is, we should be able to assume that 3rd singular and plural SClS express both number and gender. While the realization of number is evident, in that a plural SCl variant (*i* or *e*) cannot be used with a singular referent, the same is not true for the gender feature. SCl variant *u* fails

to express gender, as it can be found with both masculine and feminine singular referents.⁴ SCl variant *i* and *e* also seem to lack gender specification, as they both occur with masculine and feminine plural referents.

Brandi and Cordin (1989:113) define SCIs as inflectional elements that are phonologically expressed, and argue that “the subject [clitic] agrees in all features with the lexical subject”. On the basis of the Ligurian data on SCl variation (cf. (12)-(15)), I have reasons to question this claim, at least as far as the gender feature is concerned.

To sum up, previous studies on gender have shown that this feature is parasitic on number. Gender is usually unmarked with 3rd person referents, while it is extremely marked with 1st and 2nd person, unless the form of the pronoun involves an adjectival element ‘others’, which can bear a gender feature. The distinction in feature composition between 1st/2nd and 3rd person is reflected in the fact that, unlike 1st/2nd person, 3rd person shares the same phonological outcome for direct pronouns and definite articles. A similar account may explain the identity of the phonological form of SCIs and definite articles in Ligurian. However, in the case of Ligurian SCIs, morphological (feature) identity with the definite articles seems to hold for number, but not entirely (if at all) for gender.

2.1.1.3 Pronominality

Renzi and Vanelli (1983) investigate the behaviour of SCIs when these appear with nominal subject referents. They claim that a SCl may occur with a nominal subject only if the variety makes regular use of SCIs in 3rd person. Moreover, if a variety has only 3rd person singular SCl variants, SCIs may appear with singular nominal subjects, but not with plural DPs.

⁴ Furthermore, the singular SCl *u* may appear with a plural subject referent. In this case, the verb agrees with the singular SCl, as in (1):

- (1) u gh'è passau i spassin
 SCl LocCl.is.3SG passed.M.SG the.M.PL dustmen.M.PL
 ‘the dustmen cleaned (that road)’

In Renzi and Vanelli's classification of northern Italian dialects, western Ligurian (i.e., Ligurian I) belongs to a group of varieties which have SCIs available for all persons. Thus, both singular and plural nominal subjects can co-occur with a SCI, as in (16).

- (16) a. *stu apparecchiu u funsiuna* (Ligurian)
 this.M.SG machine.Subj.M.SG SCI work.3SG
 'this machine works'
- b. *ste artiocche i sun bune*
 these.F.PL artichokes.Subj.F.PL SCI are.3PL nice.F.PL
 'these artichokes taste nice'

With an overt pronominal subject, a SCI may occur only if, in a given variety, the relevant person allows for a SCI to occur. According to Renzi and Vanelli (1983), western Ligurian have a SCI form for each person of the paradigm, therefore, each overt pronominal subject in Ligurian may be accompanied by a SCI.

In her analysis of Cairese (an inland variety of western Ligurian), Parry (2005:170) claims that SCIs are obligatory with pronominal subjects for all persons, but for 1st person singular, where they are optional. The examples in (17) are from Parry (2005:170).

- (17) a. *chèl *(u) pòrta* (Cairo Montenotte)
 SubjPron.3M.SG SCI speak.3SG
 'he speaks'
- b. *mi (a) sc-tag*
 SubjPron.SG SCI stay.1SG
 'I stay'

Quantifiers differ from nominal and pronominal referents with regard to the occurrence of SCIs. SCIs optionally occur with a quantifier only if a variety has SCIs for all persons of the paradigm. In varieties that lack such property, SCIs do not tend to occur when the subject is a quantifier (Renzi & Vanelli, 1983).

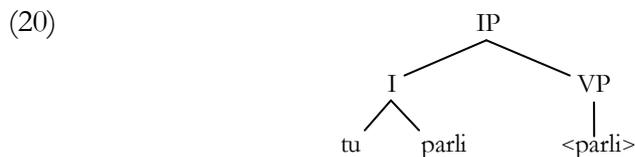
In Ligurian, bare quantifiers, e.g., *quarcùn* 'someone', *nisciùn* 'nobody' (with generic meaning) may appear with a SCI (18).

- (18) a. *quarcùn (u) m'ha ditu che* (Ligurian)
 someone.3SG SCI to.me.has.3GS told that
 'someone told me that...'

license referential *pro*, and to interpret its content. Brandi and Cordin (1989) develop further Rizzi’s proposal and argue that SCIs are morphological realizations of I, and have no initial argument status. However, the external theta-role that is assigned to the element in subject position may be assigned to *pro* only if this is co-indexed with an inflectional element, i.e., a SCI (or the verb morphology, in NSLs without SCIs). According to Brandi and Cordin, “the subject clitic acquires argument status and functions as a referential pronoun” (1989:116).

In their analysis of checking of the EPP, Alexiadou and Anagnostopoulou (1998) identify a parametrization in the process. Natural languages may check a strong μ EPP* feature (cf. Adger’s (2003) μ D* feature) on T either by Moving/Merging a (pro)nominal subject (e.g., Germanic languages), or by Moving/Merging an inflectional head (e.g., NSLs languages). In NSLs, the inflectional element may be an affix which is merged on the verb (e.g., Standard Italian), or a SCI which is merged later in the derivation (e.g., northern Italian dialects).⁵ In neither case is the presence of a null subject *pro* in the specifier of IP redundant because its function is carried out by the element that realizes the inflectional head (cf. also Manzini & Savoia, 2002).

According to the hypothesis of EPP-checking via overt realization of the inflectional head, the sentence in (19.a) has the structure in (20).



The fact that, in most northern Italian varieties (e.g., Ligurian), SCIs are optional in most contexts poses a problem for Alexiadou and Anagnostopoulou’s analysis. When the inflectional head is not realized by an overt SCI, a null referential element (*pro*) must be present in order to check the strong μ EPP* feature of I. Or else, the inflectional head must

⁵ Alexiadou and Anagnostopoulou (1998:517, fn.27) argue that the verb ultimately raises to the Agr(ement) head not because of EPP requirements, but because the subject clitic needs a host.

be realized by a null SCl, thus reducing SCl optionality to variation of an overt/null SCl form.⁶ I will argue that, at least as far as the realization of the inflectional head is concerned, SCl optionality in Ligurian is, in fact, alternation of an overt and a null SCl form.

To sum up, northern Italian dialects are NSLs, in that they allow for a null referential subject (*pro*) to appear preverbally in order to satisfy the EPP. This referential *pro* (optionally) co-occurs with an overt SCl, which, as phonological realization of inflection, licenses it and recovers its content. A different approach to EPP-checking involving head Move/Merge proposes that, in NSLs that show the occurrence of SCls, the SCl satisfies the EPP without the need for *pro* to be licensed. SCl optionality poses a problem for both analyses, in that the absence of (an overt) SCl entails that its function has to be fulfilled by another element. For both analyses, this element is the finite verb.

2.1.2 External properties of the subject

SCls and SCl variation have been investigated in relation to properties of the subject referent which involve its position in relation to the verb (i.e., preverbal, postverbal, topicalised) (e.g., Rizzi, 1986b; Poletto, 1993), and its definiteness and information status (e.g., Saccon, 1993; Suñer, 1992). The effect of these factors on SCls and SCl variation is described below.

2.1.2.1 Position of the subject

NSLs are characterized by free subject inversion (Chomsky, 1981; Burzio, 1986). In Italian, the subject appears in both preverbal and postverbal position, as in (21) and (22).

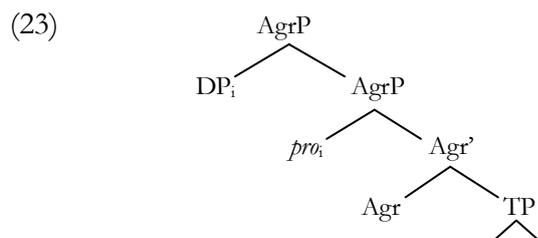
⁶ The approach proposed by Alexiadou and Anagnostopoulou (1998) could only account for SCl optionality by hypothesizing that, in the northern Italian varieties that show this phenomenon (e.g. Ligurian), the EPP-checking is obtained by realizing the inflectional head either via Merging of a SCl, or via the verb affix.

- (21) a. *Gianni* è arrivato (Italian)
 John.Subj.M.SG is.3SG arrived.M.SG
 'John arrived'
- b. è arrivato *Gianni*
 is.3SG arrived.M.SG John
 'John arrived'
- (22) a. *Maria* ha telefonato (Italian)
 Mary.Subj.F.SG has.3SG called.(M.SG)
 'Mary called'
- b. ha telefonato *Maria*
 has.3SG called.F.SG Mary
 'Mary called'

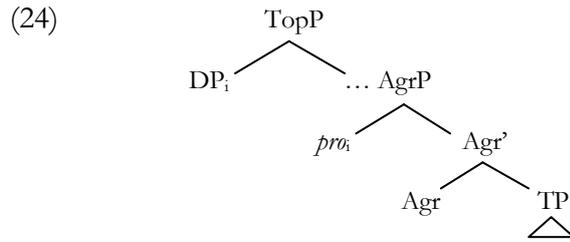
Preverbal subjects. For non-NSLs, there is general consensus that the subject occurs in the specifier of IP (in the minimalist framework, the specifier of TP) (but see Bobaljik and Jonas (1996) for an account of parametric variation of the licensing of the specifier of TP).

On the other hand, the position that hosts preverbal subjects in NSLs is still much debated. Three main approaches have been put forward:

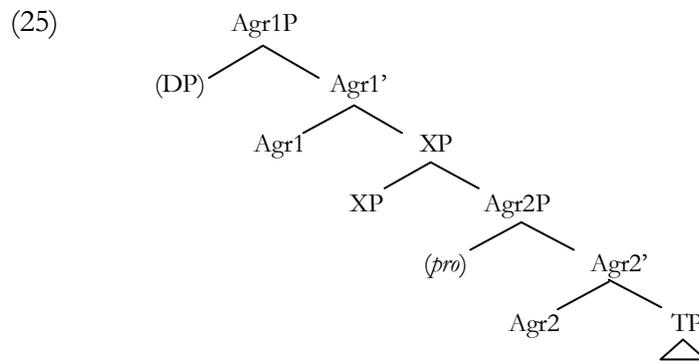
(i) the subject is in an A'-position adjoined to an AgrP above TP, and the A-position (i.e., the specifier of AgrP) is filled by a null subject (cf. Barbosa, 1994), as in (23);



(ii) the subject is Left-Dislocated in a Topic position, and it appears with a resumptive *pro* in a lower subject position (e.g., Benincà & Cinque, 1985; Frascarelli, 2007), as in (24);



(iii) the subject has two possible A-positions, the specifier of a higher AgrP (Agr1P) for nominals, and strong and weak pronouns, and the specifier of a lower AgrP (Agr2P) for *pro*, on the basis of their different position with regard to parentheticals (cf. Cardinaletti, 1997), as in (25).⁷



In a structure like (25), the overt subject referent and *pro* cannot occur simultaneously in two A-positions, as this would violate the Theta-Criterion (Chomsky, 1981). The analysis of a double A-position for NSLs preverbal subjects allows one to account for preverbal subjects in general by hypothesizing a single syntactic structure for NSLs and non-NSLs, thus satisfying economy requirements (Cardinaletti, 1997:53).

Rizzi (1986b) claims that, in Italian and northern Italian varieties, the canonical position for preverbal subjects is the specifier of IP (AgrP), and not the specifier of a Topic Phrase (cf. (24)), and evidence for this comes from quantifiers. Rizzi (1986b:395ff.) claims

⁷ In Cardinaletti's (1997) analysis, *pro* is a weak pronoun as it behaves like other weak pronouns in Italian (*esso/egli* 'he'), and French (*il*). However, with parentheticals (e.g. St. Fr. *selon toi*/St. It. *secondo te* 'in your opinion') which occur between the two AgrPs, *pro* appears in Agr2P, like St. Fr. *il*, whereas St. It. *esso/egli* appear in Agr1P (1).

- (1) i. [Agr1P (Jean/lui) Agr1 [XP selon toi [Agr2P (il) [TP[T Vfin]]]]]]
 ii. [Agr1P (Gianni/lui/egli) [XP secondo te [Agr2P (*pro*) [TP[T Vfin]]]]]]

that quantifiers cannot be topicalized because the co-occurrence of these elements with a resumptive pronoun is ungrammatical (26).⁸

- (26) a. non conosco nessuno in questa città (Italian)
 not know.1SG nobody.Obj in this town
 'I don't know anybody in this town'
- b. *nessuno, lo conosco in questa città
 nobody.Obj OCl know.1SG in this town
 'I don't know anybody in this town'

In northern Italian varieties, quantifiers are frequently followed by SCIs. Example (27) is from Torinese, from Rizzi (1986b:396).

- (27) gnun l' a dit gnent (Torinese)
 nobody.Subj SCI have.3SG said nothing.Obj
 'nobody said anything'

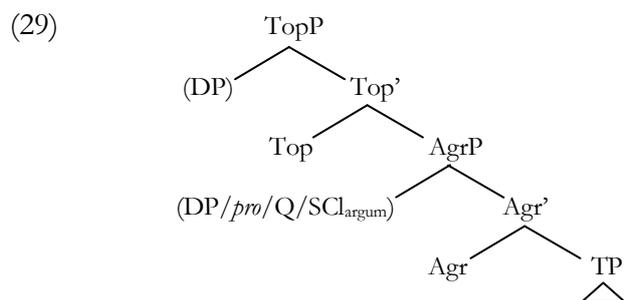
In her analysis of Veneto varieties, Poletto (1993), identifies a type of SCI that optionally occurs with (pro)nominal subjects, but fails to occur with quantifiers, as in (28).

- (28) a. Nane el vien (Veneto)
 John.Subj SCI come.3SG
 'John is coming'
- b. Nane vien
 John.Subj come.3SG
 'John is coming'
- c. *nisun el vien
 nobody.Subj SCI come.3SG
 'nobody is coming'
- d. nisun vien
 nobody.Subj come.3SG
 'nobody is coming'

⁸ Contra Rizzi (1982, 1986b), Manzini and Savoia (2002:fn.4) (cf. also Poletto, 2000) claim that, in Standard Italian, quantifiers may be topicalized by changing the pragmatic context, as in (1).

- (1) i. *nessuno l' ho visto al cinema
 nobody.Obj OCl have.1SG seen to.the cinema
 'I have seen nobody to the cinema'
- ii. qui nessuno l' ho mai visto vestirsi così
 here nobody.Obj OCl have.1SG Neg seen to.dress.himself Adv.like this
 'here I have never seen anybody to dress up like this'

Unlike the majority of SCIs in northern Italian varieties, these SCIs are true arguments, and not inflectional elements (Poletto, 1993:47-9). In order to account for variation involving these argumental clitics, Poletto suggests that two subject positions are available for the preverbal subject, namely, the specifier of TopP (available only to (pro)nominals), and the specifier of AgrP (available to (pro)nominals that occur without argumental SCIs, and to quantifiers). The structure hypothesized by Poletto is given in (29) (cf. also (24)).



Quantifiers cannot co-occur with argumental SCIs because they occupy the same syntactic position, namely, the specifier of AgrP. Quantifiers can only co-occur with a SCI when this is an agreement element that occupies the head of AgrP, and has no argumental status. Topicalized DPs, instead, can occur with both types of SCIs (i.e., argumental SCIs and agreement elements) because, in either case they occur in different syntactic positions. If topicalized DPs appear with an agreement SCI, the external theta-role is assigned to a null subject *pro* in the specifier of AgrP (see also Manzini & Savoia (2002:fn.4) for an account that involves Topic and Focus position for subjects and SCIs).

Postverbal subjects. Brandi and Cordin (1989) claim that northern Italian dialects are NSLs because they allow subject inversion with all types of verb, and with all types of subject (definite and indefinite).

On the other hand, in Trentino and Fiorentino unergative verbs show lack of subject-verb agreement when they occur with a postverbal subject, as shown in (34) and (35).

- (34) a. ha telefoná qualche putela (Trentino)
 has.3SG called.M.SG some girls.F.SG
 ‘some girls called’
- b. * l’ ha telefoná qualche putela
 SCl.F.SG has.3SG called.M.SG some girls.F.SG
 ‘some girls called’
- (35) a. gli ha telefonato delle ragazze (Fiorentino)
 SCl.M.SG has.3SG called.M.SG some girls.F.PL
 ‘some girls called’
- b. * le hanno telefonato delle ragazze
 SCl.F.PL have.3PL called.M.SG some girls.F.PL
 ‘some girls called’

Sacson (1993) investigates the phenomenon of lack of subject-verb agreement with postverbal subjects in the dialect of Conegliano (Veneto). According to Saccon (1993), in Conegliano, unaccusative and unergative verbs with a postverbal subject show lack of subject-verb agreement only if the subject is not “presupposed” in the discourse.

Sacson (1993:187ff.) argues that subjects that are generated as complement of the verb remain in their original position if they do not convey old information (see further section 2.1.2.2). If the subject does not raise from its base position, subject agreement on the SCl/verb is not triggered, and the SCl and the verb acquire a default form (i.e., 3rd person masculine singular).

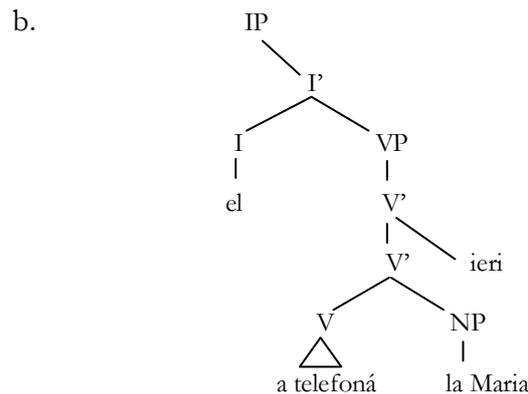
If a subject is “presupposed”, it cannot be contained within the VP, and moves to the right-hand specifier of IP.⁹ Movement of the subject causes the SCl and the verb to agree with it in person, number (and gender).

⁹ For a different analysis of right-dislocated subjects in Standard Italian, which considers them as VP-adjoined elements, see Rizzi (1982) and Samek-Lodovici (1994).

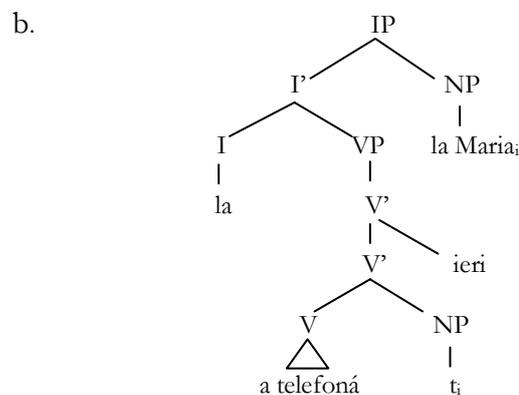
Crucially, full subject-verb agreement alternates with default agreement for both unaccusative and unergative verbs when they occur with a postverbal subject. According to Saccon (1993), this implies that both types of verb generate their subject as the complement of the verb (contra Burzio's (1986) claim that unergative and transitive verbs originate their subject in the specifier of VP).

Evidence in support of Saccon's analysis is given by the position of the subject in relation to the temporal adverb *ieri* 'yesterday', which must follow the argument in object position. The structures showing the two distinct (postverbal) subject positions, which Saccon (1993:139) proposes, are illustrated in (36) and (37).

- (36) a. el a telefoná la Maria ieri (Conegliano)
 SCL.M.SG has.3SG called.M.SG Mary.Subj.F.SG yesterday
 'yesterday, Mary called'



- (37) a. la a telefonà ieri, la Maria
 SCL.F.SG has.3SG called.M.SG yesterday the Mary.Subj.F.SG
 'Mary, she phoned yesterday'



According to Saccon, Standard Italian distinguishes the two postverbal subject positions only by means of intonation. In the northern Italian dialects, instead, occurrence of the subject in one postverbal position or the other is also reflected in the SCI/verb agreement.

To summarise, northern Italian varieties allow the subject to appear in preverbal and postverbal position. In order to account for the co-occurrence of preverbal subjects and SCIs, overt subjects are thought to occupy either an A'-position (adjoined to AgrP, or in TopP), or the higher projection of a double A-position, or else the specifier of AgrP, as in the case of elements that cannot be topicalized, i.e., quantifiers.

Postverbal subjects also co-occur with SCIs, but they may occupy different positions in the structure. The position that a postverbal subject fills is reflected in the form of the SCI and the verb. If the subject remains in its base position, as complement of the verb, the SCI and the verb acquire default agreement. If, instead, the subject moves from its original position to another postverbal position, full agreement is expressed on the SCI and verb.

2.1.2.2 Definiteness and information status

Argument definiteness has been the object of a number of cross-linguistic studies that define it in strictly syntactic terms (cf. among others Belletti, 1988). In an attempt to challenge this radical approach, more recent studies (e.g., Enç, 1991; Pinto, 1997; Saccon, 1993; Suñer, 1992) propose that definiteness and information-status of an argument are related in determining its syntactic behaviour.

Belletti (1988) develops further the idea that unaccusative verbs generate the subject as complement of the verb (Burzio, 1986) to include Case assignment. According to Belletti, unaccusative verbs inherently assign Partitive Case to their only argument, i.e., the subject generated in object position. Since only indefinite nominals can be assigned

Partitive Case, it follows that the postverbal subjects of an unaccusative verb can only be indefinite. This phenomenon is also known as the Definiteness Effect (henceforth, DE) (Belletti, 1988:2).

Consider the examples in (38) from French (adapted from Belletti, 1988:4).

- (38) a. Il est arrivé trois filles (French)
 Expl is.3SG arrived.M.SG three girls.Subj.F.PL
 ‘There arrived three girls’
- b. *il est arrivé la fille
 Expl is.3SG arrived.M.SG the girl.Subj.F.SG
 ‘there arrived the girl’
- c. la fille est arrivée
 the girl.Subj.F.SG is.3SG arrived.F.SG
 ‘the girl arrived’

In French, the postverbal subject of an unaccusative verb shows DE. Indefinite subjects (cf. (38.a)) are grammatical because they bear the Partitive Case assigned by the verb to its internal argument, while definite subjects (cf. (38.b)) are ungrammatical because if they remain in the base position they fail to receive case. In order to receive case, they must raise to the specifier of IP (where they are assigned Nominative case by I).

Italian appears to escape DE in that with unaccusative verbs the postverbal subject can be either an indefinite (39.a) or a definite nominal (39.b).

- (39) a. è arrivato un ragazzo (Italian)
 is.3SG arrived.M.SG a boy.Subj.M.SG
 ‘a boy arrived’
- b. è arrivato il ragazzo
 is.3SG arrived.M.SG the boy.Subj.M.SG
 ‘the boy arrived’

Belletti argues that all languages are subject to DE, including Italian. However, in the case of Italian DE is obscured because from its base position the subject right-adjoins to VP. In the case of unaccusative verbs, an indefinite subject remains in its base position (as

strict correspondence between morphological determiner and semantic interpretation, Saccon introduces the semantic concept of ‘presupposition’ that distinguishes between a ‘definite’ argument (i.e., ‘presupposed’, namely, previously mentioned in the discourse, or known to the hearer) and an ‘indefinite’ argument (i.e., ‘non-presupposed’, that is, new to the discourse and/or not known to the hearer) (cf. Prince, 1981).

The two types of subjects (i.e., presupposed and non-presupposed) occupy different syntactic positions. Only non-presupposed subjects can occur as complement of the verb, while presupposed subjects must occupy a position outside the VP. In Italian, the difference between the two postverbal subject positions is expressed only through prosodic features, that is, flat intonation in the former, and a short pause between verb and subject in the latter.

In the northern dialect of Conegliano, a further element is involved, that is, subject-verb agreement. ‘Non-presupposed’ subjects must occur with default SCl/verb agreement (3rd person masculine singular) (42), whereas ‘presupposed’ postverbal subjects trigger full SCl/verb agreement (43). Examples (42) and (43) from Conegliano are adapted from Saccon (1993:167).

(42) Context: On the bus, speaker A falls asleep and when he wakes up, speaker B tells him that his sister had got on the bus.

B: el era montá su to sorea (Conegliano)
 SCl.M.SG is.3SG got on.M.SG on your sister.Subj.F.SG
 ‘your sister had got on’

(43) Context: Speaker A asks where she is now and speaker B replies that she got off.

B: la e smontada to sorea
 SCl.F.SG is.3SG got off.F.SG your sister.Subj.F.SG
 ‘she got off, your sister’

One way to refine the notion of ‘presupposed’ subject is by looking at Enç’s (1991) distinction between ‘definiteness’ and ‘specificity’. Enç moves away from the standard use

of the term ‘specific indefinite’ to characterize a (morphologically) indefinite DP whose referent truly exists in the world (e.g., ‘I saw a man’ [‘a man’ = a specific individual]). Following Heim (1982), he claims that definiteness and specificity are both features contained within a DP in the form of two indices: the first index represents the morphological definiteness, the second index determines its specificity, namely, its semantic definiteness (or ‘presupposition’) in relation to the discourse.¹⁰

While definite DPs are both definite and specific, morphologically indefinite DPs may be either specific or non-specific. Specific indefinites must be “*distinct* from previously established discourse referents”, whereas non-specific indefinites must be also “*unrelated* to previously established referents” (Enç, 1991:8).

Enç identifies two types of relation that may occur between a DP and its potential antecedent. Definite DPs establish an ‘identity relation’ with an antecedent in the discourse (that is, the two referents are indeed the same one), as in (44.a); specific indefinite DPs are related to an antecedent in the discourse via an ‘inclusion relation’ (that is, although not explicitly, they are “part of” a given antecedent), as in (44.b); non-specific indefinites do not relate to any previous antecedent, they are existentials introducing a new entity in the discourse, as in (44.c).¹¹

(44) a. Context: Four boys went to play football. They all got back for dinner.

sono arrivati i ragazzi (Italian)
 are.3PL arrived.M.PL the boys.Subj.M.PL
 ‘the boys arrived’

¹⁰According to Prince (1988), markers of morphological definiteness include: definite article, demonstratives, possessive adjectives, personal pronouns, proper nouns, and universal quantifiers (such as ‘all’ and ‘every’). Markers of morphological indefiniteness are: indefinite articles (including the null article), weak quantifiers (such as ‘some’, ‘any’, ‘a few’, ‘few’ etc.), and cardinal numerals (e.g. ‘one’, ‘two’, ‘a hundred’, etc.). The claim that universal quantifiers are definite in nature is supported by the fact that they cannot appear in existential clauses because definiteness already implies existence (cf. Milsark, 1974; Chomsky, 1977; and for an account involving Partitive Case, also Belletti, 1988); moreover, they always trigger SCI/verb agreement when appearing postverbally (Suñer, 1992:667).

¹¹ See Pinto (1997:Ch.2) for an analysis of the syntax of specific indefinites with a partitive interpretation.

- b. Context: Four boys and two girls got lost during a school trip.

sono arrivati due (dei) ragazzi
are.3PL arrived.M.PL two (of the) boys.Subj.M.PL
'two (of the) boys arrived'

- c. Input: What happened?

sono arrivati due ragazzi
are.3PL arrived.M.PL two boys.Subj.M.PL
'two boys arrived'

Opposing the use of the term 'partitive' in Belletti (1988), Enç assigns a covert partitive reading to specific indefinites. Despite being morphologically indefinite (first index), their intrinsic meaning is that of "part of..." (second index). The character of the second index is what distinguishes a specific from a non-specific indefinite, that is, a presupposed from a non-presupposed indefinite DP.¹²

Enç's distinction of definiteness and specificity casts a light on the notion of indefinite 'non-presupposed' subjects, but does not account for the fact that also definite subjects can be non-presupposed, and they can occur with default SCl/verb agreement in the northern Italian dialects (cf. (42)), or flat intonation in Italian. In fact, according to Enç (1991:9), all definites are specific "because the identity relation entails inclusion".

Suñer (1992) argues that if a sentence has a subject that is given or "readily identifiable", that is, either "specific" (in Enç's terms) or "presupposed" (in Saccon's terms), the SCl and the verb fully agree with the subject no matter its syntactic position and/or its definiteness status. If the subject conveys "new" information the SCl and the verb fail to agree with it.

¹² Enç (1991) distinguishes between presentational DPs (indefinite) and quantificational DPs (definite), and claims that there exists no single DP that can fulfill both functions at the same time. According to Enç, morphological quantifiers such as 'several', 'few', 'many', 'a few' and cardinal numbers are "weak determiners" with non-quantificational interpretation, and, therefore, they behave like indefinites. Since specificity presupposes existence, but, nonetheless, weak determiners may appear in existential sentences (i.e., presentational function), it follows that these determiners are non-specific in Enç's terms. The quantificational interpretation of weak determiners depends entirely on the nature of the second index: if the second index implies specificity, the full DP is assigned partitive reading and it is interpreted as a quantificational (definite) DP (for a different account of the weak determiner 'most', cf. Belletti, 1988: fn.16).

According to Suñer, an identifiable subject referent and the agreeing morphology (SCI/verb) constitute a chain and, therefore, are coindexed. A subject which is non-identifiable (by the hearer) is characterized, in the northern Italian dialects, by the lack of such chain-relation between referent and verbal morphology, and, as a result, it appears with default (3rd singular masculine) agreement on the SCI and the verb. As Suñer (1992:668) puts it:

“...SCLs serve to separate those subjects which are presupposed or specific from those which are not. [...] the SCL and the doubled subject must match in features because they form a chain where each member constitutes one part of a discontinuous element. In essence, the Northern Italian vernaculars seem to be wearing the theme (=presupposed)/rheme (=asserted) structure of the sentence on their sleeve, since they signal it by means of their SCLs.”

Ligurian data present a problem for Suñer’s analysis in that “non-presupposed” subjects may occur with both default (45.a) and full SCI/verb agreement (45.b).¹³

- (45) Context: A girl, whose name is Maria, has just turned up.
 Input: What happened?
- a. u l’è rivau üna zuena/Maria
 SCI.M.SG Cl.is.3SG arrived.M.SG a girl/Mary.Subj.F.SG
 ‘a girl/Mary arrived’
- b. a l’è rivàa üna zuena/Maria
 SCI.F.SG Cl.is.3SG arrived.F.SG a girl/Mary.Subj.F.SG
 ‘a girl/Mary arrived’

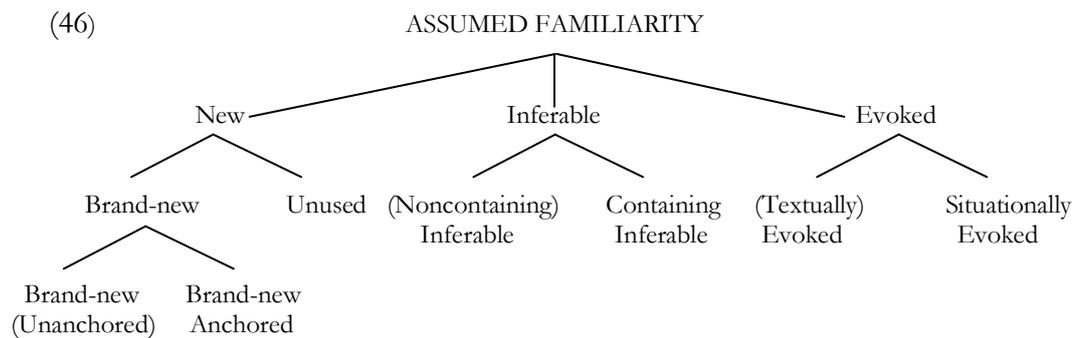
In order to determine whether variation in the use of SCIs and SCI /verb agreement in Ligurian is due to differences in the pragmatic notions of “presupposed” and “non-presupposed” subject, the information status of the subject is analysed following Prince’s (1981) typology.

Prince (1981) identifies three types of given information (or ‘givenness’): (i) ‘predictable/recoverable’, i.e., a type of information that the speaker assumes the hearer

¹³ Ligurian data present a further problem for Suñer’s analysis. In Ligurian, “presupposed” subjects normally appear with full SCI/verb agreement but can also be found with default agreement. However, this problem for Suñer’s account of default agreement is only apparent as, in these cases, “new” information is provided not by the subject but by the entire sentence (cf. Browne & Vattuone, 1975).

will predict as occurring in a certain position in the sentence, on the basis of previous input; (ii) ‘salient’, that is, a specific entity is predicted by the speaker to be in the hearer’s mind at the time of hearing the utterance; and (iii) ‘shared knowledge’ or ‘assumed familiarity’, representing the speaker’s belief that the hearer knows or can infer a particular concept/entity.

Prince develops the last type of givenness (iii) into a taxonomy, the ‘Taxonomy of Assumed Familiarity’ (Prince 1981:237) reported here in (46).



The taxonomy included three major classes of information-status, namely, New, Inferable and Evoked.

Among New information, we find items that are completely new to the discourse and are not part of a ‘shared knowledge’ (Brand-new), and items that, despite being new to the discourse, are equally known to both speaker and hearer, but their appearance in a given sentence is not necessarily predictable (Unused, e.g., ‘the government’). Within Brand-new items, there are Brand-new Anchored items (e.g., ‘a guy I work with’), which are new to the discourse (‘a guy’), although they are related to some information present in the discourse (the referent in ‘I work with’); and Brand-new (Unanchored) items, which are simply ‘out-of-the-blue’.

Opposed to New is Evoked information. Evoked items may have occurred earlier in the discourse (Textually Evoked), or simply uttered because they are related to the situation that both speaker and hearer are experiencing (Situationally Evoked).

Between New and Evoked, we find Inferable information. Inferables are discourse entities that may be recovered by a link with an Evoked item or with other Inferables (e.g., ‘a bus’ has ‘the driver’ as Inferable). Within the category of Inferables there is a subgroup, namely, Containing Inferables. These involve lexical expressions that include the entity from which the Inferable is recoverable (e.g., ‘one of these eggs’).^{14,15}

According to Prince (1981:245), the use of these discourse entities can be measured in a ‘familiarity scale’, reproduced here in (47), which varies significantly according to whether we consider subject or object arguments. While subject arguments are most likely to be Evoked items, the range of object arguments covers the entire scale.

$$(47) \quad \left. \begin{array}{l} \text{Text. Evoked} \\ \text{Sit. Evoked} \end{array} \right\} > \text{Unused} > \text{Inferable} > \text{Cont. Inferable} > \text{Anch. Brand-new} > \text{Brand-new}$$

To sum up, the effects of subject definiteness have been investigated in relation to syntactic structure (cf. Belletti, 1988), and to information status of the subject referent (e.g. Saccon, 1993; Suñer, 1992). Evidence from the northern Italian varieties (cf. Saccon, 1993 Suñer 1992, among others) has shown that definiteness and information status of the subject have an effect on SCl/verb agreement. One issue that has not been tackled by previous studies is whether definiteness and/or information status affect the variability of the SCl form with either full or default verb agreement, or indeed, whether definiteness and/or information status influence the presence vs. absence of the SCl.

¹⁴ All examples are taken from Prince (1981:235-6), apart from the example of Unused entities, which is taken from Sharma (2005)(cf. fn.15).

¹⁵ In her analysis of the use of articles in Indian English, Sharma (2005:549) revisits Prince’s taxonomy in order to refine a few ambiguous categorizations: (i) Inferable vs. Unused (according to Sharma, only “culturally recognized” entities can be classified as Unused, e.g., ‘the US government, ‘the Yellow Pages’); (ii) Containing Inferable (which involve NPs with CP complements, NPs with following locatives; NPs ellipsis); (iii) Anchored Brand-new (which include NPs with an evoked locative, NP heads of relative clauses, prepositionally modified NPs, modified NPs relying on prior discourse knowledge); (iv) the level of (fading) accessibility of Evoked items, which can be determined by the context.

2.1.3 *Properties of the verb*

According to the standard approach (e.g., Brandi & Cordin, 1989), SCl are agreement elements which phonologically realize part of verbal agreement (i.e., they are the overt spell-out of the inflectional head). Verb-related factors that are likely to affect overt/zero SCl variation and/or overt SCl variation are: finite verb morphology (section 2.1.3.1), and non-finite verb agreement (section 2.1.3.2).

2.1.3.1 *Finite verb morphology*

Renzi and Vanelli (1983:133) claim that there is no connection between the presence (or absence) of a SCl and the richness of the verb morphology. Their main argument in support of this claim is that 2nd person singular SCl is always present despite the fact that 2nd person singular verb morphology almost always differs from the other persons in the verb paradigm.

Renzi and Vanelli (1983:133) propose the following generalization:

“...if in a variety there are subject [clitic] pronouns which share the same form, the corresponding verbal endings differ from one another; if in a variety there are persons in the paradigm which share the same verbal ending, the corresponding subject [clitic] pronouns differ from one another...” (my translation).¹⁶

Their claim is supported by Brandi and Cordin (1989:117) who maintain that in northern Italian dialects the same agreement features are realized phonetically not only on the verb ending (as is the case for Italian), but also on the Inflectional head by the means of a SCl.

Renzi and Vanelli’s generalization involving SCl/verb agreement does not account for cases of impoverished verb morphology, where a syncretism in verb forms does not

¹⁶ “...se in una varietà ci sono dei pronomi soggetto formalmente uguali, le desinenze delle persone corrispondenti nel verbo sono diverse, o viceversa: se in una varietà ci sono delle desinenze uguali nel verbo, i pronomi soggetto corrispondenti sono diversi...” (Renzi & Vanelli, 1983:133).

necessarily result into a difference in SCl forms. The examples of verb syncretism in (48) are from Ligurian.

- (48) a. Ø ne piav-*a* ina brancà
 (SCl) PartCl took-3 a handful
 ‘they used to take a handful’
- b. Ø nu a cunuscev-*a*
 (SCl) not OCl know-3
 ‘he didn’t know her’

Both examples in (48) show the same verb ending *-a* despite the fact that the subject referent is 3rd plural in (48.a) and 3rd singular in (48.b). The zero SCl form in both contexts does not allow one to disambiguate the use of the syncretic verb ending *-a* for singular and plural subject referent, given that it does not (overtly) express any number (and/or gender) feature. Further investigation of empirical data is needed in order to understand to what extent verb morphology and SCl form are, in fact, related.

2.1.3.2 *Nonfinite verb agreement*

In Romance, the verbal element that may agree in number and gender with the subject referent, apart from an overt SCl, is the past participle.

Burzio (1986) argues that verbs that show gender and number agreement on the past participle have the same underlying structure. In Standard Italian, the past participle of transitive verbs agrees in number and gender with the object, when this raises from its position as complement of the verb and adjoins to the left of the finite verb in the form of a clitic, as in (49).

- (49) Giovanni la ha accusat-*a* (Italian)
 John.Subj OCl.F.SG has.3SG accused-F.SG
 ‘John has accused her’

Other verbs that show agreement on the past participle are reflexive (50.a), passive (50.b), unaccusative verbs (50.c).

- (50) a. Maria si è accusat-a
 Mary.Subj.F.SG ReflCl is.3SG accused-F.SG
 ‘Mary has accused herself’
- b. Maria è stat-a accusat-a
 Mary.Subj.F.SG is.3sSG been-F.SG accused.F.SG
 ‘Mary has been accused’
- c. Maria è arrivat-a
 Mary.Subj.F.SG is.3SG arrived-F.SG
 ‘Mary arrived’

According to Burzio (1986:55), in (49) and (50), past participle agreement is triggered by two distinct binding relations. These are illustrated in (51).¹⁷

- (51) a. $\underbrace{cl-V \ NP}$
 b. $\underbrace{NP \ V \ NP}$

In (51.a), binding occurs between the object and the preverbal clitic (as in transitive and reflexive verbs). In (52.a), it occurs between the subject and the object (as in reflexive, passive and unaccusative verbs).

A second phenomenon involves the assignment of auxiliary *essere* ‘be’ in compound tenses. Again, this is triggered by two binding relations, illustrated in (52).

- (52) a. $\underbrace{NP \ cl-V}$
 b. $\underbrace{NP \ V \ NP}$

In (52.a), the subject and the preverbal clitic are bound (e.g., in reflexive verbs), whereas in (52.b) binding occurs between the subject and the object, thus matching the relation that triggers past participle agreement for reflexive, passive and unaccusative verbs.

According to Burzio (1986), reflexive, passive and unaccusative verbs show gender and number agreement on the past participle and assignment of auxiliary *essere* because the

¹⁷ For an analysis of the structure underlying past participle agreement, see Kayne (1989) and Belletti (2006). These two analyses of past participle agreement are illustrated in Chapter 3 (section 3.3.2).

subject is the internal argument of the verb (in passives and unaccusatives), or binds the complement of the verb and the intermediate clitic (as is the case for reflexives).¹⁸

The presence or absence of subject agreement on the nonfinite verb will be taken into account in order to determine whether the form of the SCl varies in relation to the type of agreement on the past participle, and what are the possible structural links between these two elements, given that both realize subject agreement.

2.1.4 Adjacency

A SCl may be followed by a finite verb, or by other clitics, including negation, OCl, locative clitics, and ‘clitics of auxiliaries’ (Poletto, 1993). Renzi and Vanelli (1983:fn.6) claim that, in certain varieties, omission of a SCl occurs when the SCl is followed by negation and OCl, while other clitics do not affect the frequency of occurrence of the SCl (cf. Chapter 1, section 1.1.1).

In the clitic string that follows a SCl, a strong negative marker precedes all other clitics (e.g., Zanuttini, 1997, among other).¹⁹ As for the position of negation in relation to SCls, in northern Italian varieties, there are SCls that occur below negation, and SCls that appear above negation. According to Poletto (2000), pre- and post-negation SCls differ for the morpho-phonological features they express (cf. Chapter 1, section 1.1.1).

As for the remaining clitics, their position in the clitic string has been investigated in a number of studies (among others, Manzini & Savoia, 2001, 2004; Cardinaletti, 2008), which have provided a hierarchy of clitic positions.²⁰

¹⁸ According to Burzio (1986), the behaviour of unaccusatives and unergatives/transitives as far as auxiliary selection and past participle agreement are concerned constitutes evidence of the different underlying structure of these verb classes. While unaccusatives generate their subject as the complement of the verb, unergatives and transitives generate it in the specifier of VP.

¹⁹ In the Ligurian variety analysed here, negation is expressed by the strong preverbal negative marker *nu*.

²⁰ Here, I will not deal with the issue of whether clitics are base generated in their surface position (Sportiche, 1996), or whether they move there from their argument position (e.g., Kayne, 1989, 1994), but only with the clitic sequence.

Cardinaletti (2008) argues that, among OClS, person clitics (1st/2nd person DOClS and IOClS) occur before non-person clitics (3rd person DOClS), which have number. These are followed by impersonal clitics (St. It. *si* ‘one’) and partitive clitics (St. It. *ne* ‘of it/of them’), which lack, respectively, person and number. This string is summarized in (53), where \emptyset represents the lack of feature (Harbour, 2009).

(53) (Person:+) > (Number:+) > (Person: \emptyset) > (Number: \emptyset)

Manzini and Savoia (2001) provide a similar hierarchy of clitic positions in which they distinguish between impersonal *si*, which occurs higher in the hierarchy (namely, closer to SClS) and reflexive *si*, which appears on a lower position.

Locative clitics occupy an even lower position in the hierarchy, as they are never in competition with DOClS, impersonal or partitive clitics. However, they overlap with IOClS (Manzini & Savoia, 2001). In particular, in many varieties the role of the 3rd person IOCl is taken over by a locative clitic (e.g., Lig. *ghe*) (cf. Kayne, 2006; Manzini & Savoia, 2001, 2004).

2.1.4.1 *Clitics of auxiliaries*

Poletto (1993) argues that there exists a class of clitics that only occur with auxiliaries, that is, the ‘clitics of auxiliaries’, which are not agreement elements as they do not reduplicate the phi-features of the subject, and are insensitive to the preverbal or postverbal position of the subject.

According to Poletto (1993), these clitic elements form a complex head with the auxiliary in order to prevent it from raising and cliticizing onto the complementizer, when a null subject requires licensing and identification by an overt (agreement) SCl. If an object clitic or a locative clitic (e.g., Lig. *ghe*) occur between the SCl and the auxiliary, the role of the ‘clitics of auxiliaries’ is taken over by this element.

Ligurian shows a similar clitic *l'* which occurs before vowel-initial auxiliaries and copula 'be'/possessive 'have'. In Ciarlo (2007), I claim that the clitic *l'* can be interpreted either as an allomorph of a 3rd person OCl (*u, a, i, e*), or as a phonetic element. The allomorph *l'* occurs when the internal argument raises to occupy the position before the auxiliary (i.e., with transitive verbs that have a definite direct object, and with unaccusative-like verbs). The phonetic clitic *l'* occurs instead when no internal argument is present (i.e., with unergative verbs), or when the internal argument does not raise to a preverbal position (i.e., with transitive verbs that have an indefinite direct object, or with unaccusative verbs that show no subject-verb agreement).

In other northern dialects (e.g., Piedmontese varieties), the clitic form *l'* is thought to have derived diachronically from the consonantal complement clitics *lo/la* which have dropped their vowels in front of a vowel-initial verb form (cf. Parry, 1995; Gorla, 2004). In Ciarlo (2007), I note that in Ligurian *l'* occurs only in front of vowel-initial auxiliaries, and not with vowel-initial lexical verbs. Assuming that in Ligurian the form *l'* has derived from some consonantal complement clitics, this phenomenon must have occurred only with auxiliaries, and it must have spread by analogy to all contexts where vowel-initial auxiliaries occur. In contexts that require a complement clitic, *l'* has maintained its original function of OCl. In contexts that do not require an OCl *l'* has lost any morphological content and has been retained only as a phonetic clitic. The presence of (either type of) the clitic *l'* correlates with the absence of cliticization between the auxiliary and the complementizer in Ligurian (cf. Poletto, 1993).

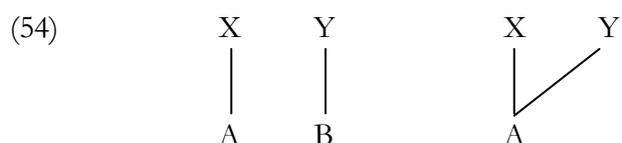
The investigation of the effect of adjacency on SCl variation and variability will take into account the fact that individual adjacent clitics occupy different positions in the hierarchy, in order to determine whether the type of adjacent clitic and its occurrence on a higher or a lower position in the clitic string influences the choice of SCl variant.

2.1.5 Phonological context

Previous studies on the phonological form of northern Italian SClS (e.g., Cardinaletti & Repetti, 2004, 2005) have focussed mainly on the distinction between SClS that express morpho-syntactic features and SClS that are pure phonological elements, thus generating variation across grammatical persons (cf. Chapter 1, section 1.1.1).

In the present study, I investigate the effect of phonology not across grammatical person, but on individual SCl variants. In particular, given that all SCl variants under investigation are vocalic in nature, the effect of preceding and following vowels is analysed in order to determine whether phonological processes such as phonological feature spreading (Clements, 1999) and vowel coalescence (Anttila, 2002) are involved.²¹

In the process of feature spreading, phonological features are passed from one element to an adjacent one, as in the schematic structure in (54) (from Clements, 1999:206).



If this process involves two adjacent vowels, which share [\pm HIGH] or [\pm LOW] traits, it is also defined as vowel coalescence (Anttila, 2002). In the process of vowel coalescence, the first of two unstressed adjacent vowels acquires the phonological traits of the second vowel.

Given that SClS are unstressed vocalic elements, the effect of vowel coalescence is likely to have an effect on the choice of their phonological form.

²¹ Unlike many other northern Italian varieties, Ligurian does not delete unstressed vowels (Forner, 1997:245). Therefore, the majority of preceding contexts will involve a vowel.

2.2 Processing effects

To my knowledge, the effect of processing has never been taken into account in an investigation of SCl variation and variability.

In this work, I look in particular at the effect of the presence of the same variable in the recent discourse, and how the processing of a given variant within that variable affects the form of the following variant (cf. Scherre & Naro, 1991, 1992).

According to Scherre and Naro (1991, 1992) (cf. also Poplack, 1980), the presence of one variant in the recent discourse triggers the choice of the same variant in the following token. In particular, Scherre and Naro (1991:24) delimit the recent discourse in which the effect of processing may take place within a sequence that ends when the speaker is interrupted by an interlocutor, or that includes up to the previous ten sentences.

Scherre and Naro (1992) argue that if a sequence of discourse is characterized by the serial occurrence of a given variable (i.e., the high frequency of tokens involving that variable), processing has greater impact on the variability than any other external factor.

2.3 Age

The impact of age on SCl variation in northern Italian varieties has only been examined in one study. Moretti (1999) investigates the influence of the external variable age on SCl variation in one variety of the Italian-speaking part of Switzerland (Ticino). He analyses the occurrence of SCls in the speech of various age groups, involving young, adult and old speakers, and he identifies a clear increase in the use of zero forms as age (and dialect competence) decreases.

Moretti (1999) observes that the general trend among young speakers is to favour the zero SCl form particularly in 3rd person contexts that overtly express a lexical subject.

Although he concludes that, in younger generations, the decrease in the use of SCIs is related to the contact with the standard, he notices that frequency of SCI use varies at the level of the individual (Moretti, 1999:96).

The current analysis will include age as an external factor that potentially affects SCI variation in Ligurian and, in particular, the frequency of the zero form due to the contact with Italian, a language that lacks SCIs.

In the following chapters, I present the variationist and syntactic analyses of variation and variability in three SCI variables in Ligurian, namely, the *u*, *a/Ø* alternation in 3rd singular contexts (Chapter 3), the *i/e/Ø* variation in 3rd plural contexts (Chapter 4), and the *e/a/Ø* alternation in 1st person contexts (Chapter 5), and I develop a feature-based account of variation that extends to all Ligurian SCIs (Chapter 6).

CHAPTER 3

THIRD PERSON SINGULAR SUBJECT CLITIC VARIATION

In this chapter, I investigate the phenomenon of overt/zero SCl alternation in 3rd person singular contexts in Ligurian. I distinguish between contexts that present categorical use of an overt SCl variant, and contexts that show overt/zero SCl variation. For the former, I provide a syntactic analysis that involves the minimalist notions of feature valuation and checking, the operation Agree, and the Defective Intervention Effect (Chomsky, 1995, 2000, 2001). To account for the latter, I carry out a variationist analysis that examines the effect of linguistic and extra-linguistic factors on the variability of the zero SCl form, and I provide evidence for the fact that overt/zero SCl variation is influenced by syntactic and phonological factors.

Third person singular contexts divide into contexts that show agreement with a subject or a nominal predicate referent, which I will call “referential”, and contexts that lack a subject referent, which I will refer to as “nonreferential”. The two contexts present different SCl variables.

The SCl variable that occurs in referential contexts presents a full agreement form (masculine *u* or feminine *a*) that alternates with a zero SCl form (\emptyset). Referential contexts may occur with default subject-verb agreement, in which case the only SCl form that occurs is an overt form *u*. In nonreferential contexts, an overt variant (*u*) alternates with a zero form (\emptyset).

Referential variable u, a/∅. Referential SClS have an overt form *u* for masculine singular referents and an overt form *a* for feminine singular referents. Referential SClS *u* and *a* occur with overt subjects (1);

- (1) a. u preve *u* fajeva a scheura nurmale
the priest.M.SG SCl did.3SG the school of-everyday
‘the priest was teaching at school everyday’
- b. me nonna *a* gh’ajeva sti dui fii
my grandma.F.SG SCl Cl.had.3SG these two sons
‘my grandma had these two sons’

with null subjects (*pro*) (2);

- (2) a. *pro* *u* stüdia quarta
pro.M.SG SCl studies.3SG fourth (class)
‘he is in year eight’
- b. *pro* *a* va a l’azilu
pro.F.SG SCl goes.3SG at the.nursery
‘she goes to the nursery’

and with nominal predicates that are introduced by an expletive null pronoun (*pro*) in impersonal ‘it’ and existential ‘there’ constructions (3).

- (3) a. li *pro* *u* l’era u depojitu de l’egua
here.ADV Expl SCl Cl.was.3SG the storage.M.SG of the water
‘here it was the water storage’
- b. *pro* *a* gh’è ancù ina scignura ansiana
Expl SCl there.is.3SG still a lady.F.SG old.F.SG
‘there is still an old lady’

Referential overt SCl *u* and *a* alternate with a zero SCl form with both overt (4.a,b) and null subjects (4.c), with existential ‘there’ (4.d), and with impersonal ‘it’ (4.e).

- (4) a. so fré \emptyset l’ha fetu primmu liceu
his brother.M.SG (SCl) Cl.has.3SG done first high school
‘his brother has passed the first year of high school’
- b. so seu \emptyset n’ha dui masc-ci
his sister.F.SG (SCl) of-them.has.3SG two boys
‘(of boys) his sister has two’
- c. *pro* \emptyset telefuna ciü tardi
pro.F.SG (SCl) calls.3SG later.Adv
‘she will call later’
- d. duman *pro* \emptyset gh’è a funsiun
tomorrow Expl (SCl) there.is.3SG the service.F.SG
‘tomorrow there is the religious service’

- e. *pro* \emptyset *l'è* *sempre istè*
 Expl (SCL) CL.is.3SG always summer.F.SG
 'it's always summer'

The clitic *l'* that appears before the verb in (4.a) and (4.e) is a phonetic element and not a SCL, and I claim this for two main reasons, namely, that it can co-occur with a (vocalic) agreement SCL (cf. (5.a)) and it only appears when followed by a vowel-initial auxiliary or copula/possessive 'have' (cf. Chapter 2, section 2.1.4.1).

Full SCL/verb agreement (cf. (1)-(4)) occurs with null, pre- and postverbal subjects, and with nominal predicates. However, like most northern Italian varieties (cf. Saccon, 1993; Suñer, 1992), Ligurian allows lack of SCL/verb agreement to occur with postverbal subject and nominal predicates.

In such cases, the finite verb acquires 3rd singular morphology and the nonfinite verb (i.e., the past participle) gets default masculine singular specification. With default subject-verb agreement, a unique SCL form *u* occurs with both masculine and feminine referents (5.a,b), whereas the referential SCL variant is ungrammatical, as is evident for feminine subjects (5.c). Unlike fully agreeing SCL forms, default SCL *u* does not alternate with a zero SCL form (5.d).¹

- (5) a. *u* *l'è* *riva-u* *Angelo*
 ?SCL CL.is.3SG arrived-M.SG Angelo.M.SG
 'Angelo arrived'
- b. *u* *l'è* *vegnü-u* *Maria*
 SCL CL.is.3SG come-M.SG Maria.F.SG
 'Maria came'
- c. **a* *l'è* *vegnü-u* *Maria*
 SCL CL.is.3SG come-M.SG Maria.F.SG
 'Maria came'
- d. ** \emptyset* *l'è* *vegnü-u* *Maria*
 (SCL) CL.is.3SG come-M.SG Maria.F.SG
 'Maria came'

¹ In example (5) and (6), the notation ? indicates that the SCL form is ambiguous between a variant that is used with full subject-verb agreement and a variant that is used with default agreement, and there is no other element in the sentence that can disambiguate the type of agreement that such sentence shows.

Masculine singular referents do not morphologically distinguish default from full agreement as, in both cases, the SCl and the verb share the outcome in (5.a). In (5.b), default number and gender agreement is expressed on the SCl and the nonfinite verb, which both present masculine singular morphology, whereas the finite verb only shows default number agreement, namely singular. Cases where default agreement is only expressed on the nonfinite verb and not on the SCl (cf. (5.c,d)) are ungrammatical in this variety.

The ungrammaticality of zero SCl in default contexts is evident only in sentences that involve a compound tense, because, even though the SCl does not appear in an overt form, the nonfinite verb determines whether the agreement is full or default by expressing or lacking gender specification. In sentences that occur with a simple tense (6), the presence of a zero SCl form is ambiguous because, due to the lack of the nonfinite verb, it is impossible to distinguish between agreeing and default SCl/verb agreement (6.b).

- (6) a. u gh'era a festa
 SCl there.was.3SG the party.F.SG
 'there was the party'
- b. Ø gh'è a funsiun
 ?(SCl) there.is.3SG the service.F.SG
 'there is the religious service'

In the same way as masculine singular contexts, contexts that involve simple tenses and present a zero SCl form are considered as ambiguous for SCl/verb agreement with postverbal subjects or nominal predicate referents.

Nonreferential variable u/Ø. Third singular nonreferential contexts include existential ('there') and impersonal ('it') structures with a non-nominal predicate, and impersonal *si* constructions (Burzio, 1986, among others). Nonreferential contexts present a single overt SCl form, namely *u*, which alternates with a zero form (Ø). Overt/zero SCl variation is

observed with nonreferential expletive ‘there’ (7) and expletive ‘it’ constructions (8), and impersonal *si* constructions (9).²

- (7) a. *pro u gh'ea pin cusci*
 Expl SCI there.was.3SG full.M.SG.Adj so.Adv
 ‘there was so many people’
- b. *pro Ø gh'è bellu pulittu*
 Expl (SCI) there.is.3SG nice.M.SG.Adj clean.M.SG.Adj
 ‘there is all nice and clean’
- (8) a. *pro u sareva meiu*
 Expl SCI would.be.3SG better.Adv
 ‘it would be better’
- b. *pro Ø me dischiaje che*
 Expl (SCI) to.me displeases.3SG that
 ‘I’m sorry that...’
- (9) a. *ma u se ghe mangiava mà*
 but SCI Cl.SI there.LocCl ate.3SG badly.Adv
 ‘but in that place we used to eat badly’
- b. *che Ø se parlava de cūna*
 that (SCI) Cl.SI talked.3SG of.cradle
 ‘that we were talking about cradles’

² In a limited number of contexts, impersonal ‘it’ constructions show also the occurrence of an overt SCI variant *a* (1.i,ii), and, in the contexts where it occurs, this variant does not show alternation with the zero SCI form in the corpus (1.iii).

- (1) i. *cui treni pro a l'è lung-a*
 with trains ?Expl SCI Cl.is.3SG long-F.SG.Adj
 ‘by train it is a long thing = it takes a long time’
- ii. *pro a l'è ver-a*
 ?Expl SCI Cl.is.3SG true-F.SG.Adj
 ‘this (thing) is true’
- iii. ?? *pro Ø l'è ver-a*
 ?Expl (SCI) Cl.is.3SG true-F.SG.Adj
 ‘this (thing) is true’

Overt SCI *a* occurs in nonreferential contexts only when the non-nominal predicate entails the meaning of an NP *cosa* (fem., sing. ‘thing’) (Toso, 1997:92). The fact that, of all nonreferential structures (cf. examples (7)-(9)), SCI variant *a* only appears in this specific context suggests that SCI *a* needs not be considered as a variant of the nonreferential SCI variable (*u/Ø*), but as an instance of referential feminine singular SCI *a* that is used in such context in virtue of its referential properties (namely, reference to the NP *cosa*).

Referential SCIs generally present variation with a zero SCI form (cf. example (4)). If *a* is taken to be a referential SCI, its lack of alternation with a zero SCI form in this context fails to be accounted for. Given the relatively low number of tokens (28 Ns) involving such specific context, the absence of zero form may be, in fact, nonoccurrence of this form in the corpus.

In this chapter, I investigate the nature of the zero SCl form in the two SCl variables (referential and nonreferential) found in 3rd singular contexts. I propose that the nature of the zero SCl form in Ligurian is threefold, namely, (i) a null underlying variant that has (unvalued) gender and number features; (ii) nonpronunciation of the syntactic structure due to the blocking effect of a high clitic; (iii) deletion of an overt SCl at the phonological level (Labov, 2008).

Most Ligurian speakers show (i) and (ii). In referential contexts, the zero form is given either by an underlying null variant, which can satisfy its gender and number requirements by establishing a syntactic relation (i.e., Agree) with the subject/nominal predicate referent, or by phonological truncation of the functional projection hosting the SCl. In cases where the underlying null variant fails to fulfill its gender and number requirements due to the defective intervention of the past participle, and phonological blocking does not meet the right conditions, categoricity of an overt SCl occurs, as is the case for default agreement.

In contexts that lack a subject/nominal predicate referent (i.e., nonreferential contexts), the occurrence of zero SCl is due to phonological truncation.

Moreover, Ligurian data present inter-speaker variation for the zero SCl form. One of the speakers shows a great discrepancy in her production of zero form when this is compared with that of other speakers. I account for her overproduction of zero SCl by claiming that, alongside (i) and (ii), this speaker's grammar allows for (iii), namely the phonological deletion of overt SCls in specific phonological contexts.

In section 3.1, I illustrate the variable context and the specification of the factors included in the variationist analysis of the data. In section 3.2, I present the results of the distributional and multivariate analyses for referential and nonreferential SCl variable. In section 3.3, I put forward a syntactic analysis to account for categorical cases, and I

determine the feature specification of the variants. In section 3.4, I illustrate how significant factors impact upon the variability of the zero SCl form, and I provide an account for the observed inter-speaker variation. In section 3.5, I conclude by summarizing the main findings of the syntactic and variationist analyses.

3.1 Data analysis

The variationist analysis investigates SCl variability in 3rd person singular contexts by determining the impact of a number of language-related factors and of two speaker-related factors on the occurrence of the zero SCl. This section first defines the contexts that are omitted from the analysis (section 3.1.1) and then provides the specification of the factors included in each independent variable (section 3.1.2).

3.1.1 Circumscribing the variable context

Default agreement. Grammaticality judgements (cf. Chapter 1 and Chapter 2, example (5)) have shown that in Ligurian default SCl/verb agreement requires a categorical overt SCl *u*. A categorical overt SCl form occurs both with feminine singular referents (10.a) and with plural referents (10.b). I assume that, by analogy, also masculine singular referents appear with categorical SCl *u* when they occur with default agreement (10.c) because, due to the morphological syncretism, default and full agreement cannot be distinguished in these contexts.

- (10) a. *u/*Ø l'è vegnù-u Maria*
 SCl Cl.is.3SG come-M.SG Maria.F.SG
 'Maria came'
- b. *u/*Ø l'è riva-u i matetti*
 SCl.M.SG Cl.is.3SG arrived-M.SG the kids.M.PL
 'the kids have arrived'

- c. *u/*∅ l'è riva-u Angelo*
 SCl.M.SG Cl.is.3SG arrived-M.SG Angelo.M.SG
 'Angelo arrived'

In compound tenses, default agreement is borne not only by the SCl but also by the past participle (cf. (10.a,b)) and by the finite verb (cf. (10.b)). In simple tenses, instead, the finite verb is the only element that shows default/full agreement beside the SCl. This is an issue for the definition of the variable context in that (masculine and feminine) singular referents share the same finite verb forms for the two types of agreement, as in (11).

- (11) a. *u rivav-a Maria*
 SCl.M.SG arrived-3SG Maria.F.SG
 'Mary was coming'
- b. *a/∅ rivav-a Maria*
 (SCl).F.SG arrived-3SG Maria.F.SG
 'Mary was coming'

Furthermore, in Ligurian, plural referents may show morphological syncretism in the verb form with singular number (12).

- (12) a. *u nu vegn-e de turisti*
 SCl.M.SG not come-3SG of tourists.M.PL
 'there are no tourists coming'
- b. *i/e/∅ nu vegn-e de turisti*
 (SCl).PL not come-3PL of tourists.M.PL
 'there are no tourists coming'

Given the overt SCl categoricity, default agreement contexts are not considered as a potential variable context. Nonetheless, singular (masculine and feminine) tokens showing default agreement are included in the analysis and considered in a single 'referential' context together with full agreement tokens. This is done in order to allow masculine subjects (e.g., (10.c)) and simple tense tokens (e.g., (11.b)), which show overt/zero SCl variation but may lack evidence regarding the type of agreement, to be analysed within a context that includes all potential tokens. Singular referential tokens are analysed with regard to overt vs. zero SCl variation, assuming that the overt SCl categoricity with

default agreement has the same impact on overt SCIs in feminine as well as in masculine contexts (see section 3.2.1.3).

Tokens involving plural subject/nominal predicate referents with default SCI/verb agreement are omitted from the analysis because the analysis does not include all potential tokens, as full agreement contexts (cf. (12.b)) are not considered (see Chapter 4).³

Polite use of third person. In Standard Italian, the 3rd singular feminine pronoun *Lei* is used to address a male or female interlocutor in a polite way. Ligurian presents the same feature, although it makes use of both the masculine personal pronoun *vellu*, when addressing a male speaker, and the feminine pronoun *vella* when talking to a female participant. In both cases, the subject pronoun (or null subject *pro*) is followed by the corresponding SCI variable, namely *u/Ø* (13.a) for masculine and *a/Ø* for feminine addressees (13.b) (default agreement is not used in these contexts). Tokens of polite use of 3rd person are first coded separately from referential and nonreferential contexts, but are subsequently omitted from the analysis as they show almost full categoricity of overt SCI variants.

- (13) a. *pro a/??Ø* l'ha rajun!
 pro SCI Cl.has.3SG reason
 'you (fem) are right!'
- b. *u gh'ha ditu "pro u/??Ø nu me spuza?"*
 SCI to-him.has said pro SCI not me.ACC marries.3SG
 'he said to (the priest) "Are you not going to marry me?"'

³ Only two tokens show a zero SCI form with plural subjects and default agreement. These are shown in (1).

- (1) i. Ø m'è vegnüu di duluri
 (SCI)to-me.is.3.SG come.M.SG of pains.M.PL
 'I have had pains'
- ii. Ø nu l'è restau de avansi
 (SCI) not Cl.is.3SG remained.M.SG of left-overs.M.PL
 'There were no left-overs'

The presence of a zero SCI in the two instances in (1) is not to be taken as counterevidence to the categoricity of an overt SCI *u* in default agreement contexts but, as I will propose in my analysis, simply as evidence of the effect of object clitics (1.i) and negation *nu* (1.ii) (see section 3.4.1).

Ambiguous subordinate clauses. Subordinate clauses frequently show cliticization of the SCI onto the complementisers *che* ‘that’ and *se* ‘if’, that is, *ch’u/ch’a* and *s’u/s’a*, or onto most wh-elements, e.g., *dunde* ‘where’ (*dund’u/dund’a*) and *cumme* ‘how’ (*cumm’u/cumm’a*). With two wh-elements, namely, *quandu* ‘when’ and *quantu* ‘how much’, cliticization of an overt SCI form cannot be distinguished from SCI omission. Tokens that present these two wh-elements are omitted from the analysis (14).⁴

- (14) a. nu so *quand’u /quandu* Ø vegne
 not know.1SG when.SCI/when (SCI) comes.3SG
 ‘I don’t know when he is coming’
- b. u m’ha ditu *quant’u /quantu* Ø custa
 SCI to-me.has.3SG told how much.SCI/how much (SCI) costs.3SG
 ‘he told me how much it costs’

Repetitions and false starts. Repetitions by the same speaker are coded only if they occur in separate turns, and immediate (following turn) repetitions by a different speaker are not included. False starts are not coded, and the complete token that follows is coded only if the SCI variant is the same as the one in the false start (15.a). Tokens such as (15.b) are, therefore, omitted from the analysis.

- (15) a. u gh’ha [*pause*] u gh’ha in frè
 SCI Cl.has SCI Cl.has a brother
 ‘he has .. he has a brother’
- b. a l’è [*pause*] Ø l’è ina me amiga
 SCI Cl.is (SCI) Cl.is a my friend
 ‘she is .. she is a friend of mine’

The same coding principle for repetitions and false starts is applied to all variables under investigation.

⁴ For the wh-element *quandu* ‘when’, older speaker produce also a variant *quande*. However, tokens that present this variant are not included in the analysis as they would not provide a result of the full number of potential tokens (Blake, 1997).

3.1.2 Factor groups specification

SCI variability in 3rd person singular contexts is investigated by determining the impact that internal linguistic factors and external linguistic factors have on it. Internal factor groups include: subject-related factors, such as gender, number, pronominality, position, definiteness and information status; syntactic factors, such as adjacency of negation, other clitic elements, or the finite verb; one verb-related factor, i.e., verb class; and finally, preceding and following phonological context. These factors have been argued to show an effect on crosslinguistic SCI variation (cf. Benincà, 1983; Poletto, 2000; Renzi & Vanelli, 1983; Heap, 2002, for the morpho-syntactic factors; Cardinaletti & Repetti, 2004 for the phonological factors) (cf. Chapter 2).

Moreover, the impact of two external linguistic factors is also tested. These factors are: the processing effect of recency of the same variant (cf. Scherre & Naro, 1991, 1992), and the sociolinguistic variable age (cf. Moretti, 1999).

In what follows, I illustrate the factor specification of each factor group that is included in the analysis of the two SCI variables, namely, referential SCI variable *u, a/Ø* and nonreferential *u/Ø*. In particular, I provide the specification of internal factors, which differ for referential contexts (section 3.1.2.1) and nonreferential contexts (section 3.1.2.2), and I illustrate the specification of those independent variables that present the same factors for referential and nonreferential contexts, that is, phonological variables (section 3.1.2.3) and extra-linguistic variables (section 3.1.2.4).

3.1.2.1 Internal linguistic factors (referential contexts)

Type of construction. Tokens are coded according to whether they have a referential subject regardless of the type of SCI/verb agreement (16.a,b), or whether the referent is a nominal predicate in an existential construction (16.c) or in an impersonal 'it' construction (16.d).

- (16) a. *u gh'è ndetu* Carlu (referential)
 'SCI there is.3SG gone.M.SG Carlo.M.SG'
- b. *u l'è vegniü* Maria (referential)
 'SCI arrived.M.SG Mary.F.SG'
- c. staseira *u gh'è* a funsiun de l'egua (existential 'there')
 'tonight SCI there is the ritual.F.SG of the water'
- d. *u l'ea* a vigilia de natale (impersonal 'it')
 'SCI it was christmas eve.F.SG'

Gender of the subject. Referential contexts are coded according to whether they occur with a masculine singular subject (17.a) or nominal predicate (17.b), or a feminine singular subject (17.c) or nominal predicate (17.d).

- (17) a. *u titulu* u restava sulu che da famiia (masculine)
 'the title.M.SG SCI remained only to the family'
- b. *u l'è in postu piccin* (masculine)
 'SCI it's a place.M.SG small'
- c. *a funsiun* a düra mezz'ura (feminine)
 'the service.F.SG SCI lasts half an hour'
- d. *u gh'era ina suora* (feminine)
 'SCI there was a nun.F.SG'

Pronominality. Tokens are coded according to whether the subject/nominal predicate is a personal pronoun (18.a), a lexical DP (18.b), a quantifier (18.c), or a null subject (*pro*) (18.d).

- (18) a. *vella* a l'ajea da cuji (personal pronoun)
 'she SCI had to sew'
- b. *u pan* u u pia *me papà* (lexical DP)
 'the bread, SCI it.Obj buys my dad.Subj'
- c. *u gh'è quarcün* ch'u ghe va (quantifier)
 'SCI there is someone who there goes'
- d. *pro* a va a l'azilu (null subject)
 'pro.F.SG SCI goes to the nursery'

Position of the referent. Referential contexts are coded depending on whether the subject is preverbal (19.a), postverbal (19.b), or topicalised (19.c). Although null subjects are always preverbal, tokens that show lack of an overt subject are coded separately from those that occur with an overt preverbal subject (19.d). Postverbal nominal predicates in existential ‘there’ and impersonal ‘it’ constructions (19.e) are distinguished from postverbal subjects because, unlike subjects, nominal predicates are categorically postverbal, and this may have a different impact on the SCl variable.

- (19) a. *u termometru* u va a tre sottuzeru (preverbal subject)
 ‘the termometer SCl falls three below zero’
- b. u l’ha sunnau *Saviu* (postverbal subject)
 ‘SCl played (the piano) Savio’
- c. *Enrica*, cumme carattere, a l’è preciza (topicalised subject)
 ‘Enrica, as for her personality, SCl she is precise’
- d. *pro* u fa secunda (null subject)
 ‘pro.M.SG SCl he attends the second class’
- e. u gh’è *u bajerico* (nominal predicate)
 ‘SCl there is the basil’

Definiteness. Subjects/nominal predicates are coded as definites (20.a), specific indefinites (i.e., “part of a limited (definite) group” (Enç, 1991)) (20.b), non-specific indefinites (20.c), and partitives (20.d). Null subjects are coded as definites.

- (20) a. *l’erba* a cresce (definite)
 ‘grass SCl grows’
- b. *in de sti fré* u l’ha duvertu ina banca (specific indefinite)
 ‘one of these brothers SCl opened a bank’
- c. u l’è passau *in fiiien* (non-specific indef.)
 ‘SCl passed by a kid’
- d. u gh’è *de l’insalatta* (partitive)
 ‘SCl there is some salad’

Information status. Following Prince's (1981) classification, as revised in Sharma (2005), subject referents and nominal predicates are coded depending on whether the information they convey is old in the discourse ('evoked', in Prince's terms) (21.a), thus including null subjects; whether the information is 'inferable', i.e. it can be recovered by the hearer (21.b), or it 'contains' an inferable item (21.c); or, whether the information is new, that is, it is conveyed by a 'new' item in the discourse (21.d), or by a new item related to another new piece of information ('anchored-new') (21.e).

- (21) a. *sulu me puè* u sajeva lezze (evoked)
 'only my father SCl could read'
- b. *u main* u l'è megù ascì (inferable)
 'the husband (of this lady) SCl is a doctor too'
- c. *a me l'ajeva ditu a padruna de stu palassu* (containing inferable)
 'SCl to me it told the owner of this building'
- d. *u gh'ea vegnüu in dulure forte* (new)
 'SCl to him occurred a sharp pain'
- e. *u l'è vegnüu u mariu de ina mestra* (anchored-new)
 'SCl came a teacher's husband'

Adjacency. Clitics are the only elements that can occur between the SCl and the finite verb. They include: negation *nu* 'not' (22.a); direct and indirect OCl (1st person) *me* 'me/to me' and *ne* 'us/to us', and (2nd person) *te* 'you/to you' and *ve* 'you(pl.)/to you(pl)' (22.b); direct 3rd person OCl *u* 'him/it (m.)', *a* 'her/it (f.)', *i* 'them (m.pl.)', *e* 'them (f.pl.)', (22.c), their allomorph *l'* in front of vowel-initial auxiliaries (22.d), indirect 3rd person OCl *ghe* 'to him/to her/to it/to them' (22.e), and partitive *ne* 'of it/of them' (22.f); reflexive OCl *se* 'himself/herself' (22.g); auxiliary/copula clitic *l'* (22.h), locative clitic *ghe* 'there' (22.i). If none of these elements occurs after the SCl, tokens are coded for SCl-verb adjacency (22.j).

- (22) a. *a nu sajeva lezze e scrive* (negation)
 'SCl not.Neg she-could read or write'
- b. *nisciün u me salüa* (1st/2nd OCl)
 'nobody SCl me.DOCl greets'

- c. vellu u *i* cammallava fin inscia stradda (3rd direct vocalic OCl)
 ‘he SCl them.DOCl carried up to the road’
- d. a *l*’ha purtà a l’uspeà (3rd direct OCl *l*)
 ‘SCl her.DOCl she-has taken.F.SG to hospital’
- e. so mamma a *gb*’ha cattò ina macchina (3rd indirect OCl *gbe*)
 ‘his mum SCl to.him.IOCl bought a car’
- f. a *n*’ha sciusciantaneuve (partitive clitic *ne*)
 ‘SCl (of them/of years).PartCl she-has sixty-nine’
- g. sta flotta a *s*’è avvijnà (reflexive clitic *se*)
 ‘this fleet SCl itself.ReflCl got closer’
- h. u *l*’è in bellu travaiiu (aux/copula clitic *l*)
 ‘SCl AuxCl.is a good job’
- i. a *gb*’era ina scignura ansiana (locative clitic *gbe*)
 ‘SCl there.LocCl was a lady old’
- j. lé *a parte* duman a dej’ure (SCl-verb adjacency)
 ‘she SCl leaves tomorrow at ten’

Verb class. This factor group is included to determine whether the original structural position of the subject has an impact on zero SCl variability. It distinguishes between two verb structures: verbs whose subject originates in the specifier of the verb phrase, that is, transitive (23.a) and unergative verbs (23.b), and verbs whose subject is base-generated as complement of the verb, namely, unaccusatives (23.c), reflexives (23.d) and passives (23.e) (Burzio, 1986). Other factors in this factor group include copular sentences (23.f); psych verbs, such as *piaje/gustà* ‘to like’, whose structure shows the theme as subject and the experiencer as (indirect) object (Roberts, 2007:151) (23.g); and raising verbs, e.g., *paré* ‘to seem’ (23.h). Moreover, the lexical verb *dì* ‘to say/to tell’ is coded separately, in cases where it is used to reproduce reported speech (23.i) or narration (23.j). Existential ‘there’ and impersonal ‘it’ constructions always occur with a copula.

- (23) a. lé *u l*’ha ripetüu a tersa (transitive)
 ‘he SCl repeated year eight’

- | | | |
|----|--|-------------------|
| b. | <i>u dorme de delà</i>
'SCI he-sleeps in the other room' | (unergative) |
| c. | <i>dui anni a l'è vegniia</i> quella piccina
'(for) two years SCI came the little girl' | (unaccusative) |
| d. | <i>a se settava</i> li da-a porta
'SCI she-used to sit (herself) by the door' | (reflexive) |
| e. | <i>sta futugrafia li a l'è steta feta</i> du quarantün
'this picture here SCI has been taken in 1941' | (passive) |
| f. | <i>u l'era nta canturia</i>
'SCI he-was in the choir' | (copula) |
| g. | <i>a me gjiata</i> a leituga
'SCI to me pleases the salad' | (psych verb) |
| h. | <i>quella tumba a pà</i> in santuariu
'that tomb SCI seems (like) a church' | (raising verb) |
| i. | <i>a gb'ba ditu</i> "No!"
'SCI to him she-said "No!"' | (reported speech) |
| j. | <i>a m'ba ditu</i> ch'a l'ea andeta li
'SCI me she-told that she had gone there' | (narration) |

3.1.2.2 Internal linguistic factors (nonreferential contexts)

The nonreferential contexts taken into account in this analysis are existential 'there' and impersonal 'it' with an adjectival, adverbial or infinitival predicate, and impersonal *si* constructions. As for internal factors, nonreferential tokens are coded for use, adjacency and verb class.

Type of construction. Nonreferential tokens are coded depending on whether they appear in existential 'there' (24.a), impersonal 'it' (24.b) or impersonal *si* constructions (24.c).

- | | | | |
|------|----|---|---------------------|
| (24) | a. | <i>u gb'è da fà</i> in travaiiu
'SCI there is to do a job' | (existential 'ghe') |
| | b. | <i>u l'è inutile</i>
'SCI it's pointless' | (impersonal 'it') |

- c. perché *u se sgrüia* (impersonal *si*)
 ‘because SCI one slips’

Adjacency. In nonreferential contexts, the SCI is always followed by another clitic element. The series of adjacent clitics include negation *nu* (25.a), indirect OCl (1st/2nd person) *me*, *ne*, *te*, and *ve* (25.b), indirect OCl (3rd person) *ghe* (25.c), impersonal *se* (i.e., St. It. impersonal *si*) (25.d), auxiliary/copula clitic *l’* (25.e), and locative clitic *ghe* (25.f).

- (25) a. peui *u nu* se riusciva a rivà (negation)
 ‘then SCI not.Neg one could get there’
- b. *u te* pà de essighe (1st/2nd indirect OCl)
 ‘SCI to you.IOCl it-seems to be there’
- c. *u ghe* cuntià pe a pensciun (3rd indirect OCl *ghe*)
 ‘SCI to him.IOCl it will count for his pension’
- d. *u se* zeugga dappertüttu (impersonal clitic *se*)
 ‘SCI SI one plays.3SG everywhere’
- e. *u l’è* impurtante savé *u* dialettu (aux/copula clitic *l’*)
 ‘SCI it AuxCl.is important to speak the dialect’
- f. *u gb’è* bellu pulittu (locative clitic *ghe*)
 ‘SCI LocCl.is nice and clean (there)’

Verb class. Nonreferential tokens are coded according to whether the SCI occurs with a copula (26.a), with a psych-verb that is preceded by an indirect OCl, e.g., *piujé* ‘to appeal to someone’, and *tuccà* ‘to be to someone to do’ (26.b). Impersonal ‘it’ and *si* tokens are coded for transitive (26.c), unergative (26.d), and unaccusative verbs (26.e). Furthermore, one lexical verb and a number of lexicalized expressions involving the use of impersonal ‘it’ or *si* are coded separately. These are *bezeugna* ‘it is needed’ (26.f) and *peu dàse* ‘it may be’ (26.g) for impersonal ‘it’, and *se peu dè* ‘one can say’ (26.h) and *se vegghe* ‘probably’ (26.i) for impersonal *si*. Finally, weather verbs are coded for in this factor group (26.j).

- (26) a. *u l’ea* mezzugiurnu (copula)
 ‘SCI it was midday’

- | | | |
|----|--|-----------------|
| b. | <i>u gh'è tuccau fà ina tezi</i>
'SCI it was to her to write a thesis' | (psych-verb) |
| c. | <i>u se cantava u vespu</i>
'SCI we used to sing the evening salms' | (transitive) |
| d. | <i>u se parla liberamente</i>
'SCI we talk freely' | (unergative) |
| e. | <i>u nu succedeva primma</i>
'not SCI it-did use to happen before' | (unaccusative) |
| f. | <i>u bezengna cangià stu toccu lì</i>
'SCI it needs changing this part' | ('need') |
| g. | <i>u peu dàse ch'i so-u catte</i>
'SCI it may be that they will buy it' | ('it may be') |
| h. | rientru <i>u se peu di a-a seira</i>
'I come back, SCI one can say, in the evening' | ('one can say') |
| i. | <i>u se vegghe che l'ho persu</i>
'SCI probably (that) I lost it' | ('probably') |
| j. | <i>u ciuviva forte</i>
'SCI it was pouring down' | (weather verbs) |

Both referential and nonreferential tokens are coded for the phonological context in which the SCl occurs, the processing effect involving recency of the same variant, and one sociolinguistic variable, i.e., the age of the speaker. Their specification is illustrated below.

3.1.2.3 Phonological factors

Tokens are coded for two phonological factor groups, that is, preceding and following phonological context.

Preceding phonology. Since 3rd singular SClS are all vocalic clitics, preceding phonological factors include individual vowel sounds /a/, /ɛ/, /e/, /i/, /o/, /ə/, /u/ and /y/, in order to determine which vowel sounds favour or disfavour a following overt SCl or indeed the zero SCl form. In the analysis, individual vowels are grouped together according to height

if they show a similar effect on the SCl, as is likely to be the case particularly for overt variants.

Tokens are also coded for preceding pause. Contexts involving a preceding consonant are coded for in this factor group, but eventually they are not considered in the analysis of the impact of preceding phonology because a preceding consonant almost categorically implies SCl cliticization onto a complementizer or a wh-element, hence a syntactic rather than a phonological phenomenon.

Following phonology. The phonological context that follows the SCl is coded according to whether it presents a fricative, a plosive, a nasal, or a liquid, or whether the following element is a vowel. Like preceding vowels, also following vowels are coded for individually and, when necessary, recoded according to height.

3.1.2.4 External linguistic factors

Besides the internal linguistic factors, I include in the analysis two external linguistic independent variables, one that concerns the effects of processing on variation, another that considers its sociolinguistic aspect.

Recency. This factor group considers the effects on SCl variability of recency of the same variant in a sequence of discourse that is broken when the interlocutor interrupts the speaker, or else within the previous ten sentences (Scherre & Naro, 1991, 1992). Coding for this factor group considers recency of a 3rd singular SCl variant in any of the 3rd singular contexts, namely, referential *u*, *a/∅* (including default *u*) and nonreferential *u/∅*. Previous variants in the discourse are recoded as recent SCl *u*, recent SCl *a*, and recent zero SCl, in order to test whether recency of a zero form (in any of the 3rd singular contexts) triggers the same variant in the following token.

The factors in this group distinguish also whether a recent SCl has the same subject referent as the following SCl, in order to determine whether recency effects are due to identity of the subject referent.

Tokens that are not preceded by a recent 3rd singular SCl are included in the group and coded for absence of the same SCl variable.

Age. One sociolinguistic variable is included in the analysis, namely, age. For socio-historical reasons (cf. Chapter 1), the present study limits the analysis of SCl variability to two age groups, an older group (70 to 80 year-olds) and a younger group (50 to 60 year-olds). 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 make regular use of it also in their adulthood, whereas they acquired Italian 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 have maintained the use of the two varieties distinct, thus using the dialect within the family (and in particular with old family members) and a regional variety of Italian in their working and social life.

The analysis of the variable age aims to determine whether, as happens in other varieties (cf. Moretti, 1999), the younger generation favours the use of a zero SCl in the two 3rd singular variables, and, if this is the case, whether this increase can be attributed to an overlap of the SCl system of the dialect with the SCl-less system of Italian.⁵

⁵ 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 Italian whereas older speakers simply accommodate to the speech of the younger. However, this distinction is difficult to detect from apparent time data, such as those used in the present study.

3.2 Results

The distributional results for the referential variable $u, a/\emptyset$ and for the nonreferential variable u/\emptyset show that the use of a zero SCl form increases in nonreferential contexts (Table 1).

<i>Referential contexts</i>			<i>Nonreferential contexts</i>		
Overall (N)	\emptyset (N)	\emptyset (%)	Overall (N)	\emptyset (N)	\emptyset (%)
4350	337	8	593	100	17

The distribution of zero SCl form for individual speakers reveals that, while most speakers present the same variability pattern, one speaker, speaker B, is found to outnumber the other speakers in her production of zero SCl. Speaker B's tokens are considered in a separate analysis.

The results of zero SCl variability in Table 1 are therefore re-proposed in Table 2 and Table 3.

<i>Referential contexts</i>			<i>Nonreferential contexts</i>		
Overall (N)	\emptyset (N)	\emptyset (%)	Overall (N)	\emptyset (N)	\emptyset (%)
3253	198	6	489	76	16

Table 2 shows the distribution of the zero SCl form in the two variables for all speakers, but without the tokens produced by speaker B. Although the percentage values for the two variables vary only slightly, the number of tokens is notably reduced, in particular as far as the referential contexts are concerned (cf. Table 1).

<i>Referential contexts</i>			<i>Nonreferential contexts</i>		
Overall (N)	\emptyset (N)	\emptyset (%)	Overall (N)	\emptyset (N)	\emptyset (%)
1097	139	13	104	24	23

Table 3 presents the distribution of the zero form for speaker B. The results for speaker B's data show that the percentage values of both variables are higher than the average values of the other speakers (cf. Table 2). Furthermore, the number of tokens that present the zero SCl is greater than the average number produced by the other five speakers, particularly in referential contexts, where the number of tokens with a zero SCl produced by speaker B is more than half the total number of tokens uttered by all other speakers.

The variationist analysis aims to determine (i) what generates the discrepancy in the production of zero SCl form between the referential and the nonreferential variable; and (ii) what causes speaker B to differ from other speakers in her production of zero SCl (inter-speaker variation).

3.2.1 Referential variable $u, a/\emptyset$

The distributional and multivariate analyses of referential variable $u, a/\emptyset$ consider tokens by all speakers but speaker B. The referential variable presents a smaller percentage of zero SCl tokens than the nonreferential variable (cf. Table 2). Table 4 shows that, within referential contexts, referential constructions and existential constructions present less occurrence of zero SCl form than impersonal 'it' construction.

Table 4. Distribution of zero SCl form (\emptyset) in referential contexts according to type of construction.

<i>Type of construction</i>	Overall (N)	\emptyset (N)	\emptyset (%)
Referential	2954	178	6
Existential ‘there’	207	10	5
Impersonal ‘it’	92	10	11

In the distributional analysis, each referential context is considered individually and results are compared in order to determine the reason why referential and existential constructions share the same variability pattern and, most importantly, why impersonal ‘it’ does not. Discrepancies in the three constructions involve default SCl/verb agreement (section 3.2.1.1) and indefinite subjects (section 3.2.1.2).

In the multivariate analysis (section 3.2.1.3), all 3rd singular contexts are considered where variation is attested, and default tokens with a singular referent are included as referential in order to control for the morphological ambiguity in masculine singular contexts.

Finally, the distributional and variationist results for all speakers are compared with those for speaker B in order to establish what factors have an impact on inter-speaker variation (section 3.2.1.4).

3.2.1.1 *Default agreement*

The ungrammaticality of the zero SCl form in default agreement contexts is reflected in the results of the only context that shows default agreement also on an element other than the SCl, that is, on the past participle. This context involves feminine singular subjects in compound tenses (of unaccusative verbs). Table 5 shows that in the corpus no token with zero SCl is attested in this context.

Table 5. Distribution of zero SCl form (\emptyset) with default SCl/verb agreement and feminine singular subjects in compound tenses (unaccusative verbs).

<i>Subject referent</i>	Overall (N)	\emptyset (N)	\emptyset (%)
Singular feminine	76	0	0

Among other referential contexts, existential constructions also present default agreement (Table 6).

Table 6. Distribution of referential variable *u*, *a*/ \emptyset in existential contexts with a nominal predicate.

<i>Number (and gender) of nominal predicate</i>	Overall (N)	variant <i>u</i> (N) (%)		variant <i>a</i> (N) (%)		zero form (N) (%)	
Feminine singular	95	83	87	6	6	6	6
Masculine singular	112	108	96	0	0	4	4

The high occurrence of variant *u* with feminine referents shows that default agreement is widely used in such contexts alongside full SCl/verb agreement. The relatively low occurrence of zero SCl form in existential contexts (cf. Table 6) follows if we assume that overt SCl *u* is categorical when default agreement occurs.

Also impersonal ‘it’ constructions occur with default agreement. Table 7 compares existential and impersonal ‘it’ constructions with feminine singular nominal predicates.

Table 7. Distribution of referential variable *u*, *a*/ \emptyset in existential and impersonal ‘it’ contexts with a feminine singular nominal predicate.

<i>Context</i>	Overall (N)	variant <i>u</i> (N) (%)		variant <i>a</i> (N) (%)		zero form (N) (%)	
Impersonal ‘it’	51	13	25	31	61	7	14
Existential	95	83	87	6	6	6	6

In impersonal ‘it’ constructions default agreement is less recurrent in feminine singular contexts than it is in existential contexts, and the decrease in the use of default agreement is reflected in an increase in the use of the zero SCl form.

Default and full SCl/verb agreement tokens of referential, existential and impersonal ‘it’ constructions are all included in the multivariate analysis for the zero SCl variant. All potential contexts are considered in order to include tokens with masculine singular referents and simple tenses. This also given that existential and impersonal ‘it’ tokens in the corpus appear mostly in simple tenses.

3.2.1.2 *Definiteness*

The distributional results for definiteness of the subject in singular (masculine and feminine) referential contexts show that, while definite referents show full *u*, *a/Ø* variation, indefinite referents categorically occur with an overt SCl variant (Table 8). Given that they also show overt SCl categoricity and they occur in relatively low Ns, partitive tokens are recoded as indefinites.

<i>Subject definiteness</i>	Overall	variant <i>u</i>		variant <i>a</i>		zero form	
	(N)	(N)	(%)	(N)	(%)	(N)	(%)
Definite	2877	1349	47	1362	47	166	6
Specific indefinite	77	32	42	33	43	12	15
Indefinite	39	32	82	7	18	0	0

As we have observed (cf. Chapter 2, section 2.1.2.2), in Ligurian, indefinite subjects may occur with both default and full SCl/verb agreement. Thus, it is not possible to establish whether the categorical results in Table 8 is due to the presence of an indefinite

subject or to the fact that most indefinite subjects occur with default agreement, a categorical context.

Similarly to referential contexts, existential constructions show very low occurrence of the zero SCl with indefinite nominal predicates (Table 9). However, unlike referential contexts, also definite and specific indefinite nominal predicates rarely occur with a zero form.

Table 9. Distribution of referential variable *u*, *a*/ \emptyset in existential contexts according to definiteness of the nominal predicate.

<i>Subject definiteness</i>	Overall	variant <i>u</i>		variant <i>a</i>		zero form	
	(N)	(N)	(%)	(N)	(%)	(N)	(%)
Definite	144	136	94	3	2	5	3
Specific indefinite	63	51	82	7	10	5	8
Indefinite	52	47	90	2	4	3	6

If present, the effect of indefiniteness in existential contexts is concealed by that of default agreement. The low occurrence of the zero SCl in existential tokens is to be mostly attributed to the use of default agreement, given that this construction presents an almost categorical SCl variant *u* regardless of definiteness of the predicate referent.

Contrary to what has been observed for referential and existential contexts, in impersonal ‘it’ constructions the occurrence of the zero SCl form increases with all types of definiteness of the nominal predicates (Table 10).

Table 10. Distribution of referential variable *u*, *a*/ \emptyset in impersonal ‘it’ contexts according to definiteness of the nominal predicate.

<i>Subject definiteness</i>	Overall	variant <i>u</i>		variant <i>a</i>		zero form	
	(N)	(N)	(%)	(N)	(%)	(N)	(%)
Definite	68	36	53	25	37	7	10
Specific indefinite	24	9	38	12	50	3	12
Indefinite	67	24	36	34	51	9	13

As illustrated in the previous section (cf. Table 7), impersonal ‘it’ constructions regularly occur with full SCl/verb agreement. This could explain the increase in the use of the zero SCl form in impersonal ‘it’ contexts as opposed to its low occurrence in existential contexts, where the high frequency of overt variants with indefinite referents (cf. Table 9) is likely to be due (mostly) to default agreement (see also Chapter 4, section 4.2.1.2.1).

Provided that tokens that involve indefinites referents can all be identified while default agreement contexts are sometimes ambiguous, and provided that indefinite referents are more likely to occur with default agreement than with full SCl/verb agreement, at least in referential and existential constructions, tokens with indefinite (and partitive) subject/nominal predicate referents in all types of construction are omitted from the multivariate analysis of referential variable *u*, *a*/ \emptyset . This allows us to reduce the impact of default agreement on the frequency of SCl *u* uniformly across all contexts under investigation.⁶

⁶ It was suggested to me (R. D’Alessandro, p.c.) that another factor that should be taken into account (together with definiteness and information structure) in the investigation of SCl/verb agreement with the subject involves subjects with contrastive focus. In Ligurian, contrastive postverbal subjects show both full and default agreement, but only with unaccusative verbs, as in (1).

- (1) a. u l’è rivau Maria, (nu Carla)
 SCl Cl.is arrived.M.SG Mary not Carla
 ‘Mary arrived, not Carla’
- b. a l’è rivàa Maria, (nu Carla)
 SCl.F.SG Cl.is arrived.F.SG Mary not Carla
 ‘Mary arrived, not Carla’

With all other verb types, subjects bearing contrastive focus show only full SCl/verb agreement, as with the unergative verb *telefonà* in (2).

- (2) a. a l’ha telefonau Maria, (nu Carla)
 SCl.F.SG Cl.has phoned Mary not Carla
 ‘Mary phoned, not Carla’
- b. *u l’ha telefonau Maria, (nu Carla)
 SCl Cl.has phoned Mary not Carla
 ‘Mary phoned, not Carla’

Thus, as we will see in the formal analysis in section 3.3.3, unlike in other northern Italian varieties verb class rather than contrastive focus is the factor that needs to be taken into account when investigating SCl/verb agreement with the subject in Ligurian. The characterization of contexts that allow default agreement requires further work. A more accurate investigation of verb agreement and verb class in Ligurian would allow us to reconsider the effect of definiteness and information status in determining the lack of verb-

3.2.1.3 Multivariate analysis for the referential variable *u, a/Ø*

A multivariate analysis is carried out in order to determine the significance of the individual factor groups, and what factors within those groups favour or disfavour the zero SCl. Factors that show a weight higher than .5 favour zero SCl, whereas factors that have a weight lower than .5 disfavour it. When the weight value is close to .5 the factor neither favours nor disfavors the zero form.

As was mentioned above, contexts involving full and default SCl/verb agreement are both included in the analysis in order for masculine singular referents to be considered despite morphological ambiguity in the type of agreement. The effect of SCl categoricity in default agreement contexts is partially controlled via the omission of tokens with indefinite subjects/nominal predicates, which most frequently display this type of agreement. Moreover, in the final regression for the zero form in 3rd singular contexts, the independent variable involving type of structure, which is previously found as nonsignificant, is omitted because of interaction between one adjacent factor (i.e., locative clitic *ghe*) and existentials.

The results of the regression for referential variable *u, a/Ø* are given in Table 11.

subject agreement, and potentially to omit from the analysis only tokens involving unaccusatives and unaccusative-like verbs.

Table 11. Significant and nonsignificant factor groups for the zero SCl form (\emptyset) in referential contexts.

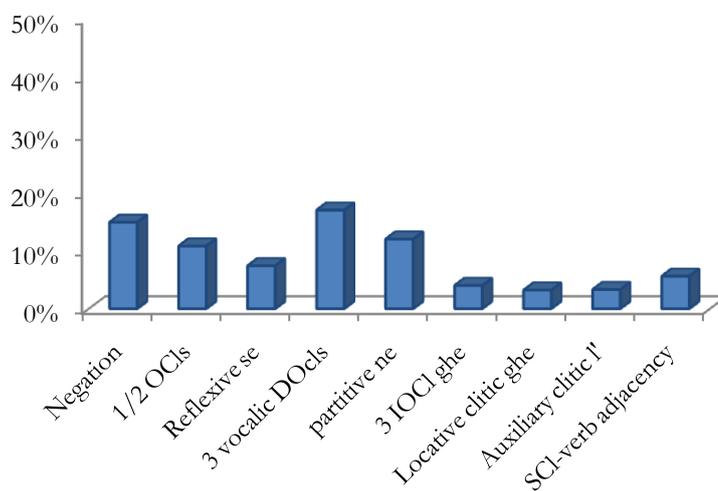
<i>Variable</i>	Overall (N)	\emptyset (N)	\emptyset (%)	VARBRUL weight
<i>Adjacency</i>				
Neg/OClS	857	100	12	.710
SCl-verb	553	31	6	.568
Auxiliary clitics	1831	59	3	.377
<i>Range</i>				333
<i>Position of the referent</i>				
Postverbal subject	354	34	10	.650
Postverbal predicate	293	20	7	.611
Preverbal subject	542	35	7	.549
Null subject (<i>pro</i>)	1862	102	6	.452
Topicalized subject	202	7	4	.384
<i>Range</i>				266
<i>Preceding phonology</i>				
Pause	313	47	15	.702
Vowel	2223	143	6	.470
<i>Range</i>				232
<i>Information status</i>				
Old	2686	161	6	.522
Inferable	232	11	5	.414
New	188	6	3	.307
<i>Range</i>				215
<i>Recency</i>				
Recent \emptyset	253	30	12	.665
Recent <i>a</i>	1151	76	7	.521
Lack of recent variable	215	13	6	.502
Recent <i>u</i>	1612	79	5	.458
<i>Range</i>				207
<i>Verb class</i>				
Psych	25	4	16	[.665]
Copula	1073	59	6	[.553]
Transitive	1164	78	7	[.498]
Unaccusative	825	51	6	[.471]
Unergative	157	6	4	[.365]
<i>Range</i>				300
<i>Pronominality</i>				
Quantifier	31	4	13	[.721]
Lexical DP	1150	79	7	[.551]
Pronoun	188	13	7	[.529]
Null subject	1862	102	6	[.482]
<i>Range</i>				239
<i>Following phonology</i>				
Vowel	57	9	16	[.578]
Nasal	589	70	12	[.508]
Plosive	872	45	5	[.482]
Liquid	1181	37	3	[.470]
Fricative	514	28	5	[.375]
<i>Range</i>				203
<i>Age</i>				
Young	1997	132	7	[.521]
Old	1256	66	5	[.468]
<i>Range</i>				53
<i>Gender of the subject</i>				
Masculine	1555	91	6	[.525]
Feminine	1698	107	6	[.479]
<i>Range</i>				46

Note. Input value: .053; significance threshold: .05; values in brackets are nonsignificant.

The internal linguistic factor groups that are statistically significant for zero SCl in 3rd singular referential contexts are adjacency, position of the referent, preceding phonological context, information status of the referent, and recency (cf. Table 11).⁷

Adjacency. The distributional analysis in Figure 1 shows that there is a split between clitics that show overt/zero SCl variation and clitics that present little SCl variation (i.e., they almost categorically require an overt SCl form). The former are negation, 1st/2nd direct and indirect OCl, reflexive *se*, 3rd direct (vocalic) OCl, and partitive *ne*; the latter include 3rd indirect OCl *ghe*, locative *ghe*, and auxiliary clitic *l'*. As OCl allomorph *l'* and phonetic *l'* have the same effect on SCl variability throughout the analysis, these are considered as a unique form. This result supports the claim that these two clitics may have originated from the same form and both trigger the same syntactic phenomenon (i.e., absence of Comp-Aux cliticization) (cf. Chapter 2, section 2.1.4.1).

Figure 1. Percentage of zero SCl form for individual adjacent factors.



The difference in the effect of adjacent clitics on the SCl variability corresponds approximately to a difference in the syntactic positions that these clitics occupy, namely, a

⁷ Some of the factors in the regression (Table 11) show low overall Ns and low Ns of the variant under investigation, as well as an extremely low input value. This generates a situation where factor groups with a high weight range are nonetheless nonsignificant.

higher structural position for negation, OCl's and reflexive clitics, and a lower structural position for locative and auxiliary clitics (cf. Cardinaletti, 2008; Manzini & Savoia, 2001). Unlike other object clitics, IOCl *gbe* presents the same little effect on zero SCl as locative *gbe* shows, a result that supports Kayne's (2006) hypothesis that these two clitics are indeed the same one (cf. also Manzini & Savoia, 2004).

In the regression (cf. Table 11), adjacent clitics are recoded according to their higher syntactic position (negation, OCl's, reflexive *se*, partitive *ne*) or lower syntactic position (locative/IOCl *gbe*, auxiliary clitic and OCl allomorph *l'*). The multivariate analysis confirms that negation and other higher clitics favour the zero form, whereas lower clitics disfavour it. Negation *nu* is recoded with object clitics that show the same favouring effect, in order to avoid the interaction with the phonological factor following nasal.⁸

Position of the referent. The results of this group show that both preverbal and postverbal subjects, and (postverbal) nominal predicates favour the zero SCl, whereas null subjects and topicalised subjects disfavour it. Rather than the position of the subject, the factor that seems to have a real effect on zero SCl variability is the presence of a lexical/pronominal overt subject as opposed to a null subject *pro*, which occurs also with topicalised subjects.

The effect of overt/null subjects is not picked by the group involving subject pronominality for two reasons: (i) because this group does not take into account the presence of *pro* with topicalised subjects; and (ii) because both 'position of the subject' and 'pronominality' include a factor that characterizes only null subjects, and these two factors interact. Given their strict relation, these two groups should be considered as one in a further analysis of these data.

⁸ I acknowledge that, throughout the analysis, the factor involving adjacent negation *nu* fully interacts with the phonological factor following nasal, thus potentially altering the results of the regression. Occasionally, as in this case, the inevitable effect of this interaction is partly reduced by recoding negation with other high clitics when these show the same favouring or disfavouring result and a similar factor weight.

Preceding phonology. Among the phonological groups, only preceding context is significant for zero SCl variability in referential contexts. In particular, preceding pause favours a following zero SCl (weight .702), whereas a preceding vowel has very little impact (weight .470). Individual vowels are first recoded according to height and subsequently collapsed into a single factor as they show the same effect on zero SCl variability.

Information status. The multivariate results for this group show that none of the three factors favours the zero SCl. Old information, the only factor with a weight above .5, has very little impact on zero SCl variability (weight .522), whereas the other two factors, namely, inferable and new information, disfavour the zero SCl form.

Recency. The variationist analysis of Ligurian SCl variation in spontaneous speech supports predictions (cf. Scherre & Naro, 1991, 1992) that the presence of one variant in the recent discourse favours the use of the same variant in a given variable context. A recent zero form favours occurrence of the same variant (weight .665), whereas recency of the other two variants and absence of the same variable in recent discourse show very little impact on zero SCl variability.

The analysis of recency shows no difference in its effect on SCl variability if a recent SCl shares the subject referent with the following SCl or if they refer to distinct subjects. For this reason, tokens that share subject identity and tokens that do not are recoded as a single factor for each recent variant.

3.2.1.3.1 A few remarks on nonsignificant factors

The internal factor groups that are found to be nonsignificant are verb class, pronominality and gender of the referent, and following phonological context. The external variable age is also nonsignificant.

Verb class. In the group involving verb class, unergative verbs, i.e., verbs which lack an internal argument, differ sharply from verbs that have an object (position). While transitive verbs (weight [.498]) show almost no impact on zero SCl variability and unaccusative verbs show little effect (weight [.471]), unergative verbs (weight [.365]) disfavour the zero SCl form.⁹

This result follows if we take into account the impact of high/low adjacent clitics and the occurrence of direct object clitics (DOCl). Unaccusative and unergative verbs do not occur with DOCl because, for the former, the complement of the verb is the subject, and the latter lack a direct object altogether. Thus, the probability for unaccusative and unergative verbs to occur with a high clitic is lower, and the effect of adjacency on the variability of the zero SCl form decreases for these verbs.

The opposite is true of psych verbs as they regularly occur with an indirect object in their structure (Roberts, 2007:151).

Pronominality of the referent. The results of the regression reveal that it is not the type of referent (i.e., pronoun, lexical DP, or quantifier), but the presence or absence of a null subject that influences the occurrence of the zero SCl form, and the impact of this factor is captured by the group involving position of the referent.

Gender of the referent. Masculine and feminine gender show very little impact on the occurrence of zero SCl. The inclusion of tokens with default agreement does not generate discrepancies between the two gender factors, thus suggesting that the categoricity of default agreement is shared by masculine and feminine referents.

⁹ In the group involving verb class, reflexive and passive verbs are recoded as unaccusatives, on the basis that they share the same underlying structure with the subject generated as internal argument (Burzio, 1986). Given their low number of tokens, raising verbs (e.g., *sembra* 'seem') are recoded with referential copular constructions. Among lexical verbs, tokens of *di* 'to say' introducing a reported speech are omitted from the analysis as they show a sharp increase in the production of zero SCl that is not recorded when the same verb is used in narratives.

Following phonology. Given that a SCl is usually followed by another clitic element and only occasionally by a verb, the phonological context following a SCl is almost entirely restricted to the phonological features of the following clitics. However, phonological factors fail to identify the crucial split in the syntactic position of the clitics which has an impact on the occurrence of the zero SCl, as nasal, plosive and liquid show no (or very little) impact on it. The results for following phonological context (cf. Table 11) contrast with the significant favouring impact of nasal- and plosive-initial (high) clitics and with the disfavouring impact of plosive- and liquid-initial (low) clitics.

Age. Contrary to what has been observed in other northern Italian varieties (cf. Moretti, 1999), the occurrence of the zero SCl form is not influenced by the age of the speaker. The even production of zero SCl across the two age groups and the fact that, for these age groups, the same internal factors show an impact on zero SCl variability suggest that the use of a zero SCl form in the dialect is not related to the lack of SCls in Italian, and that, despite language contact between the two varieties, dialect speakers of both generations have retained a uniform use of overt SCl variants and zero form.

To support this claim further is the fact that speaker B, who is singled out because of her overproduction of zero SCl form, belongs to the older generation of speakers, and some of the factors that are significant for her production of zero form show an effect also in other speakers' use of this variant.

3.2.1.4 Inter-speaker variation

Of all six speakers considered in the analysis, speaker B produces a much greater number of tokens with the zero SCl form, and her data are therefore analysed separately. Table 12 shows that speaker B's overproduction of zero form in contexts with the referential

variable *u*, *a/Ø* is evident in referential constructions and, although with small Ns, also in existential and impersonal ‘it’ constructions.

Table 12. Distribution of zero SCl form (\emptyset) in referential contexts according to type of construction, for all speakers and for speaker B.

Type of construction	All speakers			Speaker B		
	Overall (N)	\emptyset (N)	\emptyset (%)	Overall (N)	\emptyset (N)	\emptyset (%)
Referential	2954	178	6	1039	130	13
Existential ‘there’	207	10	5	40	5	13
Impersonal ‘it’	92	10	11	18	4	22

Default agreement. With default SCl/verb agreement, other speakers show categoricity of overt SCl *u*, only rarely allowing for a zero SCl form to occur when the following element is a high clitic (see fn.3). Speaker B instead allows for a zero SCl form to appear with both high clitics (e.g., IOCl *me* in (27.a) and reflexive *se* in (27.b)), and low clitics (e.g., auxiliary clitic *l’* in (27.c,d)).

- (27) a. \emptyset *m’è* risulta-u a nuvantasei a minima
 (SCl) to-me.is resulted-M.SG at 96 the blood-pressure.F.SG
 ‘my blood-pressure came up to 96’
- b. \emptyset *s’è* rutt-u sta cosa lì
 (SCl) itself.is.3SG broken-M.SG this thing.F.SG here
 ‘this thing here broke’
- c. *peui* \emptyset *l’è* riva-u anche Caterina
 then (SCl) Cl.is arrived.M.SG also Caterina.F.SG
 ‘then Caterina arrived as well’
- d. \emptyset *l’è* vegnüu Enrica
 (SCl) Cl.is come.M.SG Enrica.F.SG
 ‘Enrica came’

Definiteness. Like other speakers, speaker B presents categorical overt SCl variants with indefinite referents, the only two exceptions being with impersonal ‘it’ constructions (Table 13).

<i>Type of construction</i>	Overall (N)	\emptyset (N)	\emptyset (%)
Referential	9	0	0
Existential 'there'	9	0	0
Impersonal 'it'	12	2	17

The categoricity of indefinite referents for all speakers was found to be ambiguous because of the potential impact of default agreement. The results for speaker B show the same categoricity with indefinite referents. However, given that speaker B allows for the zero SCl form to occur with default agreement, categoricity of overt variants in such contexts for this speaker can be unambiguously attributed to indefiniteness of the subject referent.

Only tokens with definite and specific indefinite referents are included in the multivariate analysis for speaker B, while indefinite (and partitive referents) are omitted.

Multivariate analysis. Table 14 shows the results of the regression of 3rd singular referential contexts. As is the case for all speakers, tokens that show default agreement are included in the analysis of referential contexts, in order to be able to consider also masculine referents. Indefinites referents are excluded due to categoricity of overt SCl variants.

Table 14. Significant (and nonsignificant) factor groups for the zero SCl form (Ø) in referential contexts for speaker B.

<i>Variable</i>	Overall (N)	Ø (N)	Ø (%)	VARBRUL weight
<i>Following phonology</i>				
Nasal	225	65	29	.665
Vowel	22	5	23	.579
Plosive	256	25	10	.513
Liquid	422	26	6	.444
Fricative	154	14	9	.374
<i>Range</i>				291
<i>Adjacency</i>				
Neg/OClS	282	71	25	.639
SCl-verb	209	26	12	.576
Auxiliary clitics	601	39	7	.407
<i>Range</i>				232
<i>Preceding phonology</i>				
Pause	74	12	16	.531
Vowel	808	118	15	.497
<i>Range</i>				34

Note. Input value: .117; significance threshold: .05; nonsignificant factor groups: gender, position, pronominality, and information status of the referent; verb class; recency.

For speaker B, the groups that have a significant impact on zero SCl are following phonology, adjacency, and preceding phonology.

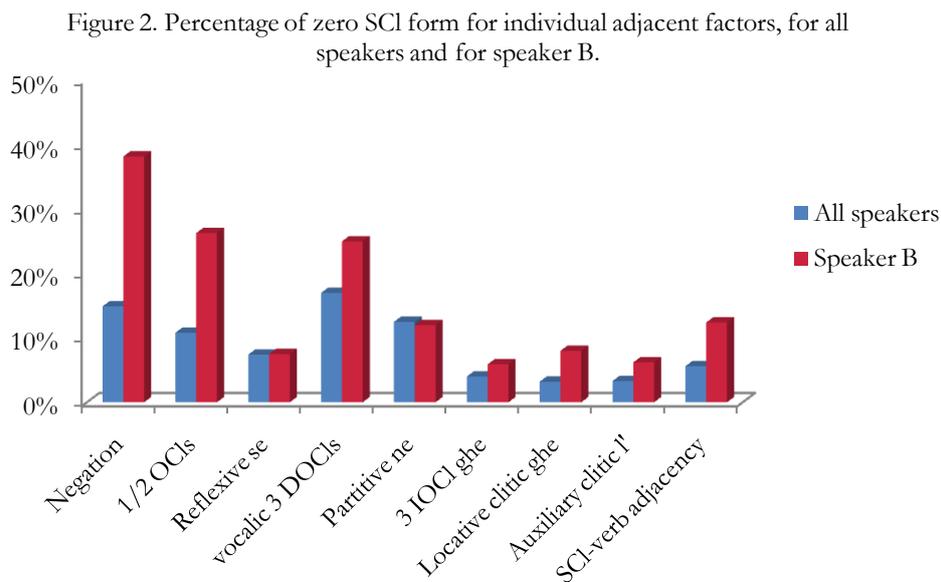
Adjacency and preceding phonology present the same factor ranking as the one found for all speakers (cf. Table 11). In the group regarding adjacency, high clitics (negation and OClS) and SCl-verb adjacency favour the zero form, whereas low clitics (auxiliary and locative clitics) disfavour it.

As for preceding phonological context, although significant, the two factors only have little effect on the occurrence of zero SCl, as both the value of preceding pause (.531), and that of preceding vowel (.497) are close to .5.

Contrary to what has been observed for other speakers, for speaker B following phonology has a significant effect on the occurrence of the zero SCl form. In particular, nasal and vowel favour the zero SCl, liquid and fricative disfavour it, and plosive shows no favouring or disfavouring effect. Following phonological factors show a difference in

ranking for following nasal and vowel, when the results for this group are compared with the analysis for other speakers (cf. Table 11).

Figure 2 shows the occurrence of zero SCl in relation to the following element in the structure (adjacency), and compares the results for all speakers (already illustrated in Figure 1) with those for speaker B.



The findings in Figure 2 show that speaker B's increase of zero SCl only occurs with specific adjacent elements, namely, those which involve also a phonological factor that shows a favouring effect in the regression.

The data for speaker B show a sharp increase in the occurrence of zero SCl when the following clitic element is nasal-initial (negation *ni*, OCl's *me*, *ne*) and vowel-initial (vocalic 3rd person OCl's), and when a following finite verb is nasal- or vowel-initial. This is because not only high clitics and an adjacent finite verb but also following nasal and vowel are favouring factors for the zero form.¹⁰ The increase in the production of zero SCl for speaker B is due to the co-occurrence of syntactic and phonological factors.

¹⁰ Contrary to expectations, the nasal-initial partitive clitic *ne* does not show an increase in the occurrence of the zero SCl. With this adjacent clitic, speaker B shows a similar result to the one found for all speakers (for a tentative account of the results for clitic *ne*, see section 3.4.2).

The phonological factor following plosive is found to have little effect on zero SCl (weight .513). This finding can be observed on the results for adjacent IOCl and locative *gbe*, which show only a limited increase in the occurrence of zero SCl form.

Following liquid and following fricative disfavour the zero SCl. Their disfavouring effect is reflected in the results for adjacent reflexive *se* and auxiliary clitic *l'*, which present a similar outcome to the one obtained for all speakers (see section 3.4.2 for further discussion).

To sum up, 3rd singular referential contexts show categoricity of an overt SCl (*u*) only when they present default SCl/verb agreement and with an indefinite subject referent. All other cases present a SCl variable *u*, *a/∅*. The variability of zero SCl is influenced by syntactic factors, i.e., adjacency, position and information status of the referent, by one phonological factor, that is, preceding phonological context, as well as by recency of the same variant. Inter-speaker variation is also attested. For one of the speakers, the production of zero SCl form increases due to the impact of another phonological factor, namely, following phonology.

3.2.2 Nonreferential variable *u/∅*

Nonreferential contexts include existential ‘there’ and impersonal ‘it’ constructions that present a non-nominal (i.e., adjectival, adverbial, infinitival) predicate, and impersonal *si* constructions that have no object referent, given the categoricity of overt variants with impersonal *si* constructions that occur with a direct object (see further section 3.2.2.2).

The variationist analysis of nonreferential variable *u/∅* includes tokens from all speakers but speaker B. As is the case for referential contexts, speaker B’s data are analysed separately in order to determine whether inter-speaker variation occurs also for the use of 3rd singular SCl variants in nonreferential contexts.

Table 15 shows that among nonreferential contexts the occurrence of zero SCI increases more with impersonal ‘it’ and impersonal *si* (henceforth, from Ligurian *se*, impersonal *se*) constructions than with existential ‘there’ constructions.

Table 15. Distribution of zero SCI form (\emptyset) in nonreferential contexts according to type of construction.

<i>Type of construction</i>	Overall (N)	\emptyset (N)	\emptyset (%)
Impersonal ‘it’	385	65	17
Impersonal <i>se</i>	37	6	16
Existential ‘there’	67	5	8

First, I illustrate a few categorical and almost categorical cases that are excluded from the overall analysis, namely, lexicalised expressions involving impersonal ‘it’ and impersonal *se* constructions (section 3.2.2.1), and impersonal *se* constructions with a direct object (section 3.2.2.2). Then, I outline the results of the multivariate analysis for nonreferential contexts (section 3.2.2.3). And finally, I compare the results of all speakers with those of speaker B account for inter-speaker variation in nonreferential contexts (section 3.2.2.4).

3.2.2.1 *Lexicalized expressions*

Among the lexical verbs included in the factor group for verb class, four lexicalized expressions are coded for. Two of these expressions involve impersonal ‘it’, namely *peu dàse* (‘it may be’/‘maybe’) and the lexical verb *besengna* (‘it needs’/‘it is needed’); the remaining two are impersonal *se* constructions, i.e., *se vegghe* (‘probably’ (lit. ‘one sees’)), and *se peu di* (‘one can say’). Unlike other factors in the group, these four expressions present almost full categoricity of zero SCI form (Table 16).

Table 16. Distribution of zero SCl form (\emptyset) in nonreferential lexicalized expressions.

<i>Lexicalized expressions</i>	Overall (N)	\emptyset (N)	\emptyset (%)
Peu d'ase	16	16	100
Beseugna	34	32	94
Se vegghe	10	8	80
Se peu di	6	4	67

The (almost full) categoricity of zero SCl presented by these expressions suggests that in the lexicalization process (overt) SCIs tend to be lost. The ambiguity lies in the fact that the zero SCl form that these expressions strongly favour could be SCl omission that is generated by lexicalization rather than by the impact of internal factors. This issue requires a more in-depth investigation in the effects of lexicalization, which is beyond the scope of the present work.

Given this ambiguity, tokens of the four lexicalized expressions listed above are omitted from the analysis.

3.2.2.2 Impersonal *se* constructions.

Impersonal *se* constructions with a transitive verb show two patterns of verb agreement: the verb and the (subject) clitic may agree in number (and gender) with the object which is assigned Nominative case (28.a), or they may fail to agree with the object which gets Accusative case (28.b). In the second case, the SCl and the verb appear in the default 3rd singular (masculine) form.

- (28) a. *i* *se veggan* *i furesti*
 SCl.PL SI see.3PL the foreigners.Obj.M.PL
 ‘one can see the foreigners’
- b. *u* *se vegghe* *i furesti*
 SCl.M.SG SI see.3SG the foreigners.Obj.M.PL
 ‘one can see the foreigners’

The examples in (28) are taken to be cases of referential agreement. As expected, no tokens are attested in the corpus which show a zero SCl form with default agreement (29.b). However, also contexts with full object-verb agreement never appear with the zero form (29.a). This is likely to be due to the extremely low Ns and the nonoccurrence of the zero variant in this context in the corpus (see Table 17).

- (29) a. a/?? \emptyset se vegghe l'izura
 SCl.F.SG SI sees.3SG the.island.F.SG
 'one can see the island'
- b. u/* \emptyset se vegghe l'izura
 SCl.M.SG SI sees.3SG the.island.F.SG
 'one can see the island'

On the contrary, *se* constructions with unaccusative, unegative and transitive verbs with unergative use (i.e., with no direct object) only occur with 3rd singular (masculine) agreement on the SCl/verb. Interestingly, in these cases where the SCl/verb shows no lack of agreement as such, as no (non-agreeing) direct object is involved, both SCl variant *u* and the zero form (\emptyset) are found in the corpus (30). I will consider the cases in (30) as instances of the nonreferential SCl variable *u*/ \emptyset .

- (30) a. u se imparà ancù
 SCl SI learn.3SG still.Adv
 'one can still learn'
- b. \emptyset se vegghe oltre
 (SCl) SI sees.3SG beyond.Adv
 'one can see beyond'

Table 17 shows the distribution of zero SCl forms with all types of impersonal *se* constructions in relation to presence vs. absence of a direct object and type of agreement.

Table 17. Distribution of zero SCl form (\emptyset) in impersonal *se* contexts according to presence/absence of subject referent.

<i>Presence/absence of object (agreement)</i>	Overall (N)	\emptyset (N)	\emptyset (%)
Object agreement (masc., sing.)	3	0	0
Object agreement (fem., sing.)	3	0	0
Default agreement	8	0	0
No agreeing/nonagreeing object	37	6	16

Given the small number of tokens with an object referent in impersonal *se* constructions, and given the categoricity of overt SCl forms with both full and default agreement, tokens like the ones in (29) are neither considered in the analysis of referential nor in that of nonreferential contexts.

Only *se* constructions without an object are considered in the analysis of nonreferential variable u/\emptyset .

3.2.2.3 Multivariate analysis for the nonreferential variable u/\emptyset

The regression for nonreferential contexts includes two syntactic factors (i.e., adjacency and verb class), two phonological factors (i.e., preceding and following phonology), and the two external linguistic factors, namely, recency and the sociolinguistic variable age. The factor involving type of structure is omitted from the analysis due to interactions with adjacency, in particular between existential constructions and adjacent locative clitic *ghe*, and between impersonal *se* constructions and adjacent impersonal clitic *se*.

Table 18 shows the results of the regression. The significant factor groups for the occurrence of zero SCl in nonreferential contexts are adjacency and preceding phonology, two groups that are found to be significant for zero SCl also in referential contexts.

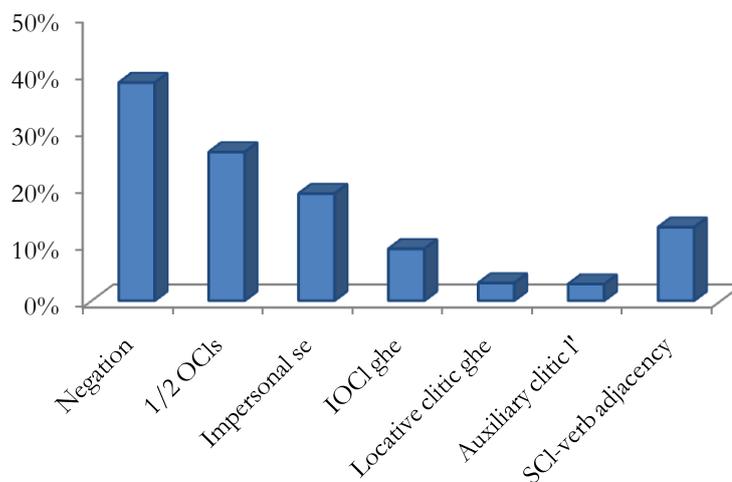
Table 18. Significant and nonsignificant factor groups for the zero SCl form (\emptyset) in nonreferential contexts.

<i>Variable</i>	Overall (N)	\emptyset (N)	\emptyset (%)	VARBRUL weight
<i>Adjacency</i>				
Neg/OClS	201	60	30	.779
SCl-verb	62	8	13	.567
Auxiliary clitics	225	8	4	.232
<i>Range</i>				547
<i>Preceding phonology</i>				
Pause	78	18	23	.618
Vowel [+HIGH]	122	27	22	.577
Vowel [-HIGH]	201	27	13	.408
<i>Range</i>				210
<i>Verb class</i>				
Copula	264	29	11	[.574]
Psych	151	38	25	[.485]
Transitive	14	4	29	[.433]
Unergative	13	2	15	[.257]
Unaccusative	45	3	7	[.238]
<i>Range</i>				336
<i>Following phonology</i>				
Fricative	67	13	19	[.595]
Nasal	164	53	32	[.531]
Plosive	117	6	5	[.402]
<i>Range</i>				193
<i>Recency</i>				
Recent \emptyset	39	8	21	[.605]
Recent <i>a</i>	133	26	20	[.556]
Lack of recent variable	48	7	15	[.498]
Recent <i>u</i>	268	35	13	[.457]
<i>Range</i>				148
<i>Age</i>				
Young	339	56	17	[.520]
Old	150	20	13	[.454]
<i>Range</i>				66

Note. Input value: .113; significance threshold: .05; values in brackets are nonsignificant.

Adjacency: The impact that adjacent factors have on the occurrence of the zero form in the nonreferential variable *u/∅* is similar to the one observed for the referential variable *u, a/∅*. High clitics (i.e., negation, OClS and impersonal *se*) and adjacency of a finite verb favour the zero SCl form, whereas low clitics (i.e., IOCl/locative *ghe*, auxiliary clitic *l'*) disfavour it. Figure 3 shows the percentage of the distribution of zero SCl for each adjacent factor.

Figure 3. Percentage of zero SCl form for individual adjacent factors in nonreferential contexts.



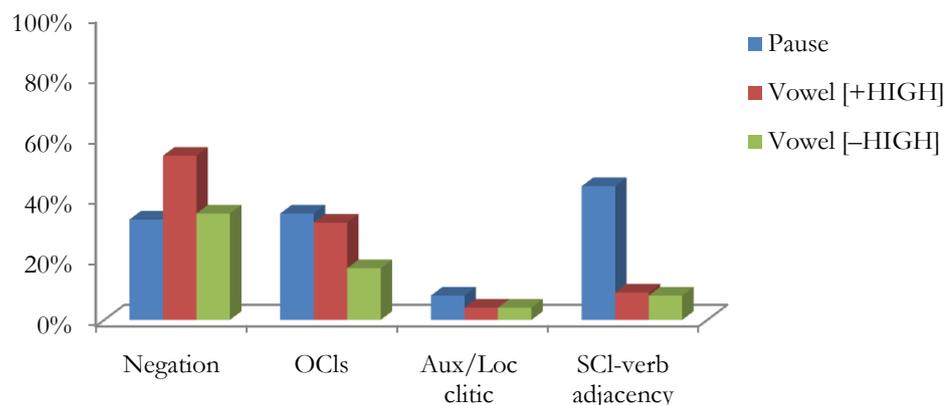
The findings regarding zero SCl variability with impersonal *se* support the view that this clitic occupies a high structural position in the clitic string (cf. Manzini & Savoia, 2001).

Preceding phonology. The group involving preceding phonology distinguishes between high vowels [+HIGH] and non-high vowels [-HIGH], as these two factors present diverging effects on zero SCl, with [+HIGH] vowels favouring the zero form and [-HIGH] vowels disfavouring it. This result can be interpreted by claiming that a [+HIGH] vowel disfavors a following SCl variant that has the same phonological feature [+HIGH], namely variant *u*, thus favouring the zero form. The [\pm HIGH] vowel distinction does not show any effect in referential contexts, because the referential SCl variable includes both [+HIGH] and [-HIGH] overt variants, respectively, *u* and *a*.¹¹

However, the effect of preceding [+HIGH] vs. [-HIGH] vowel is evident only in relation to adjacency. The occurrence of the zero SCl form increases when the preceding vowel is [+HIGH] only if there is also a following high clitic. With a following low clitic or finite verb the effect of the [+HIGH] and [-HIGH] vowel is equally low (Figure 4).

¹¹ The lack of effect of [\pm HIGH] preceding vowels in referential contexts is due to the fact that the occurrence of either of the two referential SCl variants *u* and *a* depends on other factors, such as gender of the subject and default/full subject-verb agreement. Within a given context, the two overt variants do not alternate.

Figure 4. Percentage of zero SCl form for preceding phonology in nonreferential contexts, in relation to adjacency.



As is the case in referential contexts, preceding pause favours the zero SCl. Unlike preceding vowel, its effect is observed with both high clitics and following finite verb. This suggests that, although all three phonological factors depend on the effect of adjacency, when no following clitic is present zero SCl variability is triggered by only one of the three phonological factors, namely, pause.

Nonsignificant factors.

Verb class. The group involving verb class is nonsignificant because the impact of its factors is due to their co-occurrence with high clitics: tokens that show zero SCl form with copula are almost always preceded by negation; psych verbs regularly occur with a preceding IOCl (i.e., the experiencer); other verb classes disfavour the zero form as they rarely occur with high (object) clitics in nonreferential contexts (they only occur with negation). Finally, weather verbs are not considered because of low Ns.

Following phonology. Following nasal has little effect on the zero SCl ([.531]) because all nasal-initial tokens involve high clitics and, as their impact matches that of other high clitics, adjacency, and not phonology, is considered as significant. The effect of fricative is more

evident ([.595]) because it is found with adjacent finite verbs. Tokens that involve a following liquid are not included because they show categoricity of overt SCl variant *u*.

External variables. The remaining nonsignificant groups are the external variables, namely, age and recency. While age shows no significance for the variability of the zero SCl form in both the referential and the nonreferential SCl variable, the result of recency differs from the analysis of referential contexts. As I will propose in section 3.4.1, the nonreferential variable *u/Ø* has no underlying null variant, and the zero SCl form is merely nonpronunciation of the syntactic position of the SCl when high clitics follow the SCl. Thus, the nonsignificance of recency in nonreferential contexts is hardly surprising given that nonpronunciation of the syntactic structure is strictly related to the nature of the adjacent element is the relevant token.

However, the results of the other SCl variables will reveal that recency may in fact be a significant factor when a zero SCl as nonpronunciation is implied, and this is accounted for by claiming that a recent syntactic structure may have an effect on a given variable and replicate the same effect also in a following context that involves the same variable (a phenomenon known as ‘syntactic priming’ (Branigan, 1995)) (see Chapter 4, section 4.2.2.2).

3.2.2.4 *Inter-speaker variation*

The distributional analysis of nonreferential contexts for speaker B shows that, as is the case for referential contexts, this speaker differs from the others in that she shows greater production of zero SCl form across all types of constructions. However, from the distributional results for type of construction, inter-speaker variation in nonreferential contexts appears to be mainly restricted to impersonal *se* constructions (Table 19).

Table 19. Distribution of zero SCl form (\emptyset) in nonreferential contexts according to type of construction, for all speakers and for speaker B.

<i>Type of construction</i>	All speakers			Speaker B		
	Overall (N)	\emptyset (N)	\emptyset (%)	Overall (N)	\emptyset (N)	\emptyset (%)
Impersonal 'it'	385	65	17	76	17	22
Impersonal <i>se</i>	37	6	16	13	5	39
Existential 'there'	67	5	8	15	2	13

Multivariate analysis. The regression for speaker B's nonreferential data shows that adjacency and preceding phonology are significant for the occurrence of zero SCl, whereas following phonology, verb class and recency are nonsignificant (Table 20).

Table 20. Significant and nonsignificant factor groups for the zero SCl form (\emptyset) in nonreferential contexts, for speaker B.

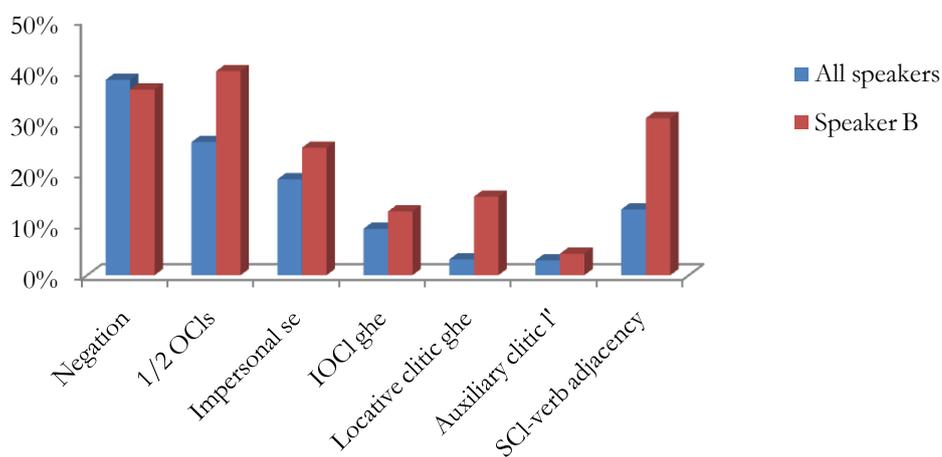
<i>Variable</i>	Overall (N)	\emptyset (N)	\emptyset (%)	VARBRUL weight
<i>Adjacency</i>				
Neg/OClS	45	16	36	.683
SCl-verb	13	4	31	.670
Auxiliary clitics	45	4	9	.275
<i>Range</i>				408
<i>Preceding phonology</i>				
Vowel [+HIGH]	33	12	36	.631
Vowel [-HIGH]	39	8	21	.389
<i>Range</i>				242
<i>Following phonology</i>				
Nasal	37	14	38	[.669]
Plosive	24	5	21	[.549]
Fricative	19	4	21	[.548]
Liquid	24	1	4	[.193]
<i>Range</i>				476
<i>Verb class</i>				
Psych	24	10	42	[.694]
Copula	51	8	16	[.511]
Unaccusative	18	2	11	[.228]
<i>Range</i>				466
<i>Recency</i>				
Recent \emptyset	13	4	31	[.599]
Recent <i>u</i>	58	13	22	[.515]
Recent <i>a</i>	25	6	24	[.414]
Lack of recent variable	8	1	12	[.296]
<i>Range</i>				303

Note. Input value: .221; significance threshold: .05; values in brackets are nonsignificant.

When we compare these results with that of referential contexts (cf. Table 14), we see that, while adjacency and preceding phonology are significant in both analyses, following phonology is significant for the occurrence of zero SCl in the referential variable $u, a/\emptyset$ but not in the nonreferential variable u/\emptyset .

Figure 5 shows the distribution of zero SCl form according to adjacent factors for all speakers and for speaker B. The marginal results for adjacency reveal that, with the exception of negation and auxiliary clitic l' , all other factors show an increase in the production of zero SCl in speaker B's speech as opposed to that of other speakers.

Figure 5. Percentage of zero SCl form for individual adjacent factors in nonreferential contexts, for all speakers and for speaker B.



The outcome for nonreferential contexts in Figure 5 resembles that for referential ones (cf. Figure 2), in which inter-speaker variation was attributed to the impact of phonology. If we compare the multivariate results for following phonology (cf. Table 20) with the distribution in Figure 5, we see that, despite being nonsignificant, the individual phonological factors show their favouring or disfavouring effect by increasing or decreasing (or not affecting) the occurrence of the zero SCl in speaker B's speech.

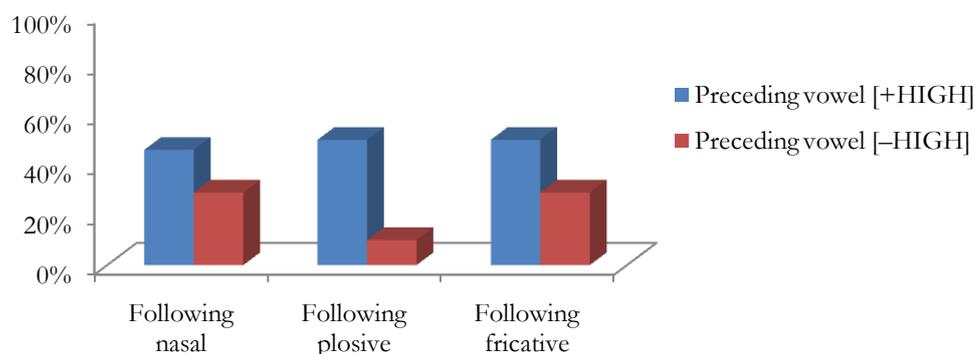
The impact of following fricative increases the occurrence of the zero SCl with impersonal *se* and 2nd plural IOCl *ve*; that of plosive affects the zero form with clitic *ghe* and with 2nd singular IOCl *te*; following nasal shows an impact on 1st person IOCl *me, ne*,

although, unexpectedly, it does not have any effect on the zero SCl with negation. All three favouring phonological factors have an impact on the zero form when the following element is a finite verb. Following liquid, instead, disfavors the zero SCl form and the effect of phonology on the SCl variable with adjacent clitic *l'* is null.

If this analysis of inter-speaker variation is correct, and the impact of following phonology matches that observed for the referential SCl variable, why is following phonology nonsignificant for nonreferential *u/Ø*? I claim that the nonsignificance of following phonology in speaker B's production of zero SCl in nonreferential contexts is strictly related to preceding phonology.

In the group involving preceding phonology, pause is not included because it shows categorical zero SCl (and has only 4 Ns overall). The other factors are [+HIGH] and [-HIGH] vowel. Unlike for other speakers, for speaker B preceding [+HIGH] vowel triggers the zero SCl with a following high clitic and with a following verb. Hence, there is a real (phonological) impact of preceding high vowels. The nonsignificance of following phonological factors is due to the fact that their effect depends upon preceding phonology, and in particular upon preceding [+HIGH] vowel (Figure 6).

Figure 6. Percentage of zero SCl for preceding phonological factors, in relation to following phonology, for speaker B.



Following nasal, plosive and fricative all favour the zero SCl form when they occur with preceding [+HIGH] vowel. On the other hand, the three following phonological

factors show variation in their effect when they occur with a preceding context that involves a [-HIGH] vowel. The potential effect of following nasal, plosive and fricative, which is hypothesized to explain the findings in Figure 5, depends on the effect of a preceding [+HIGH] vowel when this occurs with either of these three following phonological factors. Hence, the nonsignificance of following phonology in nonreferential contexts (for further discussion, see section 3.4.2).

To summarize, the factors that have a significant impact on the zero SCl form in the nonreferential variable *u/Ø* are adjacency and preceding phonological context. As is the case for referential contexts, adjacent elements favour or disfavour the zero SCl form according to whether they occur on a higher or lower position in the structure. Among the preceding phonological factors, pause always favours the zero SCl, [-HIGH] vowel always disfavors it, whereas [+HIGH] vowel shows inter-speaker variation. For most speakers, [+HIGH] vowel has a favouring effect only when the element that is adjacent to the SCl also favours the zero form (i.e., high clitics or the finite verb). For speaker B, a preceding [+HIGH] vowel has an effect on zero SCl not in relation to adjacency but when it combines only with certain following phonological factors.

3.3 Formal analysis of *u, a/Ø* variation

In Ligurian, overt/zero SCl alternation is found in both referential and nonreferential 3rd singular contexts. However, the results for compound tenses reveal that referential contexts present such alternation only if they show subject-verb agreement. If the verb occurs with default agreement, an overt SCl variant is categorical.

In this variety, verbs that generate their subject in object position, namely, unaccusative, passive and reflexive verbs (Burzio, 1986), allow for both full subject-verb

agreement and default verb agreement to occur. With full subject-verb agreement, the SCl either presents an agreeing overt form (31.a) or a zero form (31.b), but not a default (masculine singular) form, namely, *∅* (31.c).

- (31) a. *a* *l'è* *vegnü-a* *Maria*
 SCl.F.SG Cl.is.3SG come-F.SG Maria.F.SG
 'Maria came'
- b. *∅* *l'è* *vegnü-a* *Maria*
 (SCl) Cl.is.3SG come-F.SG Maria.F.SG
 'Maria came'
- c. **∅* *l'è* *vegnü-a* *Maria*
 SCl.M.SG Cl.is.3SG come-F.SG Maria.F.SG
 'Maria came'

With default agreement, a default SCl *∅* occurs (32.a), whereas the zero form (32.b) and the agreeing overt SCl form (32.c) are ungrammatical.

- (32) a. *∅* *l'è* *vegnü-∅* *Maria*
 SCl.M.SG Cl.is.3SG come-M.SG Maria.F.SG
 'Maria came'
- b. **∅* *l'è* *vegnü-∅* *Maria*
 (SCl) Cl.is.3SG come-M.SG Maria.F.SG
 'Maria came'
- c. **a* *l'è* *vegnü-∅* *Maria*
 SCl.F.SG Cl.is.3SG come-M.SG Maria.F.SG
 'Maria came'

When they occur with full subject-verb agreement, unaccusative-type verbs show number and gender agreement with the subject on the past participle (cf. (31)). On the other hand, when these verbs show default verb agreement, the past participle appears with default singular masculine morphology (cf. (32)). In contexts where the SCl has a zero form (cf (31.b) and (32.b)), it is the form of agreement on the nonfinite verb that provides the distinction between full and default agreement.

With transitive and unergative verbs, that is, verbs whose subject is generated in a position external to VP (Burzio, 1986), the finite verb agrees in person and number with the subject, whereas the past participle does not agree with the subject and appears in a

default (masculine singular) form (33.a). Transitive and unergative verbs always allow the zero SCl form to occur (33.b). Unlike other varieties (cf. Brandi & Cordin, 1989; Saccon, 1993), in Ligurian, default SCl/verb agreement is ungrammatical with these verbs (33.c).¹²

- (33) a. *a* *l'ha* *telefuna-∅* *Maria*
 SCl.F.SG Cl.has.3SG called-M.SG Maria.F.SG
 'Maria called'
- b. \emptyset *l'ha* *telefuna-∅* *Maria*
 (SCl) Cl.has.3SG called-M.SG Maria.F.SG
 'Maria called'
- c. **∅* *l'ha* *telefuna-∅* *Maria*
 SCl.M.SG Cl.has.3SG called-M.SG Maria.F.SG
 'Maria called'

In the syntactic analysis of SCl variation in Ligurian, I aim to account for (i) the categoricity of overt SCl with default subject-verb agreement, as opposed to the overt/null SCl alternation that is observed with full subject-verb agreement; and (ii) the lack of default agreement with unergative and transitive verbs.

To account for (i), I will propose that in full agreement contexts the phi-features of Agreement (and Tense) are checked via Agree with the subject, and depending on the value of the phi-features of the categories of Agreement in the numeration, that is, Number and Person, the SCl is phonologically realized as overt or null. In default SCl/verb agreement

¹² The claim that transitive and unergative verbs lack default agreement appears to be challenged by the example in (33.b), which shows no subject agreement on the past participle and a zero SCl form. The ambiguity in (33.b) is due to the fact that the finite verb shows singular number for both full and default agreement with a 3rd singular subject.

However, plural subjects provide us with evidence that default verb agreement does not occur with transitive and unergative verbs, as the ungrammaticality of the examples in (1.i,ii) shows.

- (1) i. **u* *l'ha* *telefuna-u* *i nonni*
 SCl.M.SG Cl.has.3SG called-M.SG the grandparents.M.PL
 'the grandparents called'
- ii. **∅* *l'ha* *telefuna-u* *i nonni*
 (SCl) Cl.has.3SG called-M.SG the grandparents.M.PL
 'the grandparents called'
- iii. *i* *l'han* *telefuna-u* *i nonni*
 SCl.PL Cl.have.3PL called-M.SG the grandparents.M.PL
 'the grandparents called'

contexts Agree does not take place between Agr/Tense and the subject and the phi-features of Agr/Tense are vacuously checked (via Agree) and are assigned default agreement at PF (cf. D'Alessandro & Roberts, 2010). The morpho-phonological realization of the features of Person and Number with default agreement is an overt SCl *u* and the features of T are expressed by 3rd singular (masculine) morphology.

To explain the discrepancy in (ii), I will argue that unaccusative verbs may occur with a null locative argument that occupies the position of the external argument (cf. Pinto's (1997) LOC, Tortora's (2001) pro-loc, and also Saccon, 1993). This null element checks the EPP and triggers vacuous agreement on the features of Tense and Agreement, while the (pro)nominal subject remains in its base position as the complement of the verb. Default agreement is ungrammatical with unergative and transitive verbs because in these verbs the subject occupies the external argument position, thus a null locative could not be merged in (or move to) this position.

3.3.1 Feature specification and realization of the SCl variants

According to the standard view, SClS in northern Italian varieties are agreement elements (cf. Brandi & Cordin, 1989; Poletto, 2000; Rizzi, 1986b; but see Manzini & Savoia 2002, 2005 for an analysis of SClS as nominal elements). I assumed that SClS are the phonological realization of the functional categories of Agreement, namely, Person and Number, and of their phi-features (cf. Chapter 1, section 1.2.2). For the category Person, these are the features [*u*participant:±] and/or [*u*author:±], with the implication that [*u*participant:-] entails [*u*author:-] and [*u*author:+] is intrinsically [*u*participant:+]. In Ligurian, the specification of Person also includes a strong *u*Num* that triggers movement of the category Number to adjoin to Person (cf. Chapter 1, section 1.2.2).

For the category Number, the phi-features are number [*u*singular:±] and gender [*u*feminine:±] (on the dependency of gender on number see Harley & Ritter, 2002).

Following Harbour (2009) (cf. also Adger, 2008), I assume that features may have a positive value [F: +], a negative value [F: -], and the lack of the feature [Ø]. This three-way distinction will be crucial in the account of SCl variation in nonreferential contexts, as opposed to the SCl categoricity of (referential) default agreement contexts (see section 3.3.4).

In 3rd singular subject-verb agreement contexts, SCl *u* and SCl *a* do not alternate but occur depending on the gender of the referent. In these contexts, Agreement (i.e., Person and Number) shares all phi-features with the subject referent, thus including gender. In (34), I provide the phi-feature specification of Person and Number in 3rd singular contexts with the relevant overt SCl form that realizes Agreement. Overt variants alternate with a zero form, which therefore occurs when both phi-feature specifications of Agreement are present.

(34)

variant <i>u</i>	Pers[<i>u</i> part:-, <i>u</i> Num*], Num[<i>u</i> sing:+, <i>u</i> fem:-]
variant <i>a</i>	Pers[<i>u</i> part:-, <i>u</i> Num*], Num[<i>u</i> sing:+, <i>u</i> fem:+]
Ø	Pers[<i>u</i> part:-, <i>u</i> Num*], Num[<i>u</i> sing:+, <i>u</i> fem:-] Pers[<i>u</i> part:-, <i>u</i> Num*], Num[<i>u</i> sing:+, <i>u</i> fem:+]

The only feature whose value changes in the feature specification expressed by the overt variants *u* and *a* is gender, respectively, [*u*fem:-] and [*u*fem:+].

The zero form appears with both masculine and feminine 3rd singular referents. I propose that referential contexts have a SCl variant that realizes the phi-features of Agreement but has no overt phonological form, i.e., a null underlying variant. The feature bundles that the null variant (Ø) expresses, though not phonologically, are Pers[*u*part:-], Num[*u*sing:+, *u*fem:-] and Pers[*u*part:-], Num[*u*sing:+, *u*fem:+], where gender can have

different values (cf. D’Alessandro’s (2004:28ff.) “disjunctive feature”, and also Nevins (2007)).

I propose that Agreement, and in particular Number, is realized by a null SCl variant because the gender feature of Num is underspecified for value ([*ufem:*]). This unvalued feature requires both valuation and checking (Agree as Checking by Valuing).

The final specification of the SCl variants is given in (35).

(35)

variant <i>u</i>	Pers[<i>u</i> part:–, <i>u</i> Num*], Num[<i>u</i> sing:+, <i>ufem:</i> –]
variant <i>a</i>	Pers[<i>u</i> part:–, <i>u</i> Num*], Num[<i>u</i> sing:+, <i>ufem:</i> +]]
\emptyset	Pers[<i>u</i> part:–, <i>u</i> Num*], Num[<i>u</i> sing:+, <i>ufem:</i>]

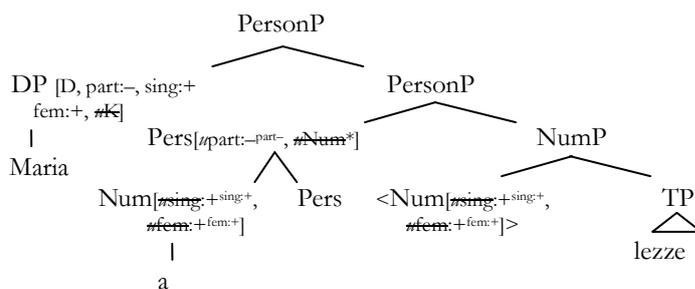
In the feature specification of Num, valued and unvalued gender may alternate. No matter their underlying form, the phi-features of Pers and Num are checked via Agree with the subject, which assigns the same semantic interpretation to the two Agree relations. Although the two Agree relations convey the same meaning, SCl *u*/ \emptyset and *a*/ \emptyset variation arises because Agreement has different underlying forms, which in this case involve underspecification of the value of gender (cf. Adger & Smith, 2005).

In the numeration, these features have also a phonological index that reflects their original value, and that they maintain throughout the course of the derivation. This index is visible at the interface level with the phonological component, and determines the phonological form of the SCl (cf. Chapter 1, section 1.2.2). An example of SCl variation *a*/ \emptyset and its underlying structure is given in (36) and (36)´.

(36) Maria a lezze
 Mary.Subj.F.SG SCl reads.3SG

Numeration:

{*Maria*[D, part:–, sing:+ fem:+, *u*K], Pers[Pers,*u*part:–part:–, *u*Num*], Num[Num, *u*sing:+sing+, *ufem:*+fem:+], T[T, *u*part:–, *u*sing:+, K, *u*EPP], *v* [*u*V], lezze [V]}

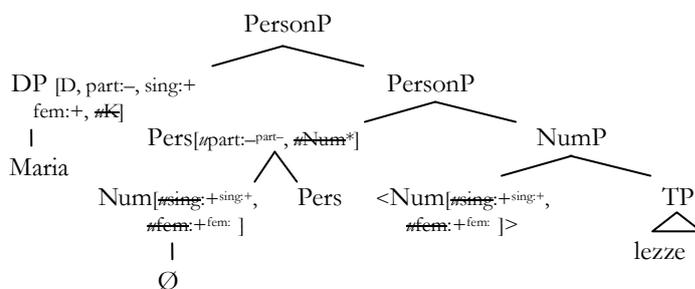


In the structure in (36), the verb raises to T. The uninterpretable phi-features of T and Agr (Pers/Num) are checked via Agree with the subject Maria which also gets Nominative case. The subject moves to the specifier of PersP to satisfy the EPP feature of T/Agr. The phonological realization of Pers/Num is determined by the phonological index that is still visible to the phonological component after feature checking. In (36), the indices of the phi-features of Pers [$part:-$] and Num [$^{sing:+}$, $fem:+$], which retain the original value of the features in the numeration, are phonologically expressed as variant *a*.

- (36)′ Maria Ø lezze
 Mary.Subj.F.SG (SCL) reads.3SG

Numeration:

{*Maria*[D, part:-, sing:+ fem:+, #K], Pers[Pers, #part:-part:-, #Num*], Num[Num, using:+sing:+, #fem: fem:], T[T, #part:-, #sing:+, K, #EPP], *v* [#V], lezze [V]}



In the derivation in (36)′, the gender feature is unvalued in the numeration, and so is its phonological index. During the course of the derivation the uninterpretable gender feature is valued and checked, but its phonological index remains unvalued and the entire feature composition is phonologically realized as a null variant (SCL Ø).

For the time being, I will assume that, in 3rd singular contexts, the number feature and its phonological index have a positive value [$^{sing:+}$] in the numeration, and this does not vary across the underlying form of the SCL variant (but see Chapter 4 and Chapter

6 for an amendment in the feature specification of 3rd singular SCIs, and the role of number).

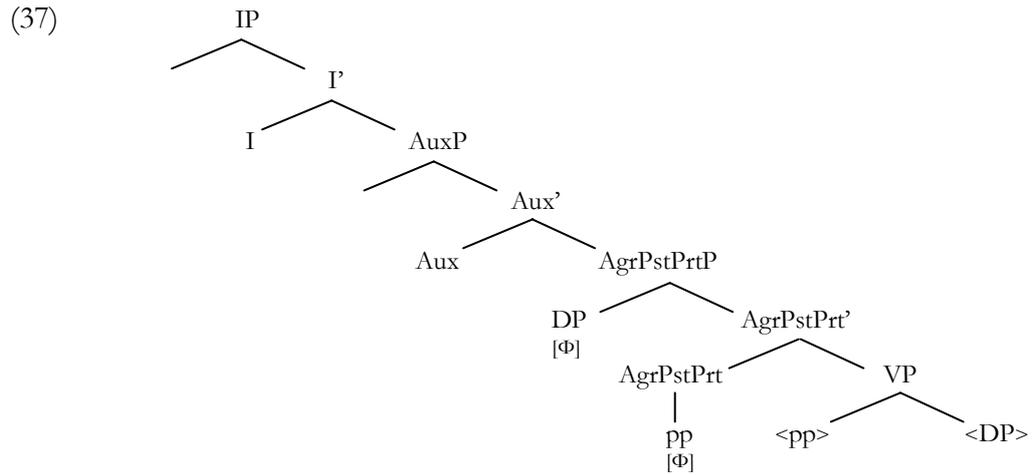
The analysis that follows considers compound tenses and the role of another element that may show subject agreement, namely, the past participle. The analysis of compound tenses will allow us to determine: (i) why overt SCl *u* is categorical with default verb agreement; (ii) what is its underlying form; and (iii) why default agreement is only found with unaccusative-like verbs.

3.3.2 Subject-verb agreement and SCl variation in compound tenses

In Ligurian, unergative, transitive and unaccusative-type verbs all occur with subject-verb agreement. In compound tenses, unaccusative-type verbs show gender and number agreement with the subject both on the SCl and on the past participle. Unergative and transitive verbs show number and gender agreement with the subject on the SCl, and number and person agreement on the finite verb, while the past participle shows default masculine singular morphology. If transitive verbs have a direct object that raises and cliticizes onto the finite verb, the past participle agrees in number and gender with the object.

The occurrence of past participle agreement with the subject (in unaccusative-type verbs) and with the object (in transitive verbs) supports the claim that, in unaccusative-type verbs, the subject is generated as the complement of the verb and, like an object, it triggers participial agreement by raising to a higher nominal position (namely, an A-position) (Burzio, 1986:56).

In order to account for participial agreement in unaccusative and transitive verbs, Kayne (1989) and Belletti (2006) hypothesize the presence of an Agreement projection immediately above VP (i.e., AgrPstPrtP (Belletti, 2006)) (37).



According to Kayne (1989) and Belletti (2006), the past participle raises to the head of AgrPstPrtP and the DP in object position raises to its specifier. The past participle agrees in number and gender with the raised object DP via spec-head agreement, thus giving participial object agreement for transitive verbs and participial subject agreement for unaccusative verbs, whose subject originates in object position (Burzio, 1986).

In this work, I focus on the presence vs. absence of subject agreement on the past participle and I do not discuss object agreement in transitive verbs, as its occurrence is not related to the features of the subject (and of the SCI). Thus, unaccusative verbs, which show participial subject agreement, are opposed to unergative and transitive verbs, which fail to do so.

I adopt the standard analysis for participial agreement in Romance put forward by Kayne (1989) and Belletti (2006) which involves movement of the argument in object position to the specifier of AgrPstPrtP. However, I reinterpret the spec-head agreement relation between the subject and the past participle as an instance of the minimalist operation Agree (Chomsky, 2001).¹³

¹³ The analysis put forward by Kayne (1989) and Belletti (2006) is first revised in minimalist terms by D'Alessandro and Roberts (2008), who offer an account of participial agreement in Standard Italian that involves Agree and the Phase Impenetrability Condition (Chomsky, 2000, 2001, 2005). In Standard Italian, transitive verbs only show participial agreement when the object raises from its base position, whereas unaccusative verbs always show participial agreement with the subject (in object position).

Following Kayne (1989) and Belletti (2006), I claim that there is a lower AgrP, which occurs below *v*P and where participial agreement takes place (cf. Belletti's AgrPstPrtP), and a higher AgrP (above TP), which in my analysis is represented by the projections of the category Person and Number.

I propose that all verb types have one instance of Agreement in the numeration that may occur in multiple copies (Chomsky, 1993). In transitive and unergative verbs, Agreement (i.e., Pers and Num) is Merged in the higher AgrP. In unaccusative verbs, the category Num is Merged in lower AgrP and subsequently a copy of its features are Merged onto the higher AgrP, while Pers is Merged in the canonical position (i.e., the past participle has number (and gender) but lacks person specification).

The structure of unaccusative verbs and unergative/transitive verbs in compound tenses is illustrated below.

Unaccusative verbs. As is the case for Italian, in Ligurian unaccusative verbs in compound tenses show subject agreement on the past participle. I propose that in unaccusative verbs the functional category Number and its phi-features are Merged in the head of AgrPstPrtP, here simply referred to as lower AgrP, while a copy of its features is Merged in above TP. The structure of the sentence in (38.a) is given in (38.b).

In order to explain this discrepancy, D'Alessandro and Roberts (2008) abandon the idea of a lower AgrP, and argue for the existence of multiple *v*P projections where participial agreement with the object takes place. When the object is assigned accusative Case by the transitive verb, the phase that contains it is spelled-out, and agreement between the past participle and the object fails to occur. In transitive verbs, agreement between the past participle and the object takes place only if the object raises and adjoins to the finite verb as a clitic. When the object is the subject of an unaccusative verb, the phase that contains it cannot be spelled-out on a separate cycle because the subject needs to be assigned nominative Case (by T).

Although it correctly accounts for the asymmetry between transitive and unaccusative verbs in Standard Italian, D'Alessandro and Roberts' analysis of participial agreement cannot be adopted to account for this phenomenon in Ligurian because: (i) in order to account for default agreement with unaccusative verbs, we would have to hypothesize that unaccusative verbs allow for the subject to be spelled-out on a separate cycle; (ii) an account that disposes of Agreement projections altogether is not suitable to account for a phenomenon that is related to the occurrence of SCLs, when these are considered as expressions of subject agreement.

A copy of Num and its features is Merged in a NumP projection above TP, while the functional category Pers, which is not Merged in the lower AgrP, is Merged in the head of PersP.¹⁴ The person feature of Pers and the features of the copy of Num are checked via Agree with the subject. Subsequently, Num adjoins to Pers to check its μ Num* feature, and the entire head is realized as a SCl.

A sentence like (38.a) may show SCl a/\emptyset variation. I have proposed that SCl alternation arises because in the numeration Pers/Num may differ for feature specification and feature value, and this underlying form is retained in a phonological index that determines the morpho-phonological form of the SCl. The a/\emptyset alternation in (38.a) is represented in (38.b) by the different values of the index of the gender feature, namely, $[\text{fem:}^+]$ a and $[\text{fem:}^-]$ \emptyset . The copy of Num that occurs in the lower AgrP head always has overt phonological expression because it undergoes morphological fusion (with the past participle) (Hornstein *et al.* 2005; Nunes, 2004).¹⁵ On the other hand, the copy that is Merged above TP head does not need to be phonologically overt, as it does not undergo morphological fusion.

The analysis I presented above provides us with an account of the nature of SCl variants in participial agreement contexts, but the syntactic role of the copy of subject agreement features in the inflection remains unclear.

According to the standard view (e.g., Rizzi, 1986a, 1986b), Number and its phi-features are required on the inflectional head in order to identify the content of a null subject (*pro*) in subject position, which is Merged in order to check the strong EPP* feature of Agr (Num/Pers)/T if no lexical subject is present or if the subject does not move from its (embedded) base position.

¹⁴ For space limitations, and given that in this example there is no strong preverbal negative element to be Merged (i.e., no NegP is projected), in (38.b) I only show the final structure of the higher AgrP, which involves NumP and PersP, namely, after Num has moved from the head of NumP (above TP) and adjoined to Pers to check the strong μ Num* feature of Pers.

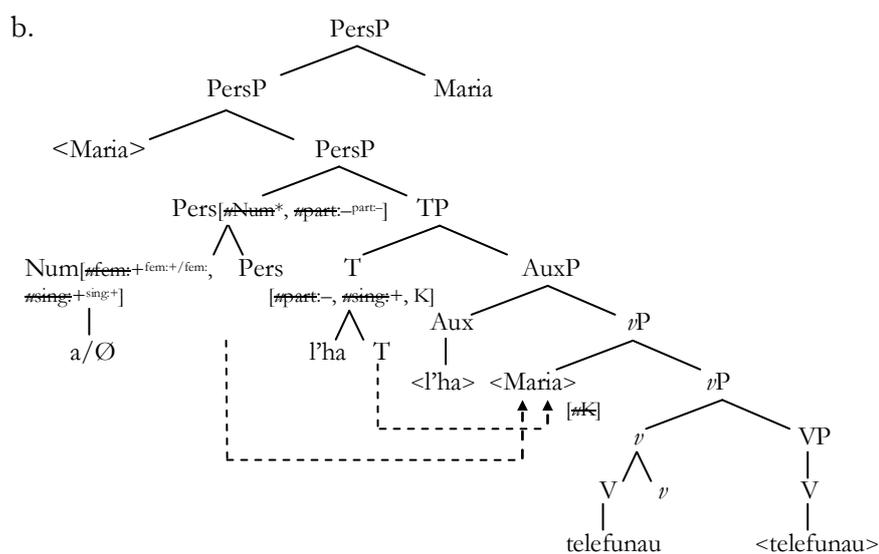
¹⁵ According to Nunes (2004), morphological fusion allows for a lower copy to be phonologically expressed without violating the Linear Correspondence Axiom (Kayne, 1994).

More recently it has been claimed that in null subject languages it is the inflectional head that satisfies the EPP, and in particular the presence of a nominal feature contained in the verbal agreement (cf. Alexiadou & Anagnostopoulou, 1998; Manzini & Savoia, 2002), or that of a D feature on Agreement (cf. Holmberg, 2005).

In the structure in (38.b), checking of the EPP feature on Agr/T has been deliberately omitted, as I leave this as an open question.

Unergative/transitive verbs. In unergative and transitive verbs, the past participle does not agree with the subject. With these verbs, both Number and Person are Merged above TP. If a lower AgrP occurs with transitive verbs, the past participle Agrees with the DP in object position when this raises above the past participle in the form of an object clitic (cf. Roberts (forthcoming)). Since unergative verbs lack an internal argument, a lower AgrP never occurs with these verbs (39).

- (39) a. a/Ø l'ha telefuna-u Maria
 SCL.F.SG Cl.has called-M.SG Maria.F.SG
 'Maria called'



In (39.b), the past participle of the unergative verb *telefunà* ('to call') is Merged in V and then raises to the little *v* head to check its *v*V feature. The subject *Maria* is Merged in the specifier of *v*P. The auxiliary *l'ha* is Merged in the head of AuxP above *v*P. When T and

Num/Pers are Merged, they value and check their uninterpretable features via Agree with the closest element that has matching features, namely, the subject *Maria* in the specifier of *v*P. In this Agree relation, the subject receives nominative Case, in virtue of the person feature on T. Finally, in unergative and transitive verbs the subject raises from the specifier of *v*P to that of PersP to check the EPP* feature of Agr (Pers/Num)/T (for different hypotheses on EPP-checking in unergative and transitive verbs see Cardinaletti, 1997; Alexiadou & Anagnostopoulou, 1998).

In unergative and transitive verbs, the raised subject either remains in the specifier of PersP, thus giving the order subject-verb, or moves further to right-adjoin to PersP leaving a trace/copy behind and generating the inverted sequence verb-subject.

3.3.3 Default verb agreement and SCl categoricity in compound tenses

In Ligurian, all verb classes show subject-verb agreement, where the verb agrees in person, number (and gender) with the subject. The underlying structure of full agreement with unaccusative and unergative/transitive verbs was provided in the previous section (3.3.2).

With a postverbal subject unaccusative verbs may also show default verb agreement, where the verb and the subject do not agree in gender and/or number, as in (40).

- (40) a. *∅* *l'è* *vegnü-∅* *Maria*
 SCL.M.SG Cl.is.3SG come-M.SG Maria.F.SG
 'Maria came'
- b. *∅* *l'è* *vegnü-∅* *e fiieure*
 SCL.M.SG Cl.is.3SG come-M.SG the girls.F.PL
 'the girls came'

Unlike in other northern varieties (cf. Saccon, 1993; Suñer, 1992), in Ligurian default verb agreement with unergative and transitive verbs is ungrammatical, as shown in (41).

- (41) a. **∅* *l'ha* *telefonau* *Maria*
 SCL.M.SG Cl.has.3SG come Maria.F.SG
 'Maria phoned'

- b. * μ l'ha mangiau u gelatu i figli
 SCL.M.SG Cl.has.3SG eaten the ice-cream.Obj the kids.M.PL
 'the kids ate an ice-cream'

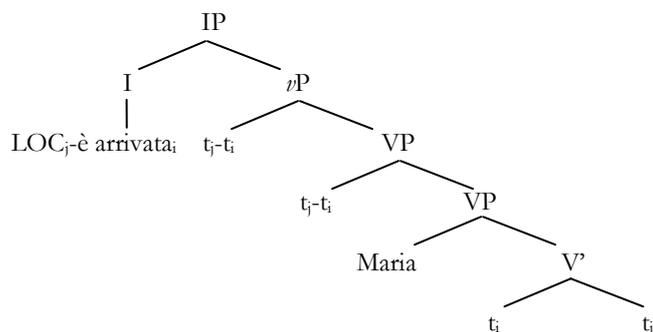
To account for the discrepancy between these verb classes, following Pinto (1997) (cf. also Saccon, 1993; Tortora, 2001), I propose that unaccusative verbs have a null locative argument that is merged in the external argument position to check the EPP when the subject is embedded in object position. This null locative element has unvalued person and number features and vacuously Agrees (in the sense of D'Alessandro & Roberts, 2010) with the phi-features of Num/Pers and T, assigning to these feature default (3rd person masculine singular) agreement at PF.

Unergative and transitive verbs fail to occur with default verb agreement because the external argument position is filled by the subject of these verbs, which values and checks the phi-features of Num/Pers and T, thus giving full subject-verb agreement.

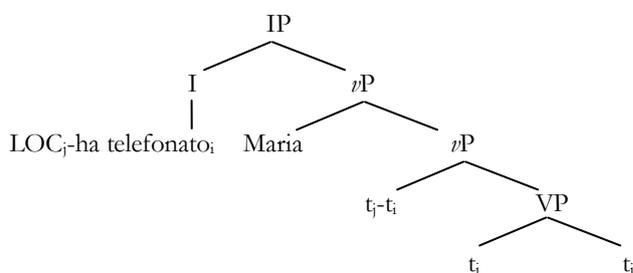
Below, I illustrate the syntactic structure of unaccusative verbs with default agreement, and I provide a formal explanation for the lack of default agreement with unergative/transitive verbs.

The null locative argument. According to Pinto (1997) (cf. also Saccon, 1993; Tortora, 2001), unaccusative verbs and some unergative verbs have a ditransitive structure as the verb selects an internal or external argument (the subject) but also a null locative argument. From an argument position inside the VP, this null locative argument cliticizes onto the verb and raises to the inflectional head with the verb where it checks the EPP, thus allowing the subject to remain in its base position (Pinto, 1997:150-1). The underlying structure hypothesized by Pinto (1997) (cf. also Tortora, 2001) for Italian unaccusatives and unergatives with a postverbal subject is schematically represented in (42) and (43) respectively.

- (42) è arrivata Maria
is.3SG come.F.SG Mary.F.SG
'Mary arrived'



- (43) ha telefonato Maria
has.3SG phoned Mary.F.SG
'Mary phoned'



According to Pinto (1997), unaccusative and unergative verbs that select a null locative argument do not do so categorically.¹⁶ When these verbs fail to select the null locative argument, the subject has to raise from its base position to check the EPP.

¹⁶ Pinto (1997) and Tortora (2001) claim that a verb like *arrivare* 'to arrive' selects the null locative argument when the meaning of the verb implies deixis with respect to the speaker, that is 'to arrive (here, in this place)' (1).

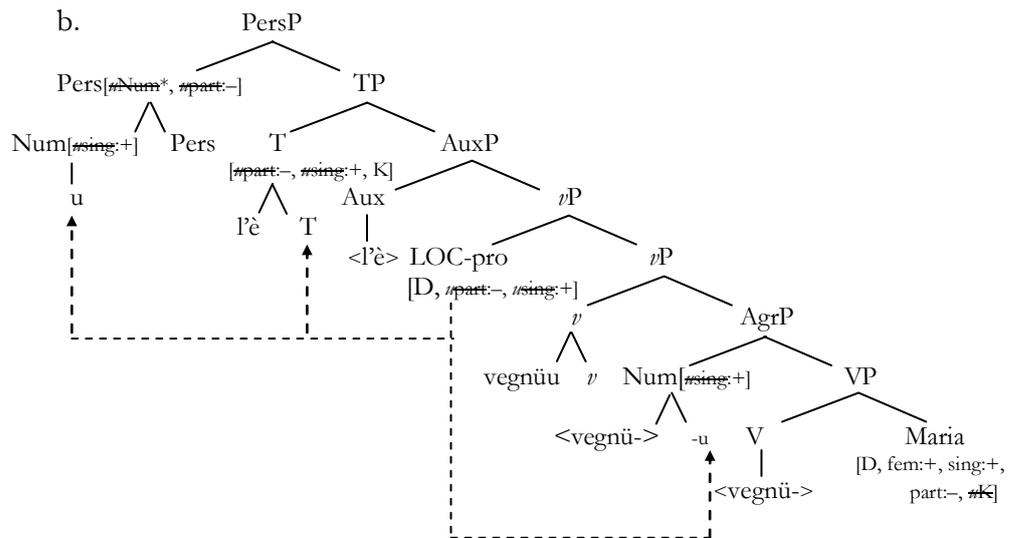
- (1) è arrivata Maria
is.3SG come.F.SG Mary.F.SG
'Mary arrived (here)'

When the same verb is used without deictic reference no null locative argument is selected, and the subject has to raise in order to check the EPP (2).

- (2) Maria è arrivata
Mary. F.SG is.3SG come.F.SG
'Mary arrived (at her place/in China)'

Default agreement and unaccusative verbs. In order to account for default agreement with unaccusative verbs in Ligurian, I propose that verbs that show lack of subject-verb agreement do so because a null locative argument (LOC-pro) is merged in (or moved to) the empty external argument position, i.e., the specifier of *v*P. I also assume that LOC-pro has unvalued person and number features. From its position in the specifier of *v*P, LOC-pro vacuously Agrees with the unvalued person and number features of T and Num/Pers, which delete and are attributed default agreement and morphological form at PF, that is, 3rd person singular (masculine) (cf. D’Alessandro & Roberts, 2010). An example of the structure I propose is given in (44).¹⁷

- (44) a. u l’è vegnü-u Maria
 SCL.M.SG Cl.is.3SG come-M.SG Maria.F.SG
 ‘Maria came’



In (44.b), the subject *Maria* is Merged as the complement of the verb and the category Num is Merged in the participial head. The subject does not need to raise from its base position because the numeration includes a null locative argument LOC-pro that is Merged in the specifier of *v*P. Alternatively, LOC-pro is Merged inside the VP and then raises to the specifier of *v*P (cf. the structure in (42)). From this position, LOC-pro which

¹⁷ For the sake of exposition, the structure in (44.b) does not show the movement of LOC-pro from its base position to the the specifier of *v*P. When this null argument is selected by the verb, I assume its base position to be the one in (42) for unaccusatives, and the one in (43) for unergative verbs.

has unvalued participant and number features vacuously Agrees with all the elements that have matching unvalued phi-features, namely, Pers/Num, T and the copy of Num that is Merged in the participial projection. These features delete and are assigned default value at PF (i.e., 3rd person singular masculine). Subsequently, LOC-pro moves to check the EPP in the specifier of PersP.

The analysis of LOC-pro that I have given here and the one provided by Pinto (1997) differ for one major aspect. In Pinto's analysis, the null locative has no phi-features and, despite the presence of this null argument, it is the subject that determines verb agreement.

In order to account for the fact that, in Italian, despite the presence of a null locative argument that checks the EPP, the verb still agrees in person, number (and gender) with the subject, Pinto (1997:152) claims that both phi-feature checking and Case assignment on the subjects occur at LF. However, Pinto's account leaves unexplained the fact that verbs that select a null locative argument may show no subject-verb agreement in Ligurian (as in many other northern Italian dialects).

The lack of subject-verb agreement with these verbs is accounted for in this analysis by assuming that the null LOC-pro indeed has person and number features but these are unvalued and vacuously check matching features of other elements. Vacuous checking of these features is morphologically realized as default (3rd masculine singular) agreement on the SCl/verb. Uninterpretable feature checking and Case assignment on the subject are considered as two separate operations: the former occurs in the syntax and feeds the morpho-phonological component, the latter takes place in the semantic component.

If we take the analysis of default agreement shown in (44.b) to be correct, the ungrammaticality of (45) and (46) follows.

- (45) * u l'è vegnü-a Maria
 SCI.M.SG Cl.is.3SG come-F.SG Maria.F.SG
 'Maria came'

- (46) * a/Ø l'è vegnü-u Maria
 SCL.F.SG Cl.is.3SG arrive-M.SG Maria.F.SG
 'Maria came'

In (45), the subject and the finite verb fail to agree whereas the nonfinite verb shows agreement with the subject. For participial agreement to occur in (45) the subject has raised to the specifier of the lower AgrP and has checked the number and gender features of Num. The movement of the subject from its base position entails that LOC-pro is either not present in the numeration or does not raise from its V-internal position. The subject raises to check the EPP and it checks also the phi-features of Pers/Num and T. The ungrammaticality of (45) obtains because LOC-pro is not Merged in the external argument position and the subject occupies this position, from where it Agree with all inflectional elements.

Conversely, in (46), the lack of participial agreement entails that a LOC-pro argument is Merged in the specifier of *v*P where it vacuously checks the phi-features of Num/Pers, T and the past participle. LOC-pro has (unvalued) person and number features, but lacks gender. If Pers has person feature and Num includes both number and gender, in order for Pers/Num to be realized by *a/Ø* their phi-features should be checked by the matching feature of the subject, which has an interpretable gender feature. However, LOC-pro blocks the Agree relation between Num/Pers and the subject because it is the closest element with matching features, although these are only a subset, and all phi-features on Num must be checked by the same lexical item (cf. Chomsky's Defective Intervention Effect (2000:124)). Hence the ungrammaticality in (46) of a SCL realizing phi-features that match those of the subject. The structure of (46), reposed in (47.a), is provided in (47.b).

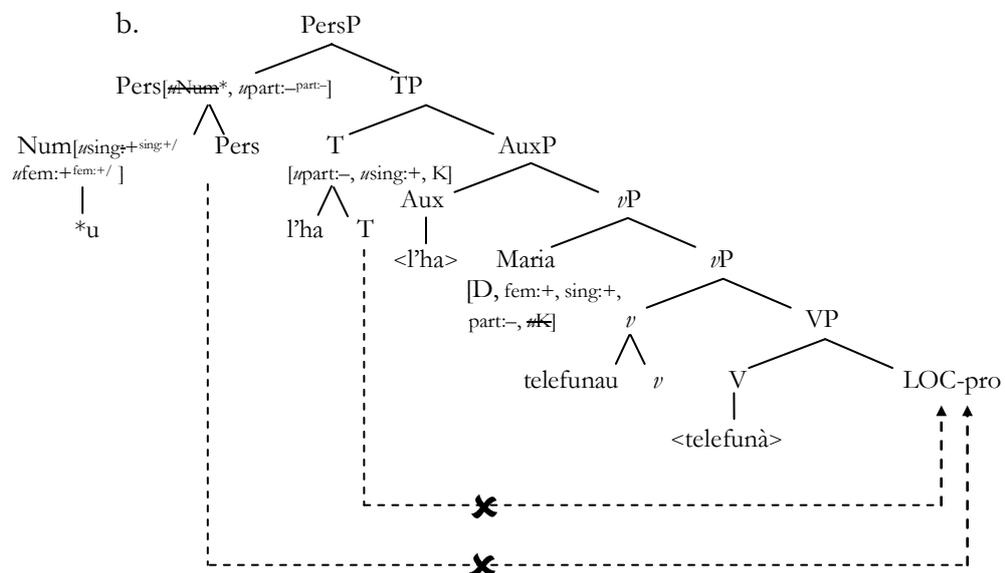
- (47) a. * a/Ø l'è vegnü-u Maria
 SCL.F.SG Cl.is.3SG arrive-M.SG Maria.F.SG
 'Maria came'

At first, the ungrammaticality of default agreement with a verb that selects a null locative argument could appear problematic for the analysis of default agreement provided above. However, there is a structural difference between unaccusative and unergative verbs. While the subject of an unaccusative verb is base generated as the complement of the verb, the subject of an unergative (and indeed of a transitive) verb is Merged in the external argument position, i.e., in the specifier of *v*P.

Given that the specifier of *v*P is already filled by the external argument, LOC-pro, if selected by the verb, cannot occupy the external argument position, and indeed does not need to raise at all because from its position in the specifier of *v*P the subject is the closest eligible element to check the EPP of Agr/T.

The ungrammaticality of (48), repeated in (49.a), is illustrated in the structure in (49.b).

- (49) a. * u l'ha telefonau Maria
 SCI.M.SG Cl.has.3SG called Maria.F.SG
 'Maria called'



One aspect that distinguishes the null locative argument in this analysis (LOC-pro) from the one hypothesized by Pinto (1997) is the fact that, according to Pinto, the null locative argument is a clitic that moves to the inflectional position by adjoining to the verb.

Following Tortora (2001), instead, I take the locative argument to be a pronominal element that occupies an argument position, namely the specifier of *v*P. Crucially, though, the ungrammaticality of (49.b) can still be accounted for if we take PRO-loc to be a null clitic, and not a null pronominal element. Let us assume that LOC-pro from its base position cliticizes onto the verb (LOC-*telefonà*) and raises with the verb to adjoin to little *v*. When the inflectional head (Pers/Num and T) looks down for an element with matching features, the first available element would be the subject DP *Maria* and not LOC-pro. Hence the ungrammaticality of default agreement with verbs that merge the subject in the external argument position.

To summarize, categoricity of overt SCl *u* in default agreement contexts has been accounted for by claiming that verbs that allow default agreement select a null locative argument with unvalued person and number features which occupies the external argument position and assigns default agreement to the SCl and the verb by vacuously checking their matching phi-features and assigning them a default value at PF. A null variant is ungrammatical in these contexts as it realizes (and requires checking of) a gender feature.

Despite the fact that both unaccusatives and some unergative verbs may select a null locative argument, default agreement only occurs with unaccusatives as in the structure of these verbs the external argument position is not originally filled by the subject, the only element that would block vacuous feature agreement.

3.3.4 U/Ø variation in nonreferential contexts

In the previous sections (cf. section 3.3.1 and 3.3.3), I showed that in 3rd singular referential contexts overt/zero SCl alternation occurs only when the subject and the verb agree in person, number (and gender). I proposed that SCl variation arises because the underlying form of these features (particularly, gender) may be valued or unvalued in the numeration,

The phonological realization of these features may be an overt SCl *u/a* or a null variant \emptyset respectively.

In default contexts, a null locative element matches its unvalued person and number features with those of Tense and Agreement (vacuous Agree), and these features receive default agreement at PF. Both (valued and unvalued) person and number features of Agreement are vacuously checked by LOC-pro and get the same default morpho-phonological form (SCl *u*). LOC-pro lacks a gender feature, thus the category Number is only vacuously assigned a default value for its number feature. Thus, in default agreement contexts variant *u* does not alternate with a null variant \emptyset because the SCl does not realize a gender feature.

Nonreferential contexts presents some similarities with default verb agreement, as they both occur with a 3rd singular verb form and an overt SCl *u*. However, unlike default SCl/verb agreement, nonreferential contexts allow for a zero SCl form to alternate with overt SCl *u*, as the examples in (50) show.

- (50) a. u p'è tardi
 SCI Cl.is.3SG late.Adv
 'It's late'
- b. \emptyset p'è meiiu
 (SCI) Cl.is.3SG better.Adv
 'It's better'

I propose that default SCl *u* and nonreferential SCl *u* differ for both (i) their feature specification and (ii) their position in the syntactic structure.

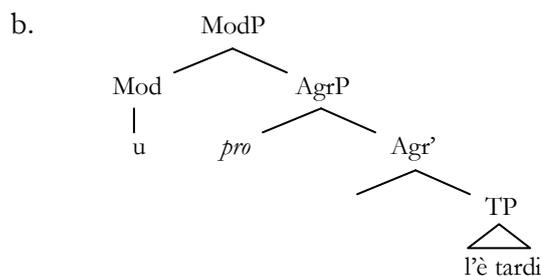
The system of feature specification, which I adopt in this analysis (cf. section 3.3.1), distinguishes between the positive value, the negative value, the lack of value (i.e., underspecification of value), and the absence of a given feature (cf. Harbour, 2009). With a 1st or 2nd person subject, the feature [participant] is assigned a positive value, i.e., [participant:+], whereas with a 3rd person subject the same feature is assigned a negative

value, that is, [participant:-]. If the context involves lack of participant, the feature is absent.

The discrepancy involving the lack of SCl *u*/ \emptyset alternation in default contexts and its occurrence in nonreferential contexts is captured by claiming that they are, in fact, two separate variants, namely, a default SCl *u* with an underlying form Pers[*u*participant:-], Num[*u*singular:+], and a nonreferential SCl *u* that expresses the absence of the feature [participant].

Poletto (1993:50ff.) claims that SCls that occur in nonreferential contexts do not occupy the head of AgrP, as they do not realize any person, number and/or gender features. They occur, instead, in the head of a higher projection, which she identifies as Mod(ality)P, and which is responsible for licensing *pro* in the specifier of AgrP when the head of AgrP is not realized by a referential SCl. According to Poletto's (1993) analysis of nonreferential SCls, the example in (50.a), repeated here in (51.a), has the structure in (51.b).

- (51) a. *u* *l'è* *tardi*
 SCl Cl.is.3SG late.Adv
 'It's late'



In nonreferential contexts, the head of AgrP is empty and cannot license *pro*. The realization of the head Mod by the nonreferential SCl *u* allows for *pro* to be licensed in the specifier of AgrP (Poletto, 1993:52).

I propose that default SCl *u* realizes the head of AgrP (Pers/Num in the present analysis) where person and number features are assigned default value. On the other hand, nonreferential SCl *u*, which lacks the feature [participant], realizes the head of a higher

projection. For the sake of simplicity, I assume with Poletto (1993) that this is the head of ModP.

As default SCl *u* and nonreferential SCl *u* are the expression of distinct feature specifications and occur in different syntactic positions, overt/zero SCl variation found in nonreferential contexts (cf. (50)) is no counterevidence to the overt SCl categoricity observed in default contexts.

However, the occurrence of the zero SCl form in nonreferential contexts cannot be accounted for by assuming that, in these contexts, SCl *u* alternates with the null SCl variant, as the latter requires (valuing and) checking of number and gender features of the category Num, and nonreferential contexts do not have a nominal element with matching interpretable features, i.e., they lack a subject referent.

In what follows, I propose that the occurrence of overt/zero SCl variation in nonreferential (and, indeed, in referential) contexts is triggered by the presence of adjacent high clitics which cause the nonpronunciation of the morpho-syntactic material that is merged above these clitics.

3.4 SCl variability

The variationist analysis of the Ligurian data distinguished between contexts that present overt/zero SCl variation and contexts that show no zero form (distributional analysis). For the contexts that present variation, the variationist analysis identified the factors that influence the variability of one variant over another (multivariate analysis).

The results of the distributional analysis fed the syntactic analysis of referential contexts (cf. section 3.3). In order to account for the discrepancy in SCl variation between subject-verb agreement and default verb agreement, I have proposed that the referential SCl variable includes a null underlying variant which is specified for number and gender,

and which do not alternate with an overt variant in default contexts because, in these contexts, the SCl and the verb agree with an element that lacks gender specification, namely, the null locative argument, and the SCl fails to express gender.

Overt/zero SCl variation is found in both (subject-verb agreement) referential contexts and nonreferential contexts. If we assume that the zero form always entails the presence of a null underlying SCl variant, overt/zero SCl variation in nonreferential contexts remains unexplained, as these contexts lack a subject referent that can check number and gender. If a null SCl variant occurred in these contexts its number and gender features would remain unchecked.

The results of the multivariate analysis showed that in contexts that present overt/zero SCl variation the variability of the zero form is influenced by a number of (internal and external) linguistic factors (cf. section 3.2.1.3 and 3.2.2.3). The significant factors for each context are repeated in (52).

(52)

Referential contexts: <i>Adjacency, position of the subject, preceding phonology, information status of the subject, recency.</i>
Nonreferential contexts: <i>Adjacency, preceding phonology.</i>

Subject-related factors, namely, position and information status, are significant for the zero form only in referential contexts, as nonreferential contexts lack the presence of a subject referent altogether.

As for structure-related factors and phonological factors, both referential and nonreferential contexts show significance of adjacency and preceding phonology.

I propose that the impact of adjacency on the zero SCl form is due to the fact that adjacent clitics that occur high in the structure, namely, negation and OCl, may block the pronunciation of the syntactic positions that host the SCl, when these are not preceded by

a complementizer. When higher clitics are present in the structure the zero SCl is, in fact, nonpronunciation of the SCl position(s).

As for preceding phonology, the effect of the factors [+HIGH] and [-HIGH] vowel is found to be related to adjacency (cf. section 3.2.2.3). The only phonological factor that significantly favours the zero SCl form, regardless of the following syntactic context, is preceding pause. I account for the effect of pause by claiming that this performance-related factor favours the choice of a SCl form with similar phonological traits, i.e., a zero form instead of an overt variant, being it a null variant (with lower clitics or adjacent verb) or nonpronunciation of the SCl due to phonological blocking.

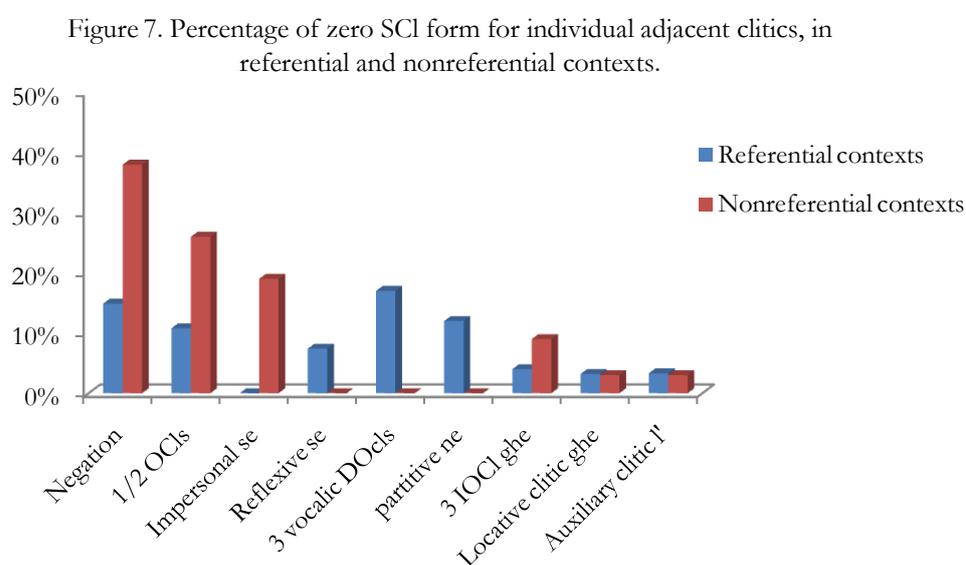
The nonsignificance of recency effects in the nonreferential variable is unexpected (cf. (52)). As the analysis of the other SCl variables will show (see Chapters 4 and 5), recency of a zero variant generally has a significant impact on the choice of a zero form in the following token, regardless of the syntactic and phonological contexts. In variables that do not include an underlying variant, but where the zero SCl form is merely nonrealization of the SCl due to the intervention of syntactic elements, the effect of recency is interpreted partly as syntactic priming (Branigan, 1995). This phenomenon involves recursion of the effect that a previous syntactic structure has on a variable onto a following context that shows the same variable. Given that nonreferential variable n/\emptyset lacks a null variant, the nonsignificance of recency in nonreferential contexts is likely to be due to undetected interactions with other factors.

Finally, the results for inter-speaker variation showed that one speaker considerably increases the production of zero SCl form in her speech (cf. sections 3.2.1.4 and 3.2.2.4). In this speaker's grammar a third factor affects the variability of the zero SCl form, namely, following phonological context. I propose that, for this speaker, in addition to null SCl variant and nonpronunciation of the SCl position, occurrence of a zero form is due to phonological deletion of the SCl when this is followed, in particular, by a nasal or a vowel.

The probability of occurrence of the zero SCl increases for this speaker, especially in those contexts where null SCl variant, nonpronunciation and phonological deletion co-occur as potential ways of generating the zero form.

3.4.1 Zero form as nonpronunciation of the SCl position

Figure 7 shows a comparison of the occurrence of zero SCl form in relation to individual adjacent clitics in referential and nonreferential contexts.



Some of the clitics are found to occur with both contexts, namely, negation, 1st/2nd person OCl, IOCl/locative *ghe*, and auxiliary/copula *l'*. The remaining clitics occurs only with referential contexts (i.e., reflexive *se*, 3rd person vocalic DOCl, and partitive *ne*), or only with nonreferential contexts (such as impersonal *se*), hence the lack of zero SCl form in the contexts that do not occur with a given clitic (cf. Figure 7).

Clitics that occur in both contexts show a similar effect on the zero form. With negation and 1st/2nd OCl the occurrence of the zero form increases, whereas with IOCl/locative *ghe* and auxiliary clitic *l'* it decreases. Clitics that occur only in one of the two contexts pattern with the former.

According to Cardinaletti (2008), clitics that are specified for person and number raise to occupy a higher syntactic position in order to check their features, whereas clitics that lack person and number features occur in lower syntactic positions.

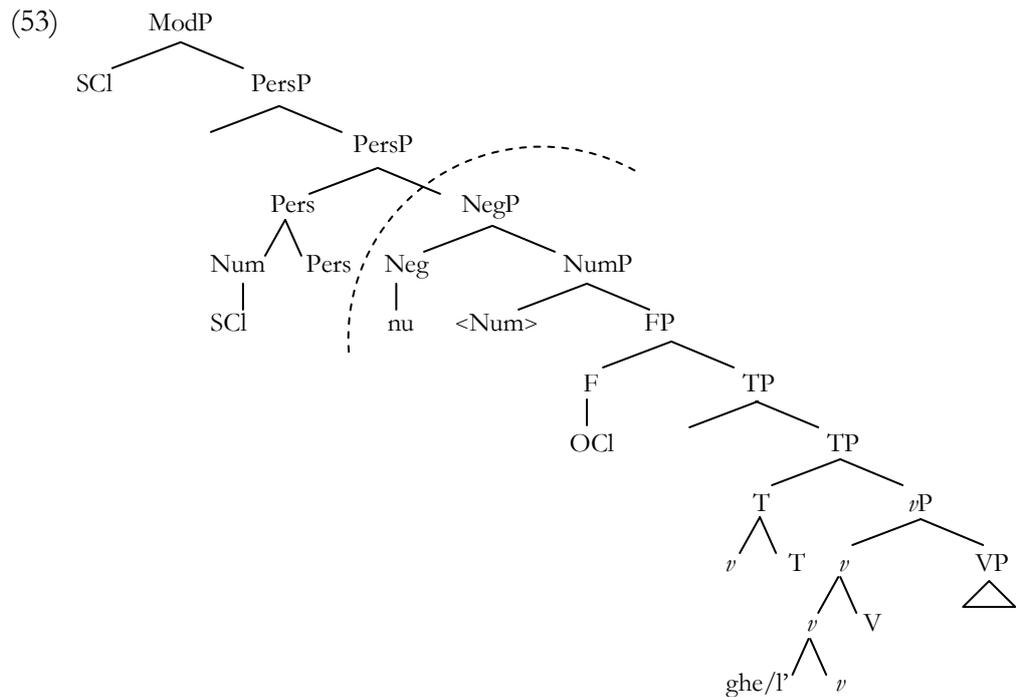
I claim that the high/low clitic split is reflected in the impact that a clitic has on the occurrence of a zero SCI form. In particular, I propose that in Ligurian 1st/2nd person OCl, impersonal and reflexive *se*, 3rd person vocalic DOCl and partitive *ne* all move from inside the VP to the head of an independent functional projection (FP) above TP, where they check their person and number features. Negation *nu*, which is strong (i.e., it can negate the sentence by itself (Zanuttini, 1997)), is Merged in the head of a NegP above all other clitics. On the contrary, IOCl/locative *ghe* and auxiliary clitic *l'*, which do not require checking of person and number, adjoin to the verb in *v*.¹⁸ Then, the clitic-verb compound raises to T, as the structure in (53) shows.¹⁹

¹⁸ In this analysis, the locative clitic *ghe* and the null locative argument LOC-pro are not interpreted as a same element with different phonological realization, but as two distinct elements. The overt locative clitic *ghe* is not necessarily an argument and lacks phi-features. LOC-pro has always argument status and has unvalued person and number features.

¹⁹ Clitic clusters that are formed by high clitic impersonal *se* and low clitic *ghe* are included in the results for adjacency factors, because in Ligurian clitic *ghe* always adjoins to the verb. Standard Italian shows the clitic sequence locative-impersonal *si*, namely, *ci si* (1), where the locative left-adjoins to the impersonal clitic, a higher clitic element. Ligurian, instead, presents the sequence impersonal *si*-locative, that is, *se ghe* (2), where *ghe* adjoins to the verb, and *se* is Merged in an independent functional position.

- | | |
|-----|---|
| (1) | ci si va
there.Loc SI goes.3SG
'People go there/We go there' |
| (2) | u se ghe va
SCI SI there.Loc goes.3SG
'People go there/We go there' |

The sequence impersonal *se*-locative in Ligurian (cf. (2)) provides further evidence in support of the claim that locative clitic *ghe* occupies a lower syntactic position than impersonal *se* in this variety (for the reverse analysis involving Standard Italian impersonal *si* in a lower position, namely, adjoined to T, see D'Alessandro, 2004).



I propose that when higher clitic projections (i.e., NegP and/or FP) in the syntactic structure are filled they may block the phonological expression of the functional projections of PersP (including Num that adjoins to Pers) and ModP, where respectively referential and nonreferential SCIs are realized (this phenomenon is represented by the dotted line in (53)). If higher clitics block the phonological realization of the SCI positions Pers and Mod, the sentence appears with a zero SCI form. The blocking effect of high clitics is not found in subordinate clauses where, given the presence of a complementizer, all functional projections above negation and OCl are phonologically expressed.

Phonological truncation of the functional projections PersP and ModP does not take place also if a clitic adjoins to *v* and then raises with the verb to T, namely, if it does not occupy an independent functional head above TP. This is the case of IOCl/locative clitic *ghe* and auxiliary/copula clitic *l'*.²⁰

²⁰ Kayne (2006) claims that northern Italian varieties express the 3rd person indirect object clitic with an overt locative clitic (*ghe*) and a silent dative clitic (DATCL), whose presence is licensed by *ghe*. According to the hypothesis I propose here, the silent dative clitic, like other (overt) OCl, would occupy the head of FP. I assume that, if the head of FP is occupied by a phonologically null element, FP has no effect on the phonological realization of higher functional projections.

Thus, when the zero form appears in referential contexts, this may be due to the occurrence of a null SCl variant, or to the nonpronunciation of the SCl position caused by the presence of a high clitic in the sentence. When the zero form occurs in nonreferential contexts, this can only be due to the latter.

In default agreement contexts, SCl *u* is almost never found to alternate with a zero form. The only two exceptions to the categoricity of overt SCl *u* in default contexts (cf. section 3.1.1, fn.3) involve the presence of high clitic, and are accounted as instances of blocking of the phonological realization of the SCl position.

To sum up, the significance of adjacency on the zero SCl form is accounted for by claiming that adjacent clitics occupy different syntactic positions. If a following clitic occupies an independent functional position, this may block the phonological realization of the functional projection whose head is expressed by the SCl, thus generating a null phonological outcome. If a following clitic adjoins with the verb to the inflectional position instead of filling an independent functional head, blocking of the phonological expression of the SCl does not take place.

3.4.2 Zero form as phonological deletion (inter-speaker variation)

According to the hypothesis I proposed above, in both referential and nonreferential contexts the zero SCl form may be interpreted as nonrealization of the SCl position caused by the presence of a high clitic. Moreover, the referential variable differs from the nonreferential variable in that it involves the presence of a null underlying SCl in the set of variants, which has number and gender feature but no phonological form.

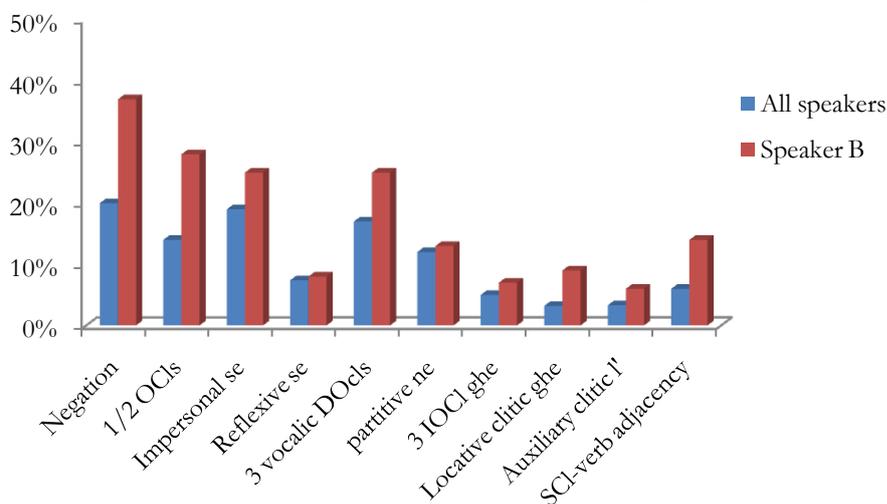
Nonetheless, the overproduction of zero SCl presented by one speaker, speaker B, in both contexts remains unexplained.

The results of the variationist analysis for the referential variable show that, alongside adjacency and preceding phonology, also following phonological context is significant for the occurrence of the zero SCI in speaker B's speech.

All speakers, including speaker B, show the same effect of preceding phonological factors, that is, preceding pause favouring the zero form in all contexts and preceding [+HIGH] vowel favouring it in nonreferential contexts. In addition, speaker B shows also the effect of following phonological factors, namely, following nasal and following vowel favouring the zero form, and following liquid disfavouring it.

Figure 8 shows the distribution of zero SCI for individual adjacent clitics, and compares the results of all speakers with the results for speaker B. As zero SCI variability increases uniformly between referential and nonreferential contexts, in speaker B and in other speakers, respectively, the two contexts are considered as one for ease of exposition.

Figure 8. Percentage of zero SCI form for individual adjacent clitics (no distinction of context), for all speakers and for speaker B.



As appears from Figure 8, speaker B increases her production of zero SCI form mainly with following nasal-initial elements (i.e., negation *nu* and 1st person OCl's *me*, *ne*), and with a following vowel (3rd person vocalic OCl's).

According to Labov (2008), the occurrence of a zero form may be due to the phonological deletion of an overt variant, if certain phonological conditions are met in a given context. I propose that in speaker B's speech these conditions involve mainly a following nasal, and this is reflected in the results for negation *nu* and 1st OCl *me/ne* (cf. Figure 8). On the contrary, a following liquid always disfavours phonological deletion, as is evident from the fact that with clitic *l'* the occurrence of zero form remains as low as it is for other speakers (cf. Figure 8).²¹ This is illustrated in (54), where the notation ↓ indicates the disfavoured pattern.

(54) Overt SCIs deletion in referential (*u/a*) and nonreferential (*u*) contexts:

$$\begin{array}{lclclcl} \text{SCI } u/a & \Rightarrow & \text{---\#nasal} & \Rightarrow & \{\emptyset\} \\ \text{SCI } u/a & \Rightarrow & \text{---\#liquid} & \Rightarrow & \downarrow\{\emptyset\} \end{array}$$

The remaining following phonological factors, that is, fricative, plosive and vowel, have little effect on the variability of the zero form when they are considered across all 3rd singular contexts (referential and nonreferential). As the results of fricative-initial *se* show (cf. Figure 8), it is the syntactic position of the clitic (higher for impersonal *se* and lower for reflexive *se*) and not its phonological traits that influences the occurrence of the zero form (for an account of a lower position of reflexive *si*, as opposed to impersonal *si*, see Manzini & Savoia, 2001).

Speaker B's overproduction of zero form is due to fact that three factors, namely, the presence of a null underlying variant, nonpronunciation due to high clitics, and phonological deletion of overt variants generate the same phonologically null output, thus increasing its probability of occurrence (cf. Adger, 2006, 2007).

In referential contexts, speaker B can produce a zero form by expressing a null SCI variant, or by failing to realize the SCI when a high clitic occurs, or indeed by deleting the

²¹ Although following liquid disfavours the zero SCI, its effect on phonological deletion of the overt SCI is found in default cases for speaker B, where the presence of the zero form cannot be interpreted as a null SCI variant (due to the defective intervention of the null locative argument), nor as nonpronunciation (given the presence of an auxiliary clitic) (cf. section 3.2.1.4).

phonological realization of an overt SCl when this is followed by nasal. In nonreferential contexts, the overt SCl *u* alternates with a zero form that is either nonrealization due to blocking or phonological deletion.

Unlike for referential contexts, following phonology is not a significant group in nonreferential contexts because of the interaction between some of its factors with preceding phonological factors.

The effect of following phonology on zero SCl in speaker B's speech is supported by the fact that, in the absence of an adjacent clitic (i.e., with SCl-verb adjacency), the zero form still increases compared to other speakers (cf. Figure 8).

Interestingly, with partitive *ne* the factor involving following nasal does not seem to trigger any deletion effect. In order to account for this, I tentatively hypothesize that, while nonpronunciation of SCl positions is a widespread phenomenon, phonological deletion is an instance of inter-speaker variation, and as such it is found in contexts that are already subject to the presence of the zero SCl form.

Similarly to reflexive clitic *se*, the lack of phonological deletion with partitive *ne* may be seen as an indication that this clitic occupies a low functional position (low FP) that does not affect the realization of higher SCl projections (for an hypothesis of the low position of *ne*, see Cardinaletti, 2008).

To sum up, inter-speaker variation for the zero SCl form can be accounted for by claiming that the grammar of individual speakers may allow for an overt SCl to be phonologically deleted in given phonological contexts. Speakers who present phonological deletion of the SCl, as well as the null underlying variant and the phenomenon of nonrealization of the SCl position, are likely to show an increase in the occurrence of zero SCl form as all three factors generate the same phonologically null outcome.

3.5 Conclusion

In this chapter, I analysed overt/zero SCl alternation in referential and nonreferential 3rd singular contexts by using variationist methodology and current syntactic theory. I showed that in Ligurian the presence of a zero SCl form can be determined by the underlying feature specification of the variants (SCl categoricity vs. variation), and by the effect of internal linguistic factors, such as adjacent elements and phonological context (SCl variability).

First, I showed that in contexts that present no SCl alternation the underlying form of the SCl lacks gender, because checking of this feature against the subject would be blocked by the defective intervention of a null locative argument. As the set of SCl variants does not include a null variant that lacks gender specification, only an overt SCl may occur in such contexts.

Then, I proposed that in contexts that show overt/zero SCl variation there are up to three possible ways of generating a zero SCl form. These include: a null underlying variant that has number and gender features but no phonological form, and that is only found in referential contexts; blocking of the phonological realization of the SCl position(s) triggered by the presence of a high clitic (in an independent functional projection above Tense); and phonological deletion of overt variants in specific phonological contexts.

Finally, while all speakers realize a zero SCl form by means of a null variant and of nonpronunciation of the SCl position, one speaker shows also the effect of phonological deletion (inter-speaker variation).

CHAPTER 4

THIRD PERSON PLURAL SUBJECT CLITIC VARIATION

In this chapter, I investigate subject clitic variation in 3rd person plural contexts. I distinguish between referential and generic use of the SCl variable, and for each context I analyse overt/zero SCl variation and alternation of overt SCl variants (*i/e*).

The analysis of overt/zero SCl variation in 3rd person plural contexts supports the hypothesis of multiple forms of zero SCl (cf. Chapter 3). Overt SCl alternation (*i/e*) is also accounted for by claiming that the two overt variants realize different phi-feature specifications. The choice of the overt SCl variant is determined by morpho-syntactic factors and by the phonological context in which the SCl occurs.

The 3rd plural SCl variable *i/e/Ø* is used in referential contexts, namely, when the SCl agrees with a subject/predicate referent, and in generic contexts, that is, when the SCl denotes a generic referent ‘they/people’. Both referential and generic contexts present overt/zero SCl alternation (*i, e/Ø*) and overt SCl variation (*i/e*).

Referential use of variable i/e/Ø. Third plural referential contexts present a SCl form *i* when they occur with an overt subject either in preverbal (1.a) or postverbal position (1.b), with a null subject (1.c), or in existential constructions when the referent is a nominal predicate (1.d).

- (1) a. *i* fratti *i* sun ndeti via
the friars.M.PL SCl are.3PL gone.M.PL away
‘the friars left’
- b. *i* se metteva insemme de je ommi
SCl themselves.RefICl put.3PL together ten men.M.PL
‘ten men got together’

- c. *pro* *i* l'ean andeti in Olanda
 pro.M.PL SCI Cl.were.3PL gone.M.PL to Holland
 'they had gone to Holland'
- d. *i* gh'eran duzze avvucatti
 SCI there.were.3PL twelve lawyers
 'there were twelve lawyers'

In all these contexts, the overt SCI *i* alternates with a zero SCI form (2).

- (2) a. e fie Ø ghe dajevan du vui
 the daughters.F.PL (SCI) to.her gave.3PL 'del voi'
 'the daughters addressed her in a polite way'
- b. Ø nu l'ean mancu queji paghei i infermei
 (SCI) not Cl.were.3PL not.even almost paid.M.PL the nurses.M.PL
 'nurses were almost not even paid'
- c. *pro* Ø sun ndeti in Corsica
 pro.M.PL (SCI) are.3PL gone.M.PL to Corsica
 'they went to Corsica'
- d. Ø gh'ean zà i careghin
 (SCI) there.were.3PL already the highchairs.M.PL
 'Highchairs existed already'

Feminine plural contexts that involve unaccusative-like verbs in compound tenses present a variable vs. categorical split in the form of the SCI. This is related to the fact that in these contexts the agreeing past participle may appear with different morphological endings.

Overt/zero SCI alternation is allowed when the past participle agrees in number and gender with the subject, that is, when the nonfinite verb has morphological ending *-e* (3).

- (3) a. e campane *i* sun lighé-e
 the bells.F.PL SCI are.3PL tied up-F.PL
 'the bells are tied up (= do not ring)'
- b. velle Ø sun vegnü-e sübetu
 they.F.PL (SCI) are.3PL come-F.PL at once
 'they (all women) come at once'

In the same context, the agreeing past participle may occur with a morphological ending *-i*. I assume that past participles that show ending *-i* agree only in number and not in gender with the subject. I will refer to past participles that lack gender specification as

‘defective past participles’. With defective past participles overt SCl variants are attested

(3’.a) whereas the zero SCl form is not found in the Ligurian corpus (3’.b).

- (3)’ a. ste man *i* sun tütte taïie-i
 these hands.F.PL SCl are.3PL all.F.PL cut-PL
 ‘These hands are all cut’
- b. ?? ste man Ø sun tütte taïie-i
 these hands.F.PL (SCl) are.3PL all.F.PL cut-PL
 ‘These hands are all cut’

When past participle ending *-i* is found with masculine plural referents, full overt/zero SCl variation is attested (4).

- (4) a. i parenti *i* sun vegnü-i a dividdili
 the relatives.M.PL SCl are.3PL come-M.PL to divide.them
 ‘the relatives came to share it (the land)’
- b. i purtù Ø sun tütte sere-i
 the front-doors.M.PL (SCl) are all.M.PL closed-M.PL
 ‘the front-doors are all closed’

Overt SCl *i* alternates also with an overt variant *e* (5). In 3rd plural contexts, *i/e* variation is found with preverbal (5.a) and postverbal subjects (5.b), with null subjects (5.c), and with existential constructions (5.d). When referential contexts occur with a defective past participle, both overt SCl variants are attested (5.e) (cf. also (3.c)).

- (5) a. sti frè *e* l’han decizu de fâ sta cà
 these brothers.M.PL SCl Cl.have.3PL decided to make this house
 ‘these brothers decided to build this house’
- b. perché *e* l’han purtà i estracumunitari
 because SCl Cl.have.3PL brought the immigrants.M.PL
 ‘because immigrants brought it’
- c. *pro* *e* sun camminei de cursa
 pro.M.PL SCl are.3PL walked.M.PL quickly
 ‘they rushed there’
- d. ma *e* ghe sun ancù dui frè
 but SCl there are.3PL still two brothers.M.PL
 ‘but there are still two brothers’
- e. *pro* *e* ghe sun ndet-i
 pro.F.PL SCl LocCl are.3PL gone-PL
 ‘they (all females) went there’

Generic use of variable i/e/∅. Overt SCl variant *i* is found in all 3rd plural generic contexts, that is, with a null subject (6.a), with the lexical DP *e gente* ‘people’ (6.b), and with bare quantifiers (6.c).¹

- (6) a. inti paisi *pro* *i* ghe dijeva che
 in.the villages pro.3PL SCl LocCl said.3PL that
 ‘in the country they used to say that...’
- b. e gente *i* fajevan de gran ecunomie
 the people.PL SCl made.3PL of.Part big economies
 ‘people used to save up’
- c. tanti *i* se n’ean andeti inte sitè
 many SCl ReflCl Cl.were.3PL gone.M.PL in.the cities
 ‘many had left to the cities’

Generic contexts show overt/zero SCl variation only when they occur with a null subject (7.a). Lexical DP *e gente* very rarely appears with a zero SCl form (7.b), whereas quantifiers are never attested with a zero SCl (7.c).

- (7) a. *pro* ∅ gh’han missu numme ‘xxx’
 pro.3PL (SCl) to-them.have.3PL put name ‘xxx’
 ‘they/people named them ‘xxx’
- b. % e gente ∅ nu san dund’andà
 the people.PL (SCl) not know.3PL where.to-go.Inf
 ‘people don’t know where to go’
- c. ??tanti ∅ se n’ean andeti inte sitè
 many (SCl) ReflCl Cl.were.3PL gone.M.PL in.the cities
 ‘many had left to the cities’

Like overt/zero alternation, overt SCl variation is found only when generic contexts involve a null subject (8.a), whereas lexical DP *e gente* and quantifiers show (almost) full categoricity of variant *i*.²

¹ Here, I use the term ‘generic’ to mean ‘impersonal’ use of the SCl variable with the semantic meaning of ‘they/people...’. In particular, generic contexts include generic (i.e., “people in general”) and arbitrary (i.e., “some people/they/someone”) reading of impersonal subjects, as opposed to their specific reading (namely, “a specific set of individuals, potentially including the speaker”) (Egerland, 2003; Cinque, 1988).

² The notation % in examples (7.b) and (8.b) indicates that, in Ligurian, zero SCl and overt variant *e* are very rare with lexical DP *e gente*, despite the fact that this is a productive form among generics. In particular, only one token for each of the two SCl forms is found in the corpus under investigation.

- (8)
- a. anticamente *pro* *e* *i* mettevan sutt'au maùn
Adv pro.3PL SCl OCl put.3PL under.the brick
'In the old days, they used to put it (money) under a brick'

 - b. % *e* gente *e* van a l'uspeà
the people.PL SCl go.3PL to the.hospital
'people go to the hospital'

 - c. ?? tanti *e* se n'ean andeti inte sitè
many SCl ReflCl Cl.were.3PL gone.M.PL in.the cities
'many had left to the cities'

In this chapter, I will show that the variationist results for 3rd plural contexts support the analysis of the zero SCl form proposed for 3rd singular contexts, namely, that it involves the presence of a null underlying variant, or the nonrealization of the SCl position, or else, the phonological deletion of the overt variant (inter-speaker variation).

I will propose that in 3rd plural contexts the SCl is the expression of the category Number and/or of that of Person. The category Number may include both number and gender features, or it may be underspecified for its phi-features. When Number is specified for gender (and consequently for number), Agreement (i.e., Number and Person) is realized as a null variant; when Number lacks gender but is specified for the number feature, it is expressed by overt variant *i*. When Number is underspecified for gender or lacks both its phi-features, the SCl realizes the participant feature of Person in the form of variant *e*.

I will also show that the underspecification of Number in 3rd plural contexts in Ligurian is reflected by the different morphological endings that a past participle agreeing with the subject exhibits.

With underspecified past participles and generic subjects overt SCls are categorical because of the lack of gender specification on Number. It has been argued that the SCl expresses a copy of the features of Num (cf. Chapter 3, section 3.3.2). When the past participle is underspecified the copy of Num lacks gender and it cannot be realized as a null variant, hence its nonoccurrence in the corpus.

In generic contexts, if Number includes gender in its specification this feature cannot be checked because the subject referent lacks a matching interpretable gender feature. Thus, the zero SCl does not occur in the corpus partly because a null variant is ungrammatical in these contexts.

In contexts lacking gender specification, a zero SCl form may only be interpreted as nonpronunciation of the syntactic position of the SCl, or indeed as phonological deletion (inter-speaker variation).

As for overt SCl variation, the choice of the overt variant is affected by morpho-syntactic and phonological factors. The former involve the expression of number on the finite verb morphology. The latter relate to the phonological traits of the preceding context when this is a vowel (i.e., feature spreading). Overt SCl alternation is not always found in generic contexts possibly due to structural and featural requirements of the generic subject.

In section 4.1, I define the variable context and I illustrate the factor specification for the variationist analysis. In section 4.2, I provide distributional and multivariate results of the overt/zero SCl alternation and the overt SCl variation for referential and generic use of the SCl variable. In section 4.3, I determine the feature specification of each variant, and I propose a syntactic account for categorical cases. In section 4.4, I summarize the main findings of the two analyses.

4.1 Data analysis

The variationist analysis examines 3rd person plural tokens in order to determine the impact of internal, processing and external factors on overt/zero SCl variation and on overt SCl alternation. In what follows, I present the contexts that are omitted from the analysis, and the reasons for their exclusion (section 4.1.1), and I define the factors included in the

individual factor groups for referential and generic use of the SCl variable *i/e/Ø* (section 4.1.2).

4.1.1 Circumscribing the variable context

Clause type. Although most studies of SCl variation in northern Italian varieties (Poletto, 2000; among others) focus on the comparison in the use of SCls in main and embedded clauses, I restrict the analysis of variable *i/e/Ø* to main clauses. In Ligurian, SCls in embedded clauses generally cliticize onto complementizers *che* ‘that’ and *se* ‘if’, and onto most wh-items (e.g., *quande* ‘when’, *cumme* ‘how’, *dunde* ‘where’). The phonological form deriving from the cliticization does not allow one to determine whether it is a variant *e* that cliticizes onto the complementizer/wh-element (9.a), or whether the complementizer/wh-element is followed by the zero form (9.b). As a result, only main clauses are considered in the analysis.

- (9) a. e so *ch'e* / *quand'e* ghe van
 SCl know.1SG that-SCl / when-SCl LocCl go.3PL
 ‘I know that/when they are not going (there)’
- b. e so *che* Ø / *quande* Ø ghe van
 SCl know.1SG that (SCl) / when (SCl) LocCl go.3PL
 ‘I know that/when they are not going (there)’

Preceding adverbs. Similarly, if overt variant *i* occurs after adverbs *peni* ‘then’, *magari* ‘maybe’, *difeti* ‘indeed’, *quindi* ‘then’, ‘so’, and *ormai* ‘now’, ‘nowadays’, the final vowel of the adverb tends to merge with the vocalic SCl, leading to ambiguity with regard to the SCl form (10).

Tokens preceded by these adverbs are not considered in the analysis.

- (10) *pen'i* / *peni* Ø sun restei là
 Adv-SCl / Adv (SCl) are.3PL remained.M.PL there
 ‘then they remained there’

Singular referents. Ligurian presents cases in which the subject referent has singular number, but plural meaning ‘the family of...’, and the SCl and the verb show plural agreement. If

the verb morphology is not specified for number, the SCl is the only element that shows number specification (11.a), and the occurrence of a zero SCl form, with no overt expression of number, generates ambiguity in meaning (11.b). Tokens with this type of subject are not coded for.

- (11) a. *a mamma* *i* *gh'ajeva* *e tere* *li*
the mum.F.SG SCl.PL Cl.had.3 the land.Obj there
‘my mum(‘s family) had their allotments there’
- b. *a mamma* \emptyset *gh'ajeva* *e tere* *li*
the mum.F.SG (SCl) Cl.had.3 the land.Obj there
‘my mum had her/my mum’s family had their allotments there’

4.1.2 Factor group specification

Tokens that show the plural SCl variable *i/e/∅* are coded for subject-related factors (gender, pronominality, position, definiteness, and information status), verb-related factors (verb class, finite verb morphology, and nonfinite verb agreement), the syntactic factor adjacency, phonological context (preceding and following the SCl), the processing factor recency of the same variable, and the external variable age.

In what follows, I provide the characterization of internal factor groups in referential contexts (section 4.1.2.1) and in generic contexts (section 4.1.2.2). The specification of phonological, processing and external factors is no longer provided as it matches that of the analysis of 3rd singular contexts.

4.1.2.1 Internal linguistic factors (referential contexts)

Gender of the subject. The variable *i/e/∅* is coded according to whether the subject referent has masculine (12.a) or feminine (12.b) grammatical gender. When the referent involves two subjects linked by a conjunction, tokens are coded as (default) masculine, if the subjects are both masculine or masculine and feminine (12.c), and as feminine, if the referents have both feminine gender (12.d).

- (12) a. *i purtui* i l'ean serei (masculine)
 'the doors.M.PL SCl were closed'
- b. *e campane* i sun lighèe (feminine)
 'the bells.F.PL SCl are tied up'
- c. *me mare e me pare* i sun nasciui li (masculine)
 'my mum.F.SG and my dad.M.SG SCl were born there'
- d. *me zia e me cujina* i rivavan da... (feminine)
 'my aunt.F.SG and my cousin.F.SG SCl came from...'

Pronominality. Referential tokens are coded according to whether they occur with a pronominal subject (13.a), a lexical subject (13.b), a (non-generic) quantifier (13.c), or a null subject (13.d).³

- (13) a. *velli* i sun bravi (pronoun)
 'they SCl are nice'
- b. *i mei nonni* i sun là (lexical DP)
 'my grandparents SCl are there'
- c. *quarciu de velli* i ghe l'han (quantifier)
 'someone (of them) SCl they have it'
- d. *pro* i sun vegnüi (null subject)
 'pro.3PL SCl are come'

Position of the referent. Like singular contexts, 3rd plural tokens are coded according to whether they appear with a preverbal subject (14.a), a postverbal subject (14.b), a topicalized subject (14.c), a null subject (14.d), or a nominal predicate in the case of existential constructions (14.e).

- (14) a. *i parenti* i sun vegnui (preverbal subject)
 'the relatives SCl are come'
- b. *i u miravan i seni frè* (postverbal subject)
 'Scl him.Obj watched his brothers.Subj'
- c. *veli* però i nu gh'era (topicalized subject)
 'they, though, SCl were not there'

³ Quantifiers that are followed by a noun, and whose quantificational meaning refers to a restricted (specific) group, are included in referential contexts. Bare quantifiers are considered as generics (see section 4.1.2.2).

- d. *pro i sun arrivei* (null subject)
 ‘pro.3PL SCl are arrived’
- e. *i gh’era ancù di nevi* (nominal predicate)
 ‘SCl there.were still some grandchildren’

Definiteness. Referents are coded as definites (15.a), which also include null subjects, as specific indefinites (namely, “part of a limited (definite) group” (Enç, 1991)) (15.b), and as indefinites, which, for plural referents, are mostly expressed via a partitive construction (15.c).

- (15) a. *i fñeui i sun rivei* (definite)
 ‘the kids SCl are arrived’
- b. *dui de sti matetti i sun maroti* (specific indefinite)
 ‘two of these kids SCl are ill’
- c. *i sun rivei di papei* (indefinite)
 ‘SCl are arrived some documents’

Information status. Like singular contexts, 3rd plural tokens are coded according to Prince’s (1981) classification (see also Sharma, 2005) for information status of the subject/nominal predicate referent. The referent can be ‘evoked’ in the discourse (i.e., old information) (16.a), ‘inferable’ (i.e., information that is recoverable by the hearer) (16.b), ‘containing’ an inferable item (16.c), ‘new’ in the discourse (16.d), or ‘anchored’ (i.e., related) to a new piece of information (16.e).

- (16) a. *ste cà i l’ean belle* (evoked)
 ‘these houses SCl were nice’
- b. *seu mamma e seu papà i sun morti* (inferable)
 ‘her mum and dad SCl died’
- c. *i fñi de sta donna i sun a Milan* (containing inferable)
 ‘the children of this lady SCl are in Milan’
- d. *di zuoni i gh’han ditu che* (new)
 ‘some youngsters SCl told him that...’
- e. *i riva i parenti de ina me amiga* (ancore new)
 ‘SCl arrive the relatives of a friend of mine’

Verb class. Verbs are coded according to their syntactic structure: verbs that present a VP-external subject, such as transitives (17.a) and unergatives (17.b); verbs that have a VP-internal subject, namely, unaccusatives (17.c), reflexives (17.d) and passives (17.e); psych verbs, which show the theme as subject and the experiencer as indirect object (17.f); raising verbs (17.g); and copular constructions (17.h).

- | | | | |
|------|----|--|----------------|
| (17) | a. | <i>i l'han piau</i> u trenu
'SCL they have caught the train' | (transitive) |
| | b. | <i>i l'han ciammau</i> velli
'SCL have called they' | (unergative) |
| | c. | <i>i sun rivei</i> i suoi parenti
'SCL are arrived his relatives' | (unaccusative) |
| | d. | <i>i se sun inraggei</i>
'SCL themselves they got angry' | (reflexive) |
| | e. | <i>i sun steti sarvei</i>
'SCL they have been saved' | (passive) |
| | f. | <i>i me piajan</i> e cireje
'SCL to-me please the cherries' | (psych verb) |
| | g. | <i>i panan</i> belle ste cà
'SCL seem nice these houses' | (raising verb) |
| | h. | <i>i l'ean</i> due seu
'SCL they were two sisters' | (copula) |

Finite verb morphology. In Ligurian, 3rd person plural contexts present verb endings that are morphologically specified for 3rd person and plural number (*-an*, *-en* (18.a)), and ambiguous verb endings (*-a*, *-e* (18.b)) that are syncretic with 3rd person singular in the present and imperfect tense, and with 3rd and 1st person singular in the conditional (and rarely also in the imperfect indicative). Tokens are coded according to whether the verb presents unambiguous or ambiguous (syncretic) morphology.

- | | | | |
|------|----|---|---------------|
| (18) | a. | <i>i parl-an</i> sempre
'SCL.3PL speak.3PL always' | (unambiguous) |
|------|----|---|---------------|

- b. *i mir-a a televijun* (ambiguous)
 ‘SCL.3PL watch.3 the telly’

Nonfinite verb morphology. In compound tenses, verbs that have a VP-internal subject show agreement with the subject on the past participle, while verbs that present a VP-external subject do not show subject agreement on the nonfinite verb (cf. Burzio, 1986). With masculine plural referents, the past participle agrees in number and gender with the subject (ending *-i*) (19.a). With feminine plural referents, the nonfinite verb shows either full agreement with the subject (ending *-e*) (19.b) or only number agreement (ending *-i*) (19.c). Tokens that show no agreement on the past participle (i.e., default masculine singular ending *-u*), or that occur in simple tenses, are coded for lack of subject agreement.

- (19) a. *i fratti i sun ndet-i via* (masculine, plural agr.)
 ‘the friars.M.PL SCL are gone-M.PL away’
- b. *e campane i sun lighe-e* (feminine, plural agr.)
 ‘the bells.F.PL SCL are tied-F.PL up’
- c. *ste man i sun tütte taiie-i* (plural agreement)
 ‘these hands.F.PL SCL are all.F.PL cut-PL’
- d. *i l’han pia-u u trenu* (lack of agreement)
 ‘SCL.3PL have caught.M.SG the train.Obj’

Adjacency. Like in singular contexts, the syntactic factor adjacency includes following negation *nu* (20.a); 1st/2nd person OCl *me* ‘me/to me’, *te* ‘you/to you’, *ne* ‘us/to us’, *ve* ‘you/to you (pl.)’ (20.b); reflexive clitic *se* ‘themselves/to themselves’ (20.c); 3rd person direct vocalic OCls *u* ‘him/it(m.)’, *a* ‘her/it (f.)’, *i* ‘them (m.pl.)’, *e* ‘them (f.pl.)’ (20.d); partitive clitic *ne* ‘of it/of them’ (20.e); 3rd person indirect OCl *ghe* ‘to him/to her/to it/to them’ (20.f); 3rd person direct OCl *l’* (20.g); locative/possessive clitic *ghe* ‘there’ (20.h); auxiliary/copula clitic *l’* (20.i); and, finally, SCL-verb adjacency (20.j).⁴

⁴ Referential contexts include also impersonal *se* followed by an object that is assigned Nominative case and agrees with the SCL/verb. An example of this construction is provided in (1) (cf. also Chapter 3, section 3.2.2.2).

(20)	a.	<i>i nu rivan ciü</i> 'SCL not they-arrive anymore'	(negation)
	b.	<i>i ne mira</i> 'SCL (at) us they-look'	(1 st /2 nd OCl)
	c.	<i>i se demura</i> 'SCL themselves they-enjoy'	(reflexive clitic <i>se</i>)
	d.	<i>i a cattan velli</i> 'SCL it.Obj buy they'	(3 rd direct vocalic OCl)
	e.	<i>i ne pian deje</i> 'SCL of.them they-get ten'	(partitive clitic <i>ne</i>)
	f.	<i>i ghe musciavan</i> 'SCL to.them they-showed'	(3 rd indirect OCl <i>ghe</i>)
	g.	<i>i l'affittava</i> 'SCL it.Obj they-rented'	(3 rd direct OCl <i>l'</i>)
	h.	<i>i ghe van</i> 'SCL there.Loc they-go'	(locative clitic <i>ghe</i>)
	i.	<i>i l'ean buie ste stansie</i> 'SCL were dark these rooms'	(auxiliary/copula cl. <i>l'</i>)
	j.	<i>i van in geja</i> 'SCL they-go to church'	(SCL-verb adjacency)

4.1.2.2 Internal linguistic factors (*generic contexts*)

The analysis of variable *i/e/Ø* in generic contexts includes only one subject-related factor, that is, pronominality. The remaining subject-related factors (i.e., gender, position, definiteness and information status) cannot be tested on generic subjects.

(1) *i se vendan ben i spareghi*
 OCl.M.PL Imp.SI sell.3PL well the asparagus.M.PL
 'Asparagus sell well'

Tokens that involve an impersonal *se* were first coded but later omitted from the analysis because they showed categoricity of overt SCL variant *i* and they occurred in small Ns.

Pronominality. Generic tokens are coded according to whether they occur with a null subject (21.a), with a lexical DP *e gente* ‘people’ (21.b), or with a bare quantifier (21.c).⁵

- (21) a. *pro* i gh’han detu feugu (null subject)
‘pro.3PL SCl (people/someone) have set fire to it’
- b. *e gente* i se sun missi a cavà (lexical DP *e gente*)
‘people.PL SCl started to dig’
- c. *quarcün* i ghe van (quantifier)
‘someone SCl go.3PL there’

Verb-related and adjacency factors. All verb-related factors (i.e., verb class, finite verb morphology, and nonfinite verb agreement) are included in the analysis of generic contexts with the same factor specification illustrated for referential contexts.

4.2 Results

The distributional results for variable *i/e/Ø* show that overt SCl variants and zero form present similar variability patterns when they are used in referential (Table 1) and in generic contexts (Table 2). Overt variant *i* is overall the most recurrent, overt variant *e* shows the same relatively low percentage in both contexts, whereas the zero form increases slightly in referential cases.

Overall (N)	variant <i>i</i>		variant <i>e</i>		zero form	
	(N)	(%)	(N)	(%)	(N)	(%)
675	448	66	93	14	134	20

⁵ While quantifiers that are followed by nouns are considered as referential subjects, bare quantifiers are treated as generics. Bare quantifiers, namely, quantifiers that do not refer to a specific lexical referent, are found to co-occur with the nominal generic subject *e gente* ‘people’, as in (1).

- (1) *e gente* quarcün i ghe van
people someone SCl there.LocCl go.3PL
‘someone/some people go there’

Overall (N)	variant <i>i</i> (N) (%)		variant <i>e</i> (N) (%)		zero form (N) (%)	
458	331	72	61	13	66	14

Despite the little variation in the use of variable *i/e/Ø* in the two contexts, referential and generic cases are considered in two separate analyses, due to the fact that not all subject-related factors can be tested in generic contexts (cf. section 4.1.2.2).

Furthermore, variable *i/e/Ø* shows inter-speaker variation in both referential and generic contexts. Table 3 illustrates the occurrence of the individual variants for all other speakers and for speaker B.

<i>Speaker</i>	Overall (N)	variant <i>i</i> (N) (%)		variant <i>e</i> (N) (%)		zero form (N) (%)	
Other speakers	524	366	70	62	12	96	18
Speaker B	151	82	54	31	21	38	25

Speaker B's data show an increase in the occurrence of the zero form and overt variant *e*. The number of tokens of variant *e* for speaker B amounts to half the number of tokens of the same variant uttered by all other speakers.

Generic contexts show the same pattern of inter-speaker variation as the one found in referential contexts. In speaker B's speech, the zero SCl form and overt variant *e* are more recurrent than in other speakers' speech, whereas the occurrence of overt variant *i* decreases.

Table 4. Distribution of variable *i/e/Ø* with generic use, for all other speakers and for speaker B.

<i>Speaker</i>	Overall (N)	variant <i>i</i>		variant <i>e</i>		zero form	
		(N)	(%)	(N)	(%)	(N)	(%)
Other speakers	390	292	75	46	12	52	13
Speaker B	68	39	57	15	22	14	21

Speaker B's data are omitted from the main analysis of variable *i/e/Ø* in referential contexts, and they are examined separately in order to determine what factors generate inter-speaker variation.

Although the variability pattern of the single variants is found to be constant in referential and generic contexts for speaker B, inter-speaker variation for variable *i/e/Ø* is investigated only as far as referential contexts are concerned.

Due to the relatively low number of tokens for each variant, speaker B's data for generic contexts cannot provide accurate results. Speaker B's tokens are omitted from the main analysis of generic contexts, but they are not considered for an individual analysis. I assume that, given the same variability pattern, the factors that affect inter-speaker variation in referential contexts show the same impact with generics.

4.2.1 Variable *i/e/Ø* in referential contexts

In its referential use, SCl variable *i/e/Ø* is found with both subject referents (referential constructions) and nominal predicate referents (existential constructions). Table 5 shows the distribution of overt variants and zero SCl form with each type of construction.

Table 5. Distribution of variable *i/e/Ø* in referential contexts according to type of construction.

<i>Type of construction</i>	Overall (N)	variant <i>i</i>		variant <i>e</i>		zero form	
		(N)	(%)	(N)	(%)	(N)	(%)
Referential	662	463	70	79	12	119	18
Existential	13	7	54	2	15	4	31

While overt variant *e* shows the same variability in the two contexts, the occurrence of the zero SCl form increases in existential constructions. However, the difference in the result for zero SCl variability can be attributed to the low number of tokens in the corpus of 3rd plural SCls in existential constructions, and can be overlooked. In the variationist analysis, referential and existential constructions are considered as one single (referential) context.

In what follows, I provide the distributional and multivariate results for referential contexts. First, in the distributional analysis I show that contexts that involve a defective past participle (subject) agreement present categoricity of overt SCl variants (section 4.2.1.1). Given their low occurrence in the corpus, the categoricity of overt SCls in such contexts is tested by means of an elicitation task and it is confirmed by its results (cf. section 4.2.1.1.1 and Appendix A).

Then, I present the results of the multivariate analyses for the zero SCl form (section 4.2.1.2) and for each overt SCl variant (section 4.2.1.3). Finally, I provide the results of overt/zero alternation and overt SCl variation for speaker B, and I compare them with the findings of the analyses for the other speakers (section 4.2.1.4).

4.2.1.1 Defective subject agreement on the past participle

The distributional analysis shows that, when variable *i/e/Ø* occurs in referential contexts, overt/zero SCl alternation is almost always attested. Categoricity of overt SCl variants is found only with feminine plural tokens that occur with a defective past participle, as Table 6 shows.⁶

⁶ Data regarding the lack of zero SCl form with defective past participles show no inter-speaker variation, as speaker B also presents an overt SCl in this context (only 1 N).

Table 6. Distribution of zero SCl form (\emptyset) in referential contexts, according to past participle agreement with the subject.

<i>Past participle agreement</i>	Overall (N)	\emptyset (N)	\emptyset (%)
Lack of agreement	440	72	16
Plural masculine <i>-i</i>	67	23	34
Plural feminine <i>-e</i>	14	1	7
Plural (feminine) <i>-i</i>	4	0	0

In Chapter 3 (in particular, section 3.3.2 and 3.3.3), I have proposed that in structures that show subject agreement on the past participle, the SCl realizes a copy of the phi-features on the past participle. The lack of zero SCl with defective past participles, i.e., past participles that lack a gender feature, follows from the generalization that in order to be expressed by a phonologically null variant, the SCl must realize both gender and number features (see section 4.3.2 for discussion).

This result represents a crucial finding for the hypothesis of a null fully specified SCl variant which I propose here. Given the small number of tokens that occur with defective past participles in the corpus, I carried out an elicitation task which showed that defective past participles are indeed a productive feature of the Ligurian dialect and they require an overt SCl variant to occur. Details of the elicitation task are given in the next subsection.

4.2.1.1.1 *Elicitation task*

Since defective past participles occur in low numbers (5 Ns) in the corpus, an elicitation task (cf. Cornips & Poletto, 2005) is carried out in order to determine (i) whether defective past participles are a productive phenomenon in Ligurian, thus excluding the interpretation of the five attested tokens as speech errors; and if so, (ii) whether the categoricity of overt SCl variants with defective past participles is in fact nonoccurrence of zero SCl tokens in these contexts in the corpus.

The task consists of forty sentences to be translated from Italian into the dialect by the same informants whose speech is the object of the variationist analysis. Each sentence presents a past participle that agrees with a feminine plural subject referent. An example is given in (22).

- (22) Sara e Michela sono *andat-e* al mare (Italian)
 Subj.3F.PL are.3PL gone-F.PL to-the beach
 ‘Sara and Michela went to the beach’

Two are the potential elicitations of the sentence in (22). These are given in (23).

- (23) a. a Sara e a Michela *i/e/Ø* sun *andet-e* a-a maina (Ligurian)
 Subj.3F.PL SCl are.3PL gone-F.PL to-the beach
- b. a Sara e a Michela *i/e/Ø* sun *andet-i* a-a maina
 Subj.3F.PL SCl are.3PL gone-PL to-the beach

Table 7 shows the distribution of the SCl variable *i/e/Ø* in the elicited sentences.

Table 7. Elicitation task. Distribution of variable *i/e/Ø* according to the elicited form of past participle agreeing with feminine plural referents.

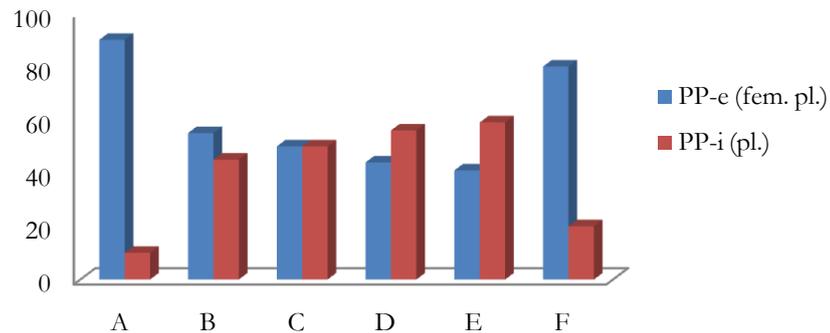
<i>Past participle agreement</i>	Overall (N)	variant <i>i</i>		variant <i>e</i>		zero form	
		(N)	(%)	(N)	(%)	(N)	(%)
Plural feminine <i>-e</i>	144	88	61	21	15	35	24
Plural <i>-i</i>	96	76	79	18	19	2	2

The results of the elicitation task show that the use of a defective form of past participle with feminine plural referents is a productive phenomenon in Ligurian (96/240 tokens (cf. Table 7)).⁷ Figure 1 shows the percentage of fully agreeing and defective past participle produced in the elicitation task by each speaker.

⁷ For most speakers, the defective 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. *arrivel*) and variable with all other verbs which, with feminine subject referents, may show a past participle *-e* specified for number and gender (e.g. *mettì* ‘to put’, PP.fem.pl. *misse* ‘put’) or a past participle ending *-i* specified only for number (PP.pl. *missi* ‘put’).

For two of the speakers, that is, speaker A and speaker F, verbs of the first conjugation do not occur with a categorical defective past participle form, but allow variation like all other verbs, thus accounting for the lower percentage of the defective form observed for these speakers. This difference is considered as an instance of intra-language variation due possibly to contact with varieties of other neighbouring villages.

Figure 1. Elicitation task. Percentage of occurrence of fully agreeing and defective past participles with feminine plural referents for each speaker.



Most speakers show (almost) equal production of both forms of past participle. Only two speakers differ in that they favour the fully specified form of past participle over the defective one, although they show occasional use of the latter (cf. fn.7).

The elicitation task shows that, when the past participle agrees in gender and number with the subject, full SCl *i/e/Ø* variation is attested (24.a). If the past participle shows no gender agreement, the zero SCl form is extremely rare (24.b) (cf. Table 7).

- (24) a. a Sara e a Michela *i/e/Ø* sun andet-e a-a maina
 Subj.3F.PL SCl are.3PL gone-F.PL to-the beach
- b. a Sara e a Michela *i/e/%Ø* sun andet-i a-a maina
 Subj.3F.PL SCl are.3PL gone-PL to-the beach

Only two instances showing a zero SCl form with a defective past participle are recorded in the task. Both sentences involve an adjacent reflexive clitic *se* ((25) and (26)).

- (25) Ø se sun isse-i
 (SCl.F.PL) themselves are.3PL got-PL up
 ‘they (fem. pl.) got up’

- (26) Ø se sun lave-i a faccia
 (SCl.F.PL) themselves are.3PL washed-PL the face
 ‘they (fem. pl.) washed their faces’

I assume that in (25) and (26) the zero form is an instance of nonpronunciation of the SCl position caused by the presence of the reflexive clitic *se*, i.e., a clitic that occur in an independent position between the SCl and the verb.

The results of the elicitation task suggest that, overall, the hypothesis that a null underlying variant can never occur in such contexts due to the lack of gender specification is correct. Rather than contradicting the claim that a null variant is ungrammatical with defective past participles, (25) and (26) show that other forms of zero SCl (e.g., nonpronunciation of the SCl position) may be found with defective past participles, as they involve phonological nonrealization due to syntactic blocking or phonological deletion of an overt variant.

To sum up, the results of the elicitation task show that the occurrence of a defective past participle agreeing with a feminine plural subject is a productive phenomenon in Ligurian. When the sentence presents this nonfinite verb form the phi-features of Agreement (Number/Person) can only be realized by an overt variant as they do not include gender. Zero SCl forms in these contexts can only involve phonological nonrealization or deletion.

Tokens that occur with a defective past participle are excluded from the analysis of overt/zero SCl variation due to categoricity of overt variants in the corpus.

4.2.1.2 Multivariate analysis (zero SCl form)

The results of the regression show that in referential 3rd plural contexts the occurrence of the zero SCl form is significantly affected by preceding phonology, adjacency, and finite verb morphology. All other factors included in the regression are nonsignificant (Table 8).

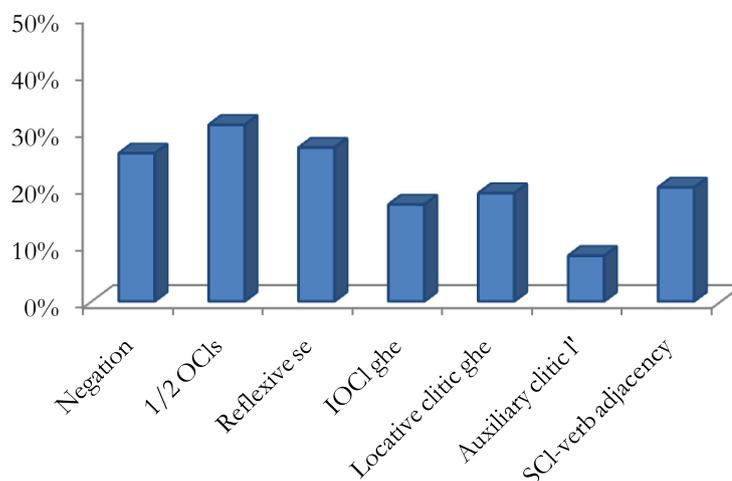
Table 8. Significant and nonsignificant factor groups for the zero SCL form (\emptyset) in referential contexts.

<i>Variable</i>	Overall (N)	\emptyset (N)	\emptyset (%)	VARBRUL weight
<i>Preceding phonology</i>				
Pause	78	26	33	.707
[+HIGH] vowel	130	29	22	.580
[-HIGH] vowel	272	33	12	.400
<i>Range</i>				307
<i>Adjacency</i>				
Neg/OClS	135	37	27	.664
SCL-verb	197	39	20	.514
Auxiliary clitics	188	20	11	.367
<i>Range</i>				297
<i>Finite verb morphology</i>				
Unambiguous	405	84	21	.545
Ambiguous	115	12	10	.346
<i>Range</i>				199
<i>Recency</i>				
Recent \emptyset	37	11	30	[.644]
Recent <i>i</i>	251	51	20	[.551]
Lack of recent variable	155	23	15	[.425]
Recent <i>e</i>	27	3	11	[.277]
<i>Range</i>				367
<i>Following phonology</i>				
Plosive	89	19	21	[.724]
Fricative	192	44	23	[.482]
Nasal	70	18	26	[.466]
Liquid	136	11	8	[.387]
<i>Range</i>				337
<i>Pronominality</i>				
Pronoun	19	6	32	[.749]
Quantifier	15	4	27	[.677]
Lexical DP	165	31	19	[.542]
Null subject	321	55	17	[.454]
<i>Range</i>				295
<i>Definiteness</i>				
Indefinite	38	10	26	[.585]
Definite	461	83	18	[.502]
Specific indefinite	21	3	14	[.316]
<i>Range</i>				269
<i>Verb class</i>				
Copula	175	34	19	[.590]
Transitive	144	24	17	[.516]
Unergative	31	4	13	[.442]
Unaccusative	153	32	21	[.395]
<i>Range</i>				195
<i>Nonfinite verb agreement</i>				
Subject agreement	81	24	30	[.661]
No subject agreement	439	72	16	[.469]
<i>Range</i>				192
<i>Position of the referent</i>				
Postverbal predicate	13	4	31	[.581]
Postverbal subject	92	23	25	[.523]
Null subject	324	56	17	[.499]
Topicalized subject	25	4	16	[.457]
Preverbal subject	66	9	14	[.391]
<i>Range</i>				190
<i>Information status</i>				
Old	490	91	19	[.505]
New	30	5	17	[.422]
<i>Range</i>				83
<i>Age</i>				
Young	254	50	20	[.513]
Old	266	46	17	[.488]
<i>Range</i>				25
<i>Gender of the subject</i>				
Masculine	349	66	19	[.506]
Feminine	171	30	18	[.487]
<i>Range</i>				19

Note. Input value: .159; significance threshold: .05; values in brackets are nonsignificant.

Adjacency. The impact of adjacent elements on the zero SCl form in 3rd plural contexts is similar to that observed with 3rd singular referents, with high clitics (i.e, negation, 1st/2nd OCl, 3rd vocalic OCl, reflexive *se* and partitive *ne*) favouring the zero form (weight .664), and low clitics (that is, 3rd IOCl/locative *ghe* and auxiliary/copula clitic *l'*) disfavouring it (weight .367). SCl-verb adjacency shows no effect on the variability of the zero form (weight .514). Figure 2 shows the distribution of the zero SCl form for the individual adjacent factors.⁸

Figure 2. Percentage of zero SCl form for individual adjacent factors in referential contexts.



Like for 3rd singular contexts, the increase of the zero SCl form with high clitics is explained by assuming that these clitics may block the phonological realization the SCl projection when no higher overt functional element (e.g., a complementizer) occurs (cf. section 3.4.1).

As for low clitics, IOCl/locative *ghe* and auxiliary/copula clitic *l'* are considered as a single factor in the regression, namely, auxiliary clitics (cf. Table 8), because both disfavour the occurrence of the zero SCl form when compared with high clitics and SCl-verb adjacency.

⁸ Third person vocalic OCl and partitive *ne* are not included in Figure 2 due to their very low number of tokens (2 Ns and 4 Ns, respectively) and almost full categoricity of zero SCl form.

However, the distributional results for each adjacent factor (cf. Figure 2) show that the occurrence of zero SCl is higher with IOCl/locative *gbe* than with auxiliary/copula clitic *l'*. I assume that the increased occurrence of zero SCl with clitic *gbe* with respect to *l'* is not due to blocking of the realization of the SCl position, as is the case for high clitics. The discrepancy between these two low clitics is likely to be due to interactions with following phonological factors, in particular the disfavouring effect of following liquid.⁹

As for preceding phonological factors, their effect on the zero SCl form and their interaction with adjacency is discussed below.

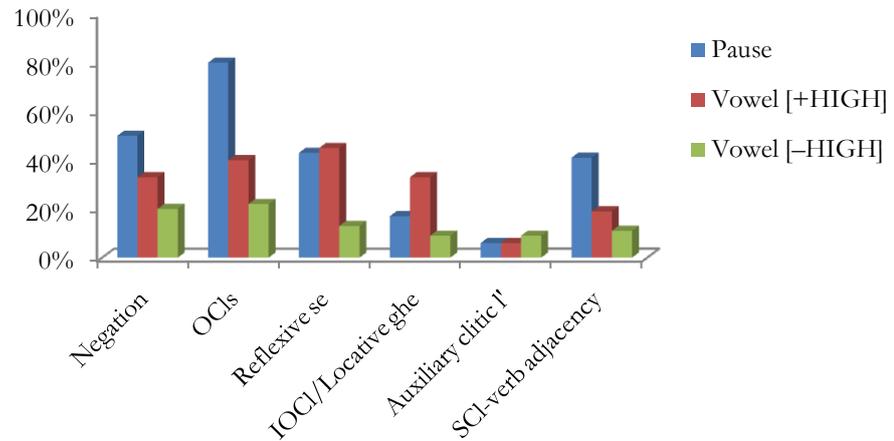
Preceding phonology and adjacency. As in the case of 3rd singular contexts, also with 3rd plural referents a preceding pause favours zero SCl (weight .707). Preceding high vowels /i/, /u/ and /y/ (with phonological feature [+HIGH]), and preceding non-high (i.e., mid and low) vowels /e/, /ɛ/, /ə/, /o/ and /a/ (with phonological feature [-HIGH]) are recoded in two single factors as they show the same effect on the variability: [+HIGH] vowels favour the zero SCl form (weight .580), [-HIGH] vowels disfavour it (weight .400).

The effect of preceding phonological factors is considered in relation to adjacency (Figure 3).

⁹ The discrepancy between IOCl/locative clitic *gbe* and auxiliary clitic *l'* in the occurrence of the zero form is found in the analysis of 3rd plural referents, but not in that of 3rd singular referents (cf. Chapter 3, section 3.2.1.3). This is because 3rd singular contexts include existential constructions (i.e., locative *gbe* constructions) that occur with default SCl/verb agreement. Since default agreement has only overt variant *u* in the set of available SCl variants, the occurrence of the zero form (that is, the phonologically null variant) in 3rd singular contexts is limited to tokens with full SCl/verb agreement.

The analysis of 3rd plural referent does not include existential constructions with default SCl/verb agreement, as these do not involve the variable *i/e/Ø*. All 3rd plural tokens (including existential constructions) potentially allow for either an overt SCl variant or the phonologically null variant to occur. Hence, the increase in the occurrence of a zero SCl form with locative *gbe* in these contexts.

Figure 3. Percentage of zero SCl form for preceding phonology in referential contexts, in relation to adjacency.



When considered in relation to adjacency, both pause and [+HIGH] vowel favour the zero SCl when they occur with a high clitic, but disfavour it when the adjacent element is an auxiliary/copula clitic *l'*.

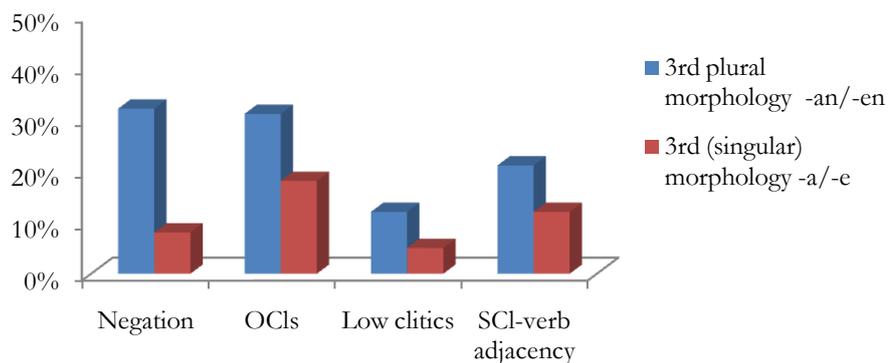
In the results for adjacency, IOCl/locative clitic *ghe* shows greater effect on zero SCl than auxiliary/copula clitic *l'*. However, as Figure 3 shows, *ghe* differs from *l'* in this respect mostly when the preceding context is a [+HIGH] vowel or a pause.

As Figure 3 shows, the disfavouring effect on the zero form of preceding [-HIGH] vowel remains almost constant with all adjacent factors. On the other hand, the favouring impact of preceding pause and [+HIGH] vowel varies according to the individual adjacent factors, and it can be seen independently of adjacency only with IOCl/locative *ghe* (favouring effect of [+HIGH] vowel) and with SCl-verb adjacency (favouring effect of pause).

Finite verb morphology. The occurrence of a zero SCl form is disfavoured when finite verb morphology does not specify number (weight .346). On the other hand, fully specified (unambiguous) verb morphology has little effect on the variability, showing a weight just above .5 (.545).

From a comparison with adjacent elements, we see that finite verb morphology may alter the effect of adjacency on zero SCl variability (Figure 4). When the verb has full morphological specification, adjacent factors show the typical favouring/disfavouring effect on zero SCl form. When the verb lacks number specification, negation sharply reduces its impact on zero SCl variability.

Figure 4. Percentage of zero SCl form for finite verb morphology in referential contexts, in relation to adjacency.



For the time being, I will assume that if the finite verb lacks number morphology number needs to be overtly expressed by the SCl, hence the choice of an overt SCl variant over a null variant (see also sections 4.2.1.3.1 and 4.2.1.3.2). The occurrence of the zero SCl form with verbs that lack number in their morphology is considered to be nonpronunciation of the SCl due to blocking. However, if we take this interpretation to be correct, the occurrence of a zero form also with adjacent verbs and low clitics remains unexplained. In Chapter 6, I will propose that the number of a syncretic verb form is disambiguated by categorically realizing number on an overt SCl when the verb has a singular subject. When the same syncretic verb occurs with a plural subject plural number does not require overt expression on inflectional elements (see Chapter 6, section 6.2.3).

4.2.1.2.1 *A note on some nonsignificant factors*

The remaining factors included in the regression are nonsignificant for the occurrence of the zero SCl form in 3rd plural referential contexts. These factors are: subject/predicate-related factors (pronominality, definiteness, information status, position, gender), verb-related factors (nonfinite verb agreement, verb class), following phonology, and the external-linguistic factors, that is, recency of the same variant and the sociolinguistic variable age.

Most nonsignificant factor groups present factor rankings that are similar to those found in the analysis of overt/zero SCl variation in 3rd singular referential contexts (cf. Chapter 3, section 3.2.1.3). These factors will not be discussed any further.

In this section, I briefly refer to three of the nonsignificant factor groups whose result differs from (or does not occur in) the analysis of 3rd singular contexts, namely, definiteness of the subject/predicate referent, nonfinite verb agreement, following phonology and recency.

Definiteness of the subject/predicate referent. In the analysis of zero SCl in 3rd singular contexts, definiteness of the subject/predicate referent was omitted because indefinite referents show categoricity of overt SCl form. However, in those contexts SCl categoricity was not taken to be a direct consequence of the presence of an indefinite subject/nominal predicate, but was related to the fact that in the corpus indefinites mostly occur with default agreement (cf. Chapter 3, section 3.2.1.2 and 3.2.1.3).

The results for definiteness in 3rd plural contexts, which lack default agreement, show that indefinite referents favour the zero SCl (weight [.585]). This finding supports the claim

that overt SCl categoricity with indefinite 3rd singular referents is mostly due to their occurrence with default SCl-verb agreement in the Ligurian corpus.¹⁰

Nonfinite verb agreement. Due to overt SCl categoricity, tokens that show defective past participle agreement are not included in the multivariate analysis (cf. section 4.2.1.1 and 4.2.1.1.1). The remaining factors are recoded according to subject agreement on the past participle (including masculine and feminine plural agreement), and lack of agreement on the past participle. Although subject agreement on the past participle favours the zero SCl form (weight [.661]) and lack of agreement slightly disfavour it (weight [.469]), the effect of this factor group on zero SCl variability is considered as nonsignificant.

The analysis of 3rd singular contexts did not include this factor group, due to the fact that only feminine singular referents can distinguish between a past participle that agrees and one that does not agree with the subject, whereas masculine referents present a single morphological form of past participle for both cases.

Following phonology. Like in 3rd singular contexts, the occurrence of zero SCl form is not significantly affected by following phonological factors. The only factor that appears to favour the zero form is following plosive (weight [.724]). From the analysis of adjacency (cf. Figure 2), it is evident that the result for following plosive is mostly due to the effect of IOCl/locative clitic *ghe* which, in 3rd plural contexts, shows an increase in the occurrence of the zero form.

Recency. Unlike in 3rd singular contexts, recency of the same variant is not a significant factor for 3rd plural referents. As expected, the internal factor ranking and the factor weights show

¹⁰ A further and more in-depth analysis of SCls with indefinite subjects is required in order to establish whether SCl variation is at all affected by subject indefiniteness and whether its apparent effect in this analysis is merely due to the fact that most indefinite subjects in this corpus occur with default agreement.

that a recent zero SCl is frequently followed by another zero form [(.644)], although the effect of the recent variant is not statistically significant. I presume that the result of nonsignificance of recency in this context is due to undetected interactions between recent variants and other factors.

To summarize, in 3rd plural referential contexts the occurrence of a zero SCl form is favoured by the presence of high clitics (negation and OCl) and by a preceding phonological context involving pause and [+HIGH] vowels, whereas it is disfavoured with finite verb forms that do not show number morphology. While the effect of phonological factors on the zero form is mostly evident when no clitic occurs between the SCl and the verb (and partly with locative clitic *ghe*), that of finite verb morphology can be observed with all adjacent factors, in particular with negation.

In what follows, I illustrate the factors that affect the occurrence of the individual overt variants *i* and *e* (overt SCl variation).

4.2.1.3 Multivariate analysis (overt SCl variants)

The analysis of overt SCl variation shows that both phonological and morpho-syntactic factors play a role in determining the occurrence of the overt variants. As for phonological factors, preceding phonological context affects the occurrence of variant *e*, whereas following phonology has an impact on the variability of variant *i*. As for morpho-syntactic factors, finite verb morphology influences overt SCl variation.

4.2.1.3.1 Overt SCl variant i.

All factors are included in the multivariate analysis for SCl variant *i* as there are no contexts in which this variant does not occur or is categorical. The results of the regression are presented in Table 9.

Table 9. Significant and nonsignificant factor groups for the overt SCl variant *i* in referential contexts.

<i>Variable</i>	Overall (N)	<i>i</i> (N)	<i>i</i> (%)	VARBRUL weight
<i>Following phonology</i>				
Liquid	136	110	81	.650
Fricative	195	134	69	.497
Plosive	90	60	67	.420
Nasal	70	38	54	.320
<i>Range</i>				330
<i>Finite verb morphology</i>				
Ambiguous	115	94	82	.678
Unambiguous	409	272	67	.448
<i>Range</i>				230
<i>Nonfinite verb agreement</i>				
No subject agreement	439	316	72	[.546]
Subject agreement	85	50	59	[.277]
<i>Range</i>				269
<i>Recency</i>				
Recent <i>e</i>	28	22	79	[.627]
Lack of recent variable	156	111	71	[.518]
Recent <i>i</i>	252	178	71	[.492]
Recent \emptyset	38	21	55	[.387]
<i>Range</i>				240
<i>Definiteness</i>				
Specific indefinite	21	17	81	[.719]
Indefinite	38	28	74	[.552]
Definite	465	321	69	[.485]
<i>Range</i>				234
<i>Pronominality</i>				
Null subject	328	233	71	[.533]
Lexical DP	162	112	69	[.465]
Pronoun	19	12	63	[.397]
Quantifier	15	9	60	[.306]
<i>Range</i>				227
<i>Verb class</i>				
Unaccusative	157	110	70	[.606]
Copula	175	124	71	[.487]
Transitive	144	98	68	[.424]
Unergative	31	20	65	[.392]
<i>Range</i>				214
<i>Position of the referent</i>				
Null subject	328	233	71	[.518]
Preverbal subject	66	45	68	[.485]
Topicalized subject	25	17	68	[.480]
Postverbal subject	92	64	70	[.459]
Postverbal predicate	13	7	54	[.327]
<i>Range</i>				191
<i>Preceding phonology</i>				
[+HIGH] vowel	133	95	71	[.556]
[-HIGH] vowel	272	190	70	[.505]
Pause	78	49	63	[.390]
<i>Range</i>				166
<i>Information status</i>				
New	30	24	80	[.591]
Old	494	342	69	[.494]
<i>Range</i>				97
<i>Adjacency</i>				
SCl-verb	199	141	71	[.558]
Neg/OCl/LocCl/AuxCl	325	225	69	[.464]
<i>Range</i>				94
<i>Age</i>				
Old	268	194	72	[.542]
Young	256	172	67	[.456]
<i>Range</i>				86
<i>Gender of the subject</i>				
Feminine	175	121	69	[.501]
Masculine	349	245	70	[.498]
<i>Range</i>				3

Note. Input value: .712; significance threshold: .05; values in brackets are nonsignificant.

The significant groups for the occurrence of overt variant *i* are following phonology, with liquid as the only favouring factor, and finite verb morphology, with ambiguous verb forms (i.e., finite verbs with no number specification) favouring the occurrence of SCl *i* and unambiguous verb forms disfavouring it. All other factors are nonsignificant.

Following phonological context. Among following phonological contexts, following liquid favours overt variant *i* (weight .650), following plosive (weight .420) and nasal (weight .320) disfavour it, whereas following fricative has no impact on the variability (weight .497). Following vowel is omitted due to low number of tokens.

The results in Table 9 show that the significant effect of phonological factors is not due to the fact that these factors occur as part of adjacent clitics. High and low adjacent clitics are recoded into a single factors because they show no difference in the effect that they have on the variability, as all disfavour SCl variant *i*. The only factor that favours variant *i* in this group is SCl-verb adjacency (weight [.558]), but its effect is nonsignificant as it depends on the phonological features that the verb shows.

Finite verb morphology. The occurrence of variant *i* is strongly favoured when finite verb morphology does not show number specification (weight .678). On the other hand, fully specified (unambiguous) verb morphology has little effect on the variability (weight .448). This finding suggests that overt SCl variant *i* is able to express number even when the verb fails to do so, and is therefore favoured in these contexts.

4.2.1.3.2 Overt SCl variant *e*.

The regression for overt variant *e* does not include definiteness and information status of the subject/predicate referent due to nonoccurrence in the corpus of variant *e* with

indefinite referents and with referents that carry new information. All other factors are included. The results of the analysis are shown in Table 10.

Table 10. Significant and nonsignificant factor groups for the overt SCL variant *e* in referential contexts.

<i>Variable</i>	Overall (N)	<i>e</i> (N)	<i>e</i> (%)	VARBRUL weight
<i>Preceding phonology</i>				
[-HIGH] vowel	272	49	18	.643
[+HIGH] vowel	133	9	7	.371
Pause	78	3	4	.239
<i>Range</i>				404
<i>Finite verb morphology</i>				
Unambiguous	409	53	13	.535
Ambiguous	115	9	8	.379
<i>Range</i>				156
<i>Pronominality</i>				
Quantifier	15	2	13	[.666]
Null subject	328	39	12	[.538]
Lexical DP	162	20	12	[.438]
Pronoun	19	1	5	[.274]
<i>Range</i>				392
<i>Position of the referent</i>				
Preverbal subject	66	12	18	[.701]
Topicalized subject	25	4	16	[.669]
Postverbal predicate	13	2	15	[.520]
Null subject	328	39	12	[.473]
Postverbal subject	92	5	5	[.410]
<i>Range</i>				291
<i>Verb class</i>				
Unergative	31	7	23	[.687]
Transitive	144	22	15	[.586]
Copula	175	17	10	[.488]
Unaccusative	157	15	10	[.396]
<i>Range</i>				291
<i>Nonfinite verb agreement</i>				
Subject agreement	85	11	13	[.688]
No subject agreement	439	51	12	[.462]
<i>Range</i>				226
<i>Following phonology</i>				
Nasal	70	14	20	[.661]
Plosive	90	11	12	[.521]
Liquid	136	15	11	[.487]
Fricative	195	17	9	[.440]
<i>Range</i>				221
<i>Age</i>				
Young	256	34	13	[.565]
Old	268	28	10	[.438]
<i>Range</i>				127
<i>Recency</i>				
Lack of recent variable	156	22	14	[.563]
Recent <i>Ø</i>	38	6	16	[.557]
Recent <i>e</i>	28	3	11	[.473]
Recent <i>i</i>	252	23	9	[.455]
<i>Range</i>				108
<i>Gender of the subject</i>				
Feminine	175	24	14	[.524]
Masculine	349	38	11	[.488]
<i>Range</i>				36
<i>Adjacency</i>				
Clitic	325	43	13	[.506]
SCL-verb	199	19	10	[.490]
<i>Range</i>				16

Note. Input value: .105; significance threshold: .05; values in brackets are nonsignificant.

The significant groups for overt variant *e* are preceding phonology, with [–HIGH] vowel favouring the occurrence of the variant and [+HIGH] vowel and pause disfavouring it, and finite verb morphology, with unambiguous verb forms (that is, forms with morphological number specification) favouring SCl *e* over ambiguous verb forms. The remaining factors are nonsignificant.

Preceding phonological context. Preceding mid and low vowels are recoded to form a single factor ([–HIGH] vowel) as they all favour variant *e* (weight .643), whereas high vowels and pause disfavour it. The favouring effect of preceding [–HIGH] vowel on the occurrence of variant *e* is interpreted as feature spreading, which involves extending a phonological feature from one element to another (Anttila, 2002; Clements, 1999). The phonological feature [–HIGH] in the preceding context triggers the choice of a variant with the same phonological feature, namely *e*.

Finite verb morphology. While verb forms that are morphologically specified for number show little impact on the variability (weight .535), verbs that show no number specification disfavour variant *e* (weight .379). In this sense, the two overt variants differ as variant *i* is favoured when the verb lacks number.

The results for finite verb morphology suggest that overt variant *e* cannot be considered as a mere allophone of SCl *i*, as in that case the significant disfavouring effect of ambiguous verb morphology would not be explained. If variant *i* expresses number specification with ambiguous verbs, the fact that variant *e* is disfavoured in these contexts entails that they are indeed two distinct SCl variants, which differ with regard to number specification (for discussion, see section 4.3 and subsections therein).

4.2.1.3.3 *Remarks on two nonsignificant factors*

The remaining factors included in the analysis of overt SCl variation are nonsignificant. These include subject-related factors (i.e., gender, pronominality, position, and definiteness and information status, when these are included, namely, for variant *ì*); verb-related factors other than finite verb morphology (that is, verb class and nonfinite verb agreement); adjacency; among phonological factors, preceding phonology for variant *ì*, and following phonology for variant *e*. The processing variable recency of the same variant and the sociolinguistic variable age are also found nonsignificant for overt SCl variation.

The nonsignificance of two of these factors, namely, adjacency and gender of the referent, is particularly relevant to the investigation of overt/zero SCl alternation and overt SCl variation respectively. These two factors are briefly discussed below.

Adjacency. Unlike the zero SCl form, overt SCl variation is not affected by adjacency. All adjacent (high and low) clitics are recoded into a single factor as they show a disfavouring pattern (for variant *ì*), or do not influence the variability (for variant *e*). This result supports the claim that adjacent factors do not affect the choice of any of the variants in the set, namely, the overt SCl variants *ì/e* or the null variant. Adjacent factors (namely, high clitics) only have an impact on the occurrence of the zero form as pronunciation of the SCl position due to blocking.

Gender of the subject/predicate referent. The nonsignificance of this factor shows that, unlike in 3rd singular contexts, gender is not involved in the choice of the overt SCl variant in 3rd plural contexts, and variation between the two overt SCl forms occurs regardless of the gender specification of the referent.

In Ligurian, the *ì/e* 3rd plural SCl alternation resembles the distinction between masculine plural determiner *ì* (as in Lig. *ì pari* ‘the fathers’) and feminine plural determiner

e (as in Lig. *e mari* ‘the mothers’). As masculine referents regularly occur with SCl variant *e*, and gender is nonsignificant for *i/e* SCl variation, I assume that, unlike determiners, overt SCl variants do not have gender specification, and can therefore appear with both plural masculine and feminine referents (for further discussion see section 3.4).

To sum up, overt SCl variation (*i/e*) is influenced by phonological and morpho-syntactic factors. As for phonological factors, variant *i* is favoured in contexts that involve a following liquid, whereas variant *e* is triggered by a preceding mid or low vowel (feature spreading). As for morpho-syntactic factors, verbs that lack number specification in their morphology favour variant *i* and disfavour variant *e*. The different impact on the two variants of defective finite verb morphology suggests that variant *e* is not to be considered as an allophone of SCl *i*, but as a SCl variant with a different feature composition. Furthermore, given that *i/e* variation is not affected by gender of the referent, the difference between the two overt SCl variants is likely to involve number specification.

4.2.1.4 *Inter-speaker variation*

Like for singular contexts, speaker B’s data for 3rd plural variable *i/e/Ø* show higher production of zero form and, as far as overt SCl variation is concerned, an increase in the occurrence of variant *e*. The distribution of individual variants in referential contexts for speaker B and for the other speakers, which was presented in Table 3, is repeated below for convenience.

Table 3. Distribution of variable *i/e/Ø* with referential use, for all other speakers and for speaker B.

<i>Speaker</i>	Overall	variant <i>i</i>		variant <i>e</i>		zero form	
	(N)	(N)	(%)	(N)	(%)	(N)	(%)
Other speakers	524	366	70	62	12	96	18
Speaker B	151	82	54	31	21	38	25

The results of the variationist analysis of speaker B's data for variable *i/e/Ø* (with referential use) are compared with the analysis of all other speakers in order to determine what factors are responsible for the inter-speaker variation attested in overt/zero and *i/e* SCl alternation.

Overt/zero SCl variation. The analysis of speaker B's data for zero SCl form shows that for this speaker adjacency is the only factor that has a significant impact on overt/zero SCl alternation, with SCl-verb adjacency and high clitics both favouring the zero form, and low clitics disfavouring it. Unlike for other speakers, in speaker B's speech the zero form is not affected by preceding phonological contexts and finite verb morphology.¹¹ All remaining factors are also nonsignificant (Table 11).

¹¹ Speaker B only rarely uses verb forms that lack number specification in the morphology (8 Ns overall).

Table 11. Significant and nonsignificant factor groups for the zero SCl form (Ø) in referential contexts, for speaker B.

<i>Variable</i>	Overall (N)	Ø (N)	Ø (%)	VARBRUL weight
<i>Adjacency</i>				
SCI-verb	64	25	39	.697
Neg/OClS	29	8	28	.578
Auxiliary clitics	58	5	9	.254
Range				443
<i>Pronominality</i>				
Pronoun	7	4	57	[.805]
Null subject	109	24	22	[.523]
Lexical DP	29	9	31	[.478]
Quantifier	6	1	17	[.051]
Range				754
<i>Preceding phonology</i>				
Pause	6	2	33	[.735]
[-HIGH] vowel	90	22	24	[.537]
[+HIGH] vowel	49	12	25	[.402]
Range				333
<i>Finite verb morphology</i>				
Ambiguous	8	3	38	[.786]
Unambiguous	143	35	25	[.482]
Range				304
<i>Recency</i>				
Recent Ø	11	5	46	[.744]
Recent <i>e</i>	9	2	22	[.574]
Lack of recent variable	43	11	26	[.469]
Recent <i>i</i>	47	11	23	[.452]
Range				292
<i>Following phonology</i>				
Nasal	22	7	32	[.716]
Plosive	31	3	10	[.451]
Fricative	61	21	34	[.442]
Range				274
<i>Gender of the subject</i>				
Masculine	126	33	26	[.545]
Feminine	25	5	20	[.287]
Range				258
<i>Definiteness</i>				
Indefinite	7	3	43	[.723]
Definite	144	35	24	[.488]
Range				235
<i>Verb class</i>				
Copula	29	9	31	[.542]
Transitive	50	8	16	[.527]
Unaccusative	54	19	35	[.495]
Unergative	12	1	8	[.319]
Range				223
<i>Position of the referent</i>				
Postverbal subject	18	6	33	[.638]
Preverbal subject	20	8	40	[.631]
Null subject	109	24	22	[.452]
Range				186
<i>Nonfinite verb agreement</i>				
No subject agreement	117	27	23	[.502]
Subject agreement	34	11	32	[.492]
Range				10

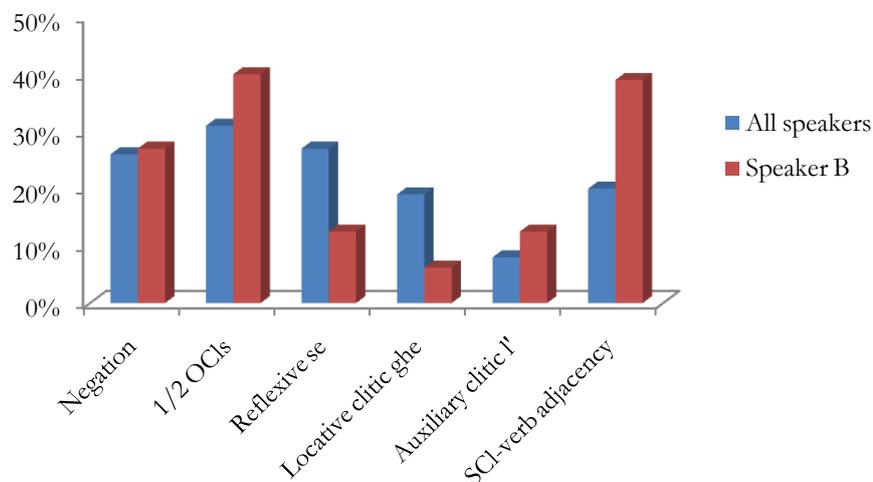
Note. Input value: .218; significance threshold: .05; values in brackets are nonsignificant.

Contrary to what has been observed in 3rd singular contexts for speaker B, the occurrence of zero SCl with 3rd plural referents does not appear to be affected by phonological factors and, in particular, by following phonological context.

This result would lead us to assume that the phenomenon of phonological deletion of overt SCl, which has been hypothesized for the 3rd singular SCl variable in speaker B's speech (cf. Chapter 3, section 3.4.2), does not take place in plural contexts. However, when we look at the results for adjacency we see that the factor that favours the most the occurrence of a zero form is the presence of an adjacent finite verb, whose effect can potentially be related to phonological features.

In Figure 5, I compare the occurrence of zero form with individual adjacent factors for all speakers (cf. also Figure 2) and for speaker B.

Figure 5. Percentage of zero SCl form for individual adjacent factors in referential contexts, for other speakers and for speaker B.



From the comparison of the distribution of zero SCl with individual adjacent factors, we see that only 1st/2nd OCl's and adjacent finite verb show an increase in the occurrence of the zero SCl form for speaker B when compared with other speakers. Although nonsignificant, the results for following phonological contexts show that nasal is the only factor to favour the zero form, while plosive and fricative disfavour it. The group regarding

following phonology does not include liquid, because there are no liquid-initial elements other than auxiliary clitic *l'*, and vowel, due to the small number of tokens (3 Ns).¹²

The favouring effect of following nasal is evident with both high clitics (although less with negation) and adjacent finite verb.¹³ Plosive and fricative show opposite effect if they occur as part of a clitic element (e.g., locative *gbe* and reflexive *se*) or of an adjacent verb, as the zero form decreases with the former and increases with the latter.¹⁴ The disfavouring effect of plosive- and fricative-initial adjacent clitics reduces the impact of the corresponding phonological factors.

As a consequence, adjacency (and not following phonology) is found as significant in the regression for zero SCl in 3rd plural contexts for speaker B. The distribution for individual adjacent elements (cf. Figure 5) reveals that, despite the overall nonsignificance of following phonology, following nasal increases the occurrence of the zero SCl form whether it occurs with a clitic or with a finite verb, thus supporting the hypothesis of phonological deletion of the overt SCl in these contexts (cf. Chapter 3, section 3.4.2).

Furthermore, the opposite effect of plosive and fricative when these occur in clitic and non-clitic elements supports the hypothesis that phonological deletion, as an instance of inter-speaker variation, is subordinate to the general effect of adjacency and takes place only with adjacent (clitic) factors that already favour the zero SCl form (cf. Chapter 3, section 3.4.2). Although the zero form increases its occurrence with plosive and fricative-initial adjacent verbs, it fails to do so with plosive-initial locative clitic *gbe* and fricative-initial reflexive clitic *se*.

¹² Despite the small Ns, the favouring effect of following vowel found in 3rd singular contexts is confirmed as two of the three tokens with vowel-initial contexts occur with the zero SCl form.

¹³ All tokens with adjacent OClS involve 1st person nasal-initial *me* 'me/to me' or *ne* 'us/to us'. Tokens with adjacent finite verbs include nasal, plosive and fricative-initial elements.

¹⁴ The variation attested in the occurrence of zero SCl form with reflexive *se* and locative *gbe* between all speakers and speaker B (inter-speaker variation) is not to be attributed to following phonology nor to adjacency, but to the fact that in all speakers' data most tokens with reflexive and locative clitics occur with a preceding phonological context that favours the zero form, i.e., a pause or a [+HIGH] vowel.

This result supports the claim that both these clitics occupy a (low) syntactic position and do not cause the nonpronunciation of the SCl position. I assume that since this type of zero form is not obtained with these clitics phonological deletion also fails to take place (for a hypothesis on the low position of reflexive *si*, see Manzini & Savoia, 2001).

Overt SCl variation. The results of the regression for overt SCl variation in speaker B's speech are given in Table 12 (for variant *i*) and Table 13 (for variant *e*).

Table 12. Significant and nonsignificant factor groups for the overt SCl variant *i* in referential contexts, for speaker B.

<i>Variable</i>	Overall (N)	<i>i</i> (N)	<i>i</i> (%)	VARBRUL weight
<i>Adjacency</i>				
Auxiliary clitics	58	41	71	.693
OClS	18	10	56	.471
SCl-verb	64	28	44	.371
Negation	11	3	27	.264
	<i>Range</i>			429
<i>Verb class</i>				
Unaccusative	54	31	57	.602
Transitive	50	34	68	.553
Unergative	12	7	58	.475
Copula	29	9	31	.250
	<i>Range</i>			352
<i>Preceding phonology</i>				
[+HIGH] vowel	49	32	65	.658
[-HIGH] vowel	90	43	48	.419
Pause	6	3	50	.402
	<i>Range</i>			256

Note. Input value: .553; significance threshold: .05; nonsignificant factor groups: gender, pronominality, definiteness, information status, and position of the subject; finite verb morphology, and nonfinite verb agreement; following phonology; recency.

Table 13. Significant and nonsignificant factor groups for the overt SCl variant *e* in referential contexts, for speaker B

<i>Variable</i>	Overall (N)	<i>e</i> (N)	<i>e</i> (%)	VARBRUL weight
<i>Verb class</i>				
Copula	29	11	38	.794
Unergative	12	4	33	.670
Transitive	50	8	16	.486
Unaccusative	54	4	7	.304
	<i>Range</i>			490
<i>Preceding phonology</i>				
[-HIGH] vowel	90	25	28	.622
Pause	6	1	17	.449
[+HIGH] vowel	49	5	10	.291
	<i>Range</i>			331

Note. Input value: .154; significance threshold: .05; nonsignificant factor groups: gender, pronominality, and position of the referent; finite verb morphology, and nonfinite verb agreement; adjacency; following phonology; recency.

For speaker B, overt SCl *i/e* variation is significantly affected by one phonological factor, namely preceding phonology, and by verb class. The occurrence of variant *i* is also significantly influenced by adjacency.

Preceding phonology. Like for all other speakers, in speaker B's speech the occurrence of variant *e* is triggered by feature spreading in that a preceding mid or low vowel with the phonological feature [–HIGH] favours variant *e*, which also has the feature [–HIGH]. Unlike other speakers though, for speaker B the phenomenon of feature spreading extends to variant *i* in that a [+HIGH] vowel favours this variant while all other preceding phonological contexts disfavour it.

Verb class. In the analysis for all speakers, overt SCl variation is influenced by the combined effect of phonological and morpho-syntactic factors, in particular finite verb morphology. This finding suggests that overt variants *i* and *e* are not mere allophones, but are characterized by different underlying (feature) specifications (see further section 4.3.1).

Speaker B makes rare use of ambiguous morphological forms, and finite verb morphology is nonsignificant for the *i/e* alternation. Nonetheless, another syntactic factor, namely verb class, is found to affect overt SCl variation. In speaker B's speech, copular constructions favour the occurrence of variant *e*, whereas unaccusative-type verbs favour the occurrence of variant *i*.¹⁵

Most copular tokens (9 out of 11) that occur with variant *e* involve the form of the present tense *sun* ('they are'), whereas only two tokens show the form of the imperfect tense *l'era(n)* ('they were'). Although this speaker rarely uses morphologically ambiguous verb forms, present tense copula *sun* is the only verb form in which number is always

¹⁵ In the group involving verb class, verbs that share the same syntactic structure as unaccusative verbs, namely, passives and reflexives (cf. Burzio, 1986), are recoded with unaccusatives, and they show the same effect on the SCl variant. Raising and psych verbs are omitted from the factor group in the regression due to their small number of tokens in speaker B's data.

morphologically expressed (cf. *sun*/**su* ‘they are’, *l’eran*/*l’era* ‘they were’/‘they were’, ‘he (she, it) was’).

Thus, the increase of the occurrence of variant *e* in speaker B’s speech is to be attributed not only to the presence of a verb form that shows number specification but to one verb in particular, namely, copula *sun*, whose morphology never fails to express number. In the analysis of overt SCl variation for other speakers, copular verb forms do not show any impact on overt variant *e* (cf. Table 10).

The impact of copula *sun* on variant *e* for speaker B is confirmed by the fact that, unlike other verb classes, its effect remains the same with all preceding phonological contexts, thus it cannot be attributed (only) to feature spreading.

Like for other speakers (cf. Table 9), the occurrence of variant *i* for speaker B is favoured by unaccusative-type verbs. However, unlike for other speakers, this results for speaker B is significant.

In speaker B’s data, copular constructions (with main verb ‘be’) and unaccusative-type verbs (with auxiliary ‘be’ in compound tenses) differ as far as the effect of copula/auxiliary ‘be’ on *i/e* variation is concerned. While copula *sun*/*l’era(n)* favours the occurrence of variant *e*, auxiliary *sun*/*l’era(n)* favours that of variant *i*.

In 3rd plural contexts, auxiliary ‘be’ is always followed by a past participle that agrees with the subject (unaccusative-type verbs). I have proposed that, when the past participle agrees in number (and gender) with the subject, the SCl is the phonological realization of a copy of the phi-features of the past participle (cf. Chapter 3, section 3.3.2). The fact that in speaker B’s speech variant *i* is favoured over variant *e* when the SCl phonologically realizes a copy of the phi-features of the past participle suggests that the two overt variants differ in their feature specification (see section 4.3.2 for discussion).

As for the other factors in the group, unergative and transitive verbs show a favouring pattern for variant *e* and variant *i* respectively. However, these results are subject

to interactions with phonological factors. In particular, all unergative verbs showing variant *e* have also a preceding [–HIGH] vowel, and most transitive verbs with variant *i* occur with a preceding [+HIGH] vowel.

Adjacency. The variability of SCl *i* is also influenced by adjacency. The significance of adjacency for the occurrence of variant *i* is explained by assuming that with low clitics (weight .693) SCl positions are regularly pronounced, and in these contexts the zero form can only be a null underlying variant, thus reducing its probability of occurrence (cf. Adger, 2006). The presence of a low clitic in the structure affects the presence vs. absence of the overt SCl, not its overt phonological form. Hence, the nonsignificance of adjacency with variant *e*.

To summarize, like for 3rd singular contexts, the occurrence of zero SCl form in 3rd plural contexts shows inter-speaker variation in that, for one speaker, it involves not only nonrealization of the SCl position with high clitics but also phonological deletion of the overt SCl with a following nasal-initial element. The phenomenon of phonological deletion is subordinate to the effect of adjacency, as it fails to take place with adjacent elements that disfavour the occurrence of the zero form (e.g., with reflexive *se* and locative *gbe*).

For all speakers, overt SCl variation is affected by both phonological and morpho-syntactic factors. However, also the *i/e* alternation is subject to inter-speaker variation. For one speaker, the phenomenon of phonological feature spreading from the preceding context, which generally influences the occurrence of variant *e*, is found as significant also for variant *i*.

As for morpho-syntactic factors, the effect of verb morphology on overt SCl variation, which is found as significant for all speakers, for one speaker is evident mainly in

copular verb forms (for variant *e*) and in compound tenses of unaccusative-like verbs (for variant *i*).

Finally, adjacency affects overt/zero SCl alternation and not the quality of the overt SCl.

4.2.2 Variable *i/e/Ø* in generic contexts

Contexts that involve a generic use of variable *i/e/Ø* (as in e.g., ‘they/people say...’) are analysed in order to determine whether the occurrence of the zero SCl form and overt SCl variation are affected by the same factors that influence the referential use of the variable.

Data from speaker B are excluded from the analysis of generics. Table 4, repeated here for convenience, shows that both the zero SCl form and overt variant *e* occur in greater percentage for speaker B than for all other speakers.

Table 4. Distribution of variable *i/e/Ø* with generic use, for all other speakers and for speaker B.

<i>Speaker</i>	Overall (N)	variant <i>i</i>		variant <i>e</i>		zero form	
		(N)	(%)	(N)	(%)	(N)	(%)
Other speakers	390	292	75	46	12	52	13
Speaker B	68	39	57	15	22	14	21

Given the low number of tokens, speaker B’s data will not be dealt with in a separate analysis. Speaker B shows similar variability patterns for overt SCl variants and for the zero form in referential and generic contexts. I assume that (most) factors that generate inter-speaker variation in referential contexts do so also in generic contexts.

In what follows, first I illustrate the categorical case of quantifiers (section 4.2.2.1); then I provide the results of the regression for the zero SCl form (section 4.2.2.2) and for overt SCl variation (section 4.2.2.3).

4.2.2.1 Quantifiers

For generics, the group involving pronominality of the subject referent includes null subjects, the plural lexical DP *e gente* ('the people'), and quantifiers (e.g., *tütti* 'all', *pareggi* 'many', *quarcün* 'someone'). Table 14 shows the distribution of the two overt variants and the zero form with these factors.

<i>Pronominality</i>	Overall	variant <i>i</i>		variant <i>e</i>		zero form	
	(N)	(N)	(%)	(N)	(%)	(N)	(%)
Null subject	361	265	73	45	13	51	14
Lexical DP <i>e gente</i>	17	15	88	1	6	1	6
Quantifier	12	12	100	0	0	0	0

While generic null subjects present both overt/zero and overt SCl variation, quantifiers and the lexical expression *e gente* show full, or almost full, categoricity of variant *i* (see discussion in section 4.3.3). In the regression, the lexical factor *e gente* is included in order to assess the effect of pronominality, whereas quantifiers are omitted from the analysis.

4.2.2.2 Multivariate analysis (zero SCl form)

The factors that significantly affect the occurrence of the zero SCl form in generic contexts are recency of the same variant and adjacency. Phonological factors, verb-related factors and pronominality of the subject referent are nonsignificant (Table 15).

Table 15. Significant and nonsignificant factor groups for the zero SCl variant \emptyset in generic contexts (excluding speaker B).

<i>Variable</i>	Overall (N)	\emptyset (N)	\emptyset (%)	VARBRUL weight
<i>Recency</i>				
Recent \emptyset	17	6	35	.844
Recent <i>i</i>	201	26	13	.556
Recent <i>e</i>	14	1	7	.403
Lack of recent variable	105	6	6	.342
Range				502
<i>Adjacency</i>				
Negation	33	9	27	.716
SCI-verb	96	15	16	.530
OClS	56	7	12	.465
Auxiliary clitics	168	21	12	.449
Range				267
<i>Following phonology</i>				
Fricative	66	13	20	[.627]
Nasal	66	13	20	[.543]
Plosive	132	15	11	[.469]
Liquid	85	11	13	[.415]
Range				212
<i>Nonfinite verb agreement</i>				
Subject agreement	19	5	26	[.700]
No subject agreement	359	47	13	[.489]
Range				211
<i>Verb class</i>				
Copula	19	4	21	[.628]
Unergative	61	8	13	[.547]
Unaccusative	59	11	19	[.513]
Transitive	222	26	12	[.472]
Range				156
<i>Preceding phonology</i>				
[+HIGH] vowel	94	17	18	[.594]
Pause	48	8	17	[.550]
[-HIGH] vowel	209	24	11	[.446]
Range				148
<i>Pronominality</i>				
Null subject	361	51	14	[.507]
Lexical DP <i>e gente</i>	17	1	6	[.362]
Range				145
<i>Age</i>				
Young	170	29	17	[.564]
Old	208	23	11	[.448]
Range				116
<i>Finite verb morphology</i>				
Ambiguous	114	15	13	[.529]
Unambiguous	264	37	14	[.487]
Range				42

Note. Input value: .108; significance threshold: .05; values in brackets are nonsignificant.

Recency. Since generics do not involve gender, I assume that the zero form in these contexts is not a null SCl variant, which requires gender and number specification, but is interpreted as nonrealization of the SCl position.

The significant favouring effect of a recent zero form on the same following variant (weight .844) is an unexpected result, given that the nonpronunciation of the SCl projection is due to the nature of the adjacent element (cf. Chapter 3, section 3.2.2.3).

The impact of recency shown in generics can be explained by claiming that a recent structure that shows blocking of higher functional projections due to the presence of high clitics favours the recursion of the same phenomenon on a subsequent similar structure involving a SCl, crucially, regardless of the nature of its adjacent element. This phenomenon is known as syntactic priming (or ‘priming effect’), whereby if two syntactic structures have related representations, processing of one structure affects the processing of the subsequent structure (Branigan, 1995).

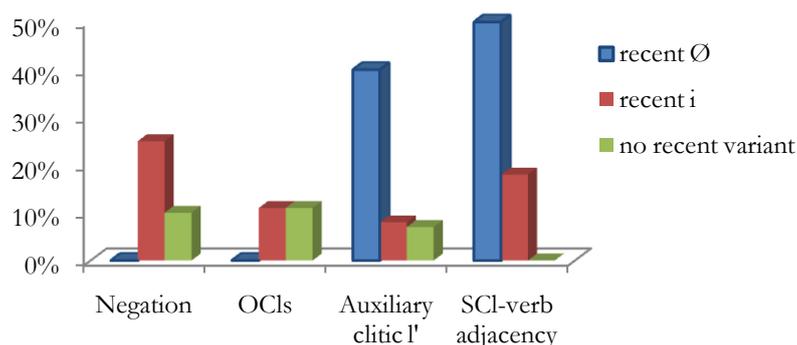
Adjacency. In generic contexts, the effect of adjacent factors differs from the one observed in referential contexts for two main findings, namely, the slightly disfavoured effect of OCl on the zero form, and a small increase in the production of the zero form with low clitics.

High clitics, namely negation and OCl, are considered as two separate factors because, while negation favours the zero form (weight .716), OCl shows little (disfavouring) effect (weight .465). This finding supports the view that negation occupies an independent functional position that occurs higher than object clitics (cf. Zanuttini, 1997), and it is therefore the clitic element that is more likely to trigger blocking of the pronunciation of the SCl position in any given context, whereas (object) clitics lower than negation are less likely to do so.

As for auxiliary clitics, generic contexts show an increase in the occurrence of the zero SCl form when compared with referential contexts (cf. Table 8). Auxiliary clitics disfavour the zero form (weight .449) but not as much as had been predicted given that, in generic contexts, the zero form can only be due to nonpronunciation of the SCl position. A

comparison with the recency factors shows that the increase in the effect of auxiliary clitics on the zero form is to be attributed mostly to the presence of a recent same variant \emptyset (Figure 6). Recent variant e is not considered as it occurs with a following zero form only in one instance.

Figure 6. Percentage of zero SCl form for adjacent factors in generic contexts, in relation to recency.



As Figure 6 shows, a recent zero form triggers the choice of the same variant with lower clitics and with SCl-verb agreement. The lack of effect of recent \emptyset with the remaining adjacent factors is due to nonoccurrence of such combination of factors in the corpus. The results shown in Figure 6 support the claim that recency of blocking caused by high clitics affects the processing of a following related SCl structure regardless of adjacency.

To sum up, the occurrence of a zero SCl form in generic contexts is favoured by the presence of a recent zero form and by adjacent negation. The significant effect of recency is visible on the results of other adjacency factors (e.g., auxiliary clitics) that usually disfavour the zero form. This suggests that syntactic priming is taking place whereby the processing of a structure that involves nonpronunciation of the SCl position influences the

processing of a following structure by favouring truncation, even though adjacent elements do not potentially trigger this phenomenon.

4.2.2.3 Multivariate analysis (overt SCl variants)

The regression for the overt SCl variants shows that variant *i* is significantly affected by syntactic and processing factors, whereas variant *e* is influenced by phonological factors.

Overt SCl variant i. The significant factors for variant *i* in generic contexts are adjacency, pronominality and recency; all other factors are nonsignificant (Table 16).

Table 16. Significant factor groups for the overt SCl variant *i* in generic contexts (excluding speaker B).

<i>Variable</i>	Overall (N)	<i>i</i> (N)	<i>i</i> (%)	VARBRUL weight
<i>Adjacency</i>				
Auxiliary clitics	168	128	76	.546
SCl-verb	96	73	76	.513
OClS	56	42	75	.507
Negation	33	16	49	.242
<i>Range</i>				304
<i>Recency</i>				
Lack of recent variable	105	82	78	.534
Recent <i>i</i>	201	156	78	.514
Recent <i>e</i>	14	9	64	.339
Recent \emptyset	17	10	59	.282
<i>Range</i>				252
<i>Pronominality</i>				
Lexical DP <i>e gente</i>	17	15	88	.709
Null subject	361	265	73	.490
<i>Range</i>				219

Note. Input value: .762; significance threshold: .05; nonsignificant factor groups: verb class, nonfinite verb agreement, and finite verb morphology; preceding and following phonology; age.

Adjacency. Among the adjacent factors, only auxiliary clitics are found to slightly favour the occurrence of variant *i* (weight .546), whereas SCl-verb adjacency and OClS show no effect on the variability. On the other hand, negation clearly disfavours variant *i* (weight .242) thus supporting the claim that, given its high position in the structure,

negation more than any other clitic triggers nonpronunciation of the SCl position and, consequently, disfavours the presence of an overt SCl variant.

Pronominality. The group involving pronominality of the subject referent includes only two factors, namely, null subject and lexical DP *e gente* ‘people’. Quantifiers are omitted as they show categorical use of variant *i* (cf. section 4.2.2.1).

In generic contexts, a null subject does not affect the occurrence of variant *i* (weight .490), whereas the lexical DP *e gente* favours it (weight .709). I assume that in the lexicalization process that lead to its generic use the feminine plural DP *e gente* has lost gender specification. The occurrence of a null underlying SCl variant with the generic lexical DP *e gente* is ruled out due to lack of gender specification on the subject referent, as is indeed the case with null generic referents.

Recency. The effect of recency of the same variant differs from what we have observed for the zero form, namely, that recency of a zero form favoured the same variant in the following token (cf. Table 15). For overt variant *i*, lack of the variable in the recent discourse (weight .534) and recent variant *i* (weight .514) show little or no effect on the occurrence of SCl *i*. The significance of recency lies in the fact that a recent variant *e* (weight .339) and a recent zero form (weight .282) strongly disfavour the occurrence of a subsequent variant *i*.

Overt SCl variant e. The regression for variant *e* shows that its occurrence is significantly affected by preceding phonological context, and it is favoured particularly by a preceding mid or low vowel (i.e., [–HIGH]) (Table 17).¹⁶

¹⁶ The group involving nonfinite verb agreement is excluded from the multivariate analysis of variant *e* as there are no instances of this SCl variant with a past participle agreeing with the subject in generic contexts.

Table 17. Significant factor groups for the overt SCl variant *e* in generic contexts (excluding speaker B).

<i>Variable</i>	Overall (N)	<i>e</i> (N)	<i>e</i> (%)	VARBRUL weight
<i>Preceding phonology</i>				
[-HIGH] vowel	209	35	17	.621
Pause	48	3	6	.352
[+HIGH] vowel	94	5	5	.314
<i>Range</i>				<i>307</i>

Note. Input value: .109; significance threshold: .05; nonsignificant factor groups: pronominality; adjacency; verb class, finite verb morphology; following phonology; recency; age.

As is the case for referential contexts, also with generics the occurrence of variant *e* is triggered by the phenomenon of phonological feature spreading, whereby a preceding [-HIGH] vowel favours a following SCl variant that has similar phonological traits, namely, variant *e*.

Unlike for referential contexts, generic use of the 3rd plural SCl variable does not show any significant effect of finite verb morphology on overt SCl variation.

To summarize, in generic contexts the occurrence of the two overt variants *i* and *e* is affected by different factors, namely, by syntactic and processing factors (variant *i*) and by phonological factors (variant *e*). In particular, factors that have a significant effect on variant *i* for generics differ from those found in the analysis of referential contexts. This difference is accounted for by claiming that in generics the zero form can only be interpreted as blocking of the pronunciation of the SCl position and, consequently, factors that trigger nonpronunciation (i.e., adjacency and recency) affect the (non)occurrence of overt variant *i*.

4.3 Formal analysis of *i/e/Ø* variation

The variationist analysis for 3rd SCl variable *i/e/Ø* showed that most contexts allow overt/null SCl alternation and overt SCl (*i/e*) variation. The variability of the three SCl forms is affected by (morpho)-syntactic, phonological and, to some extent, processing factors.

The distributional analysis of the data identified a number of cases that show categoricity of overt variants over the zero form and/or categoricity of variant *i* over variant *e*. These categorical cases constitute the object of the formal analysis.

The first case involves feminine plural referential contexts that occur in compound tenses in which the past participle agrees with the subject referent. Full SCl variation (*i/e/Ø*) is attested when the nonfinite verb presents gender and number agreement with the subject (ending *-e*) (27).

- (27)
- a. e me kujine i sun andet-e a cà
the my cousins.F.PL SCl are.3PL gone-F.PL to home
'my cousins (all females) went home'
 - b. e me kujine e sun andet-e a cà
the my cousins.F.PL SCl are.3PL gone-F.PL to home
'my cousins (all females) went home'
 - c. e me kujine Ø sun andet-e a cà
the my cousins.F.PL (SCl) are.3PL gone-F.PL to home
'my cousins (all females) went home'

When the nonfinite verb agrees only for number with the subject (defective past participle) showing ending *-i*, overt SCl variants alternate while the zero form is ungrammatical (28).

- (28)
- a. e fieure i sun zà arrive-i
the girls.F.PL SCl are.3PL already arrived-PL
'the girls have already arrived'
 - b. e fieure e sun zà arrive-i
the girls.F.PL SCl are.3PL already arrived-PL
'the girls have already arrived'

- c. * e fiature Ø sun zà arrive-i
 the girls.F.PL (SCI) are.3PL already arrived-PL
 ‘the girls have already arrived’

Masculine plural contexts always allow *i/e/Ø* variation to occur (29). However, in masculine plural contexts the two forms of past participle share the same morphological ending *-i*, thus making it impossible to investigate the effect of defective past participle agreement on SCI variation.

- (29) a. i matetti i sun zà andet-i via
 the kids.M.PL SCI are.3PL already gone-M.PL/PL away
 ‘the kids have already gone’
- b. i matetti e sun zà andet-i via
 the kids.M.PL SCI are.3PL already gone-M.PL/PL away
 ‘the kids have already gone’
- c. i matetti Ø sun zà andet-i via
 the kids.M.PL SCI are.3PL already gone-M.PL/PL away
 ‘the kids have already gone’

In what follows, I will propose that the occurrence of a null SCI in all 3rd plural contexts but with past participles lacking gender agreement (with the subject) can be accounted for by the hypothesis that a null underlying variant realizes Person and Number when the latter is specified for an unvalued gender feature in the numeration. The ungrammaticality of a null SCI variant with past participles that do not show gender agreement is explained because the copy of Number (on the past participle) that is realized by the SCI does not include a gender feature.

I will also propose that overt SCI variants *i/e* always alternate despite the lack of gender specification of the past participle agreement because they realize either Person and a category Number that lacks gender (i.e., feature underspecification), or merely the category Person. In particular, overt SCI *i* realizes Person and either a copy of Number (on the past participle) that is underspecified for gender or a copy involving a subset of the features of Number (namely, only the number feature) when Number is fully specified for

number and gender in the numeration (cf. Barbiers *et al.*, 2008; Di Sciullo & Isac, 2003; van Craenenbroeck & van Koppen, 2008).

Overt variant *e* alternates with SCl *i* in contexts that involve fully specified Number on the past participle and where the copy of Number is a subset thereof, or in contexts that have underspecified Number in the numeration (i.e., with defective past participles). I will propose that this is not so because SCl *e* realizes Person and Number (i.e., it is an allophone of *i*), but because in these contexts variant *e* realizes only the participant feature of Person (for discussion see Chapter 6).

SCl variation arises because Person and Number show different underlying phi-feature compositions that have distinct phonological realizations. Moreover, when (the copy of) Number is underspecified for gender, the choice of the phonological form that realizes Agreement (i.e., Number and Person) is affected by the need to express the number feature overtly (for discussion, see below and section 4.3.3, and Chapter 6, section 6.2.3).

The second case of SCl categoricity involves generic contexts, some of which show use of overt variant *i* but do not present overt/zero alternation nor *i/e* variation.

When they occur with a null subject, generic contexts show full *i/e/∅* variation (30).

- (30) a. *pro* *i* ghe van
 pro.3PL SCl there.LocCl go.3PL
 ‘they/people go there’
- b. *pro* *e* ghe mettivan u lete
 pro.3PL SCl there.LocCl put.3PL the milk
 ‘they/people used to put milk in there’
- c. *pro* ∅ gh’han missu numme ‘xxx’
 pro.3PL (SCl) to-them.have.3PL put name ‘xxx’
 ‘they/people named them ‘xxx’

However, when they occur with a bare quantifier generic contexts only allow SCl variant *i* to occur (31).¹⁷

- (31) a. quarcün/tütti i ghe van
 someone/everyone SCl there.LocCl go.3PL
 ‘someone/everyone goes there’
- b. * quarcün/tütti e ghe van
 someone/everyone SCl there.LocCl go.3PL
 ‘someone/everyone goes there’
- c. * quarcün/tütti Ø ghe van
 someone/everyone (SCl) there.LocCl go.3PL
 ‘someone/everyone goes there’

The remaining generic contexts which appear with the lexicalized DP *e gente* ‘people in general’ show almost full categoricity of variant *i*, as variant *e* and the zero form are recorded only once in the corpus (32).

- (32) a. e gente i gh’ajevan puira
 the people.PL SCl Cl.had.3PL fear
 ‘people were scared’
- b. % e gente e van a l’uspeà
 the people.PL SCl go.3PL to the.hospital
 ‘people go to the hospital’
- c. % e gente Ø nu san dund’andà
 the people.PL (SCl) not know.3PL where.to-go
 ‘people don’t know where to go’

In 3rd plural generic contexts, bare quantifier subjects and the lexicalized DP *e gente* have no gender feature. Since I have claimed that a null SCl variant realizes the gender and number features of Number, the lack of gender on the subject in generic contexts implies that the occurrence of a zero SCl is never a null underlying variant, as its gender feature would remain unchecked. In these contexts the zero form can only be phonological nonrealization of the SCl position triggered by an adjacent clitic that fills an independent head.

¹⁷ When the universal quantifier *tütti* ‘all’ has the semantic meaning of “everyone in general” it shows the same restrictions in the occurrence of SCl variable *i/e/Ø* as bare quantifiers (cf. (31)). For this reason, tokens that show the quantifier *tütti* with a general meaning are considered as generics.

Furthermore, I will account for the (near) categoricity of overt SCIs vs. zero form with lexical generic referents (cf. (30)-(32)) by claiming that the presence of a preverbal overt subject (i.e., a quantifier or the lexicalized DP *e gente*) requires the projections above the independent clitic head to be phonologically expressed. The only SCI forms that can be realized in the SCI position are overt variants as their underlying form does not require checking of a gender feature.

Unlike quantifiers, the lexical DP *e gente* is sporadically found with a zero SCI form (cf. 32.c). Although in its generic use *e gente* has lost its feminine grammatical gender through lexicalization, I will attribute the occasional occurrence of zero SCI with this type of subject to its original form as DP. In these rare cases the zero form can be considered as a null SCI variant on a par with referential contexts.

In order to account for the lack of overt SCIs alternation in generic contexts that involve bare quantifier subjects, I tentatively hypothesize that quantifiers retain only their (semantic) quantificational meaning while their (syntactic) number feature must be expressed on the variable they bind. This variable is the SCI.

In what follows, first I illustrate the feature specification of 3rd plural SCI variants (section 4.3.1); then, I provide a formal account of overt SCI categoricity with agreeing past participles (section 4.3.2); and finally, I propose a tentative explanation for SCI categoricity in some generic contexts (section 4.3.3).

4.3.1 Feature specification of the SCI variants

The analysis of Ligurian data showed that in 3rd plural contexts number (and gender) agreement with the subject may be overtly expressed on the verb morphology (i.e., by the finite verb ending *-an/-en*, and/or by the agreeing past participle); or, indeed, the morphological manifestation of these features may lack altogether, as in the case of syncretic finite verb forms (i.e., ending *-a/-e* for both 3rd person singular and plural).

I claim that in 3rd plural contexts the three SCl variants express different underlying specifications of the categories Person and/or Number, which may involve underspecification of features and feature values (Adger & Smith, 2005; Adger, 2006). I propose that in these contexts the category Number in the numeration can either include number and gender or it may lack gender (thus showing only number), or else it can be underspecified for both number and gender.

The phonological realization of Number and Person varies according to the different underlying forms of the category Number. If Number includes an unvalued gender feature, the SCl form is that of a null variant. If gender is underspecified in the category Number, Number and Person are expressed by overt variants *i* or *e*. Finally, if Number is underspecified for both gender and number, Person is realized by overt variant *e*.¹⁸ The feature specification of the three variants is given in (33).

(33)

variant <i>i</i>	Pers[μ part:–, μ Num*], Num[μ sing:–]
variant <i>e</i>	Pers[μ part:–, μ Num*], Num([μ sing:–])
\emptyset	Pers[μ part:–, μ Num*], Num[μ sing: , μ fem:]

In Chapter 3, I proposed that the null underlying SCl variant \emptyset is specified for number and gender on the category Number, and has its gender feature unvalued (cf. section 3.3.1). Given the presence of the same variant in 3rd plural contexts, its feature specification requires a revision. I propose that the null SCl variant \emptyset has both the number and gender features of Number unvalued.

¹⁸ According to the feature specification of the SCl variants I propose here, SCl variant *e* in 3rd plural contexts phonologically realizes the Person feature [μ part:–]. In Chapter 6, I revise the specification of SCl variant *e*, which, in fact, expresses an unvalued author feature [μ auth:], on the basis of its occurrence in 2nd plural and 1st person contexts (see also Chapter 5). Since valuation of the participant feature does not affect the formal analysis of SCl *e* in 3rd plural contexts, I assume, for the time being and for the sake of simplicity, that this feature has a (negative) value.

The phi-features that the null variant \emptyset realizes retain their original unvalued form in the phonological index, which determines the morpho-phonological form of the variant. For this reason, the outcome of the underlying form $\text{Pers}[\#part:-, \#Num^*]$, $\text{Num}[\#sing: \quad, \#fem: \quad]$ in 3rd singular and plural contexts is always a null variant, regardless of the values that these features acquire (via Agree).

Unlike 3rd singular contexts, overt variants in 3rd plural contexts alternate with both masculine and feminine plural referents, as they lack gender specification. Overt SCIs are the only variants in the set that can phonologically express an underlying form lacking gender specification (e.g., in generic contexts).

In what follows, I show that by proposing that the three SCI variants realize different feature specifications we are able to account for cases of SCI categoricity with defective past participle agreement and with overt generic subjects.

4.3.2 I/e/ \emptyset variation and past participle agreement

In the previous section, I proposed that the SCI is the phonological realization of the categories of inflectional Agreement, namely, Person and Number. In 3rd plural contexts SCI variation arises because Number may be underspecified for (some of) its phi-features or feature values. Different underlying forms of Person and Number are expressed by distinct SCI variants.

In order to account for past participle agreement with the subject in compound tenses of unaccusative-like verbs, for 3rd singular contexts I proposed that past participle agreement is the expression of the category Number that is merged in a lower Agreement head from where it checks its gender and number against the subject via Agree. Subsequently, from the numeration a copy of the same category Number is Merged in the inflectional agreement position above TP and realized as a SCI (cf. Chapter 3, section 3.3.2).

The hypothesis of the underlying structure of participial agreement I proposed for 3rd singular contexts can be applied to account for the variation in past participle agreement in Ligurian 3rd plural (feminine) data, by claiming that Number can be underspecified in these contexts.¹⁹

I will propose the following theory for subject agreement in Romance. If gender and number feature both occur in the category Number in the numeration, they must be realized on the same head (i.e., the SCl, or the past participle, or both). When the structure includes a participial agreement head (i.e., the head of a lower AgrP), the number and gender features of Number must be realized by the past participle and can be realized (also) by the SCl, but not vice versa. Moreover, while the expression of gender is parasitic on the realization of number on the same head, number can be expressed separately from gender (cf. Harley & Ritter, 2002).

If the category Number has only a number feature in the numeration (i.e., Number is underspecified for gender), the number feature must be realized on the participial head and, optionally, on the SCl.

Given that participial agreement with the subject is always morphologically realized in unaccusative-like verbs, the claim that in 3rd plural contexts Number can be underspecified for both number and gender may be problematic. In the light of the data involving participial agreement, I will consider the category Number to be always specified at least for the number feature, and full phi-feature underspecification of Number will be reinterpreted as copy of the mere Num feature in the numeration that is Merged in the higher agreement projection (in order to satisfy the strong μ Num* feature of Pers).

¹⁹ Cases of default subject-verb agreement with plural subject referents are not considered here, as I assume that they show the same structure of singular subjects, which involves checking of unvalued number and person features via vacuous Agree with a null locative element (cf. Chapter 3, section 3.3.3).

Past participle with full subject agreement. When the past participle shows full number and gender agreement with the subject full SCl variation (*i/e/Ø*) is attested.

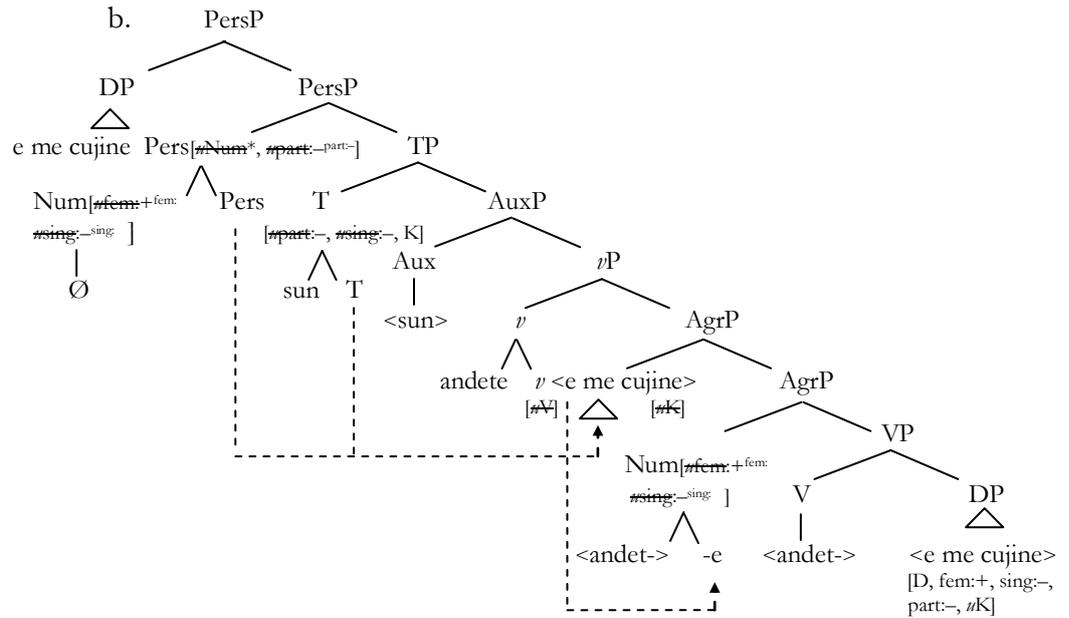
I propose that in such contexts Number has full phi-feature specification (that is, number and gender) and is Merged in the head of the lower participial agreement projection, whereas Pers is Merged in the head of PersP in the inflectional projection.

Number in the participial head checks its uninterpretable features via Agree with the subject that has raised in the specifier of the participial projection. Subsequently, a copy of the features of Number is Merged in inflectional NumP and later adjoins to PersP in order to check its strong *u*Num* feature. The entire head including Pers and (the copy of) Num is phonologically expressed by a SCl (cf. Chapter 3, section 3.3.2).

In 3rd singular contexts both the number and gender features of Num must be included in the copy that is Merged in the higher agreement projection. And this is reflected in the fact that all 3rd singular SCls are specified for number and gender. For 3rd plural contexts I propose that the copy of the features of Num that is Merged onto the head of NumP/PersP must include either all features (Copy Full Set), or a subset of these features, namely, number and the categorial feature Num (Copy Subset), or simply Num and no phi-features (Copy only Category) (cf. also Barbiers *et al.*, 2008; Di Sciullo & Isac, 2003; van Craenenbroeck & van Koppen, 2008).

If both number and gender features of Num are copied onto the head of NumP/PersP (Copy Full Set), only a null variant expresses the feature combination that is obtained as no overt variant includes gender in its specification (34).

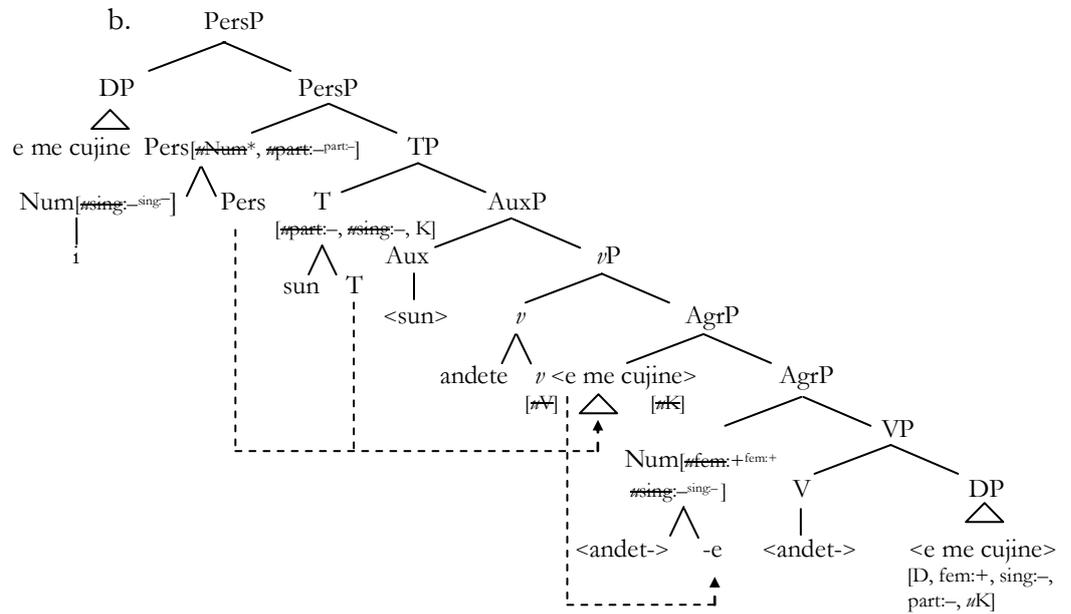
- (34) a. e me kujine Ø sun andet-e (COPY FULL SET)
 the my cousinsF.PL (SCl) are.3PL gone-F.PL
 ‘my cousins (all females) went’



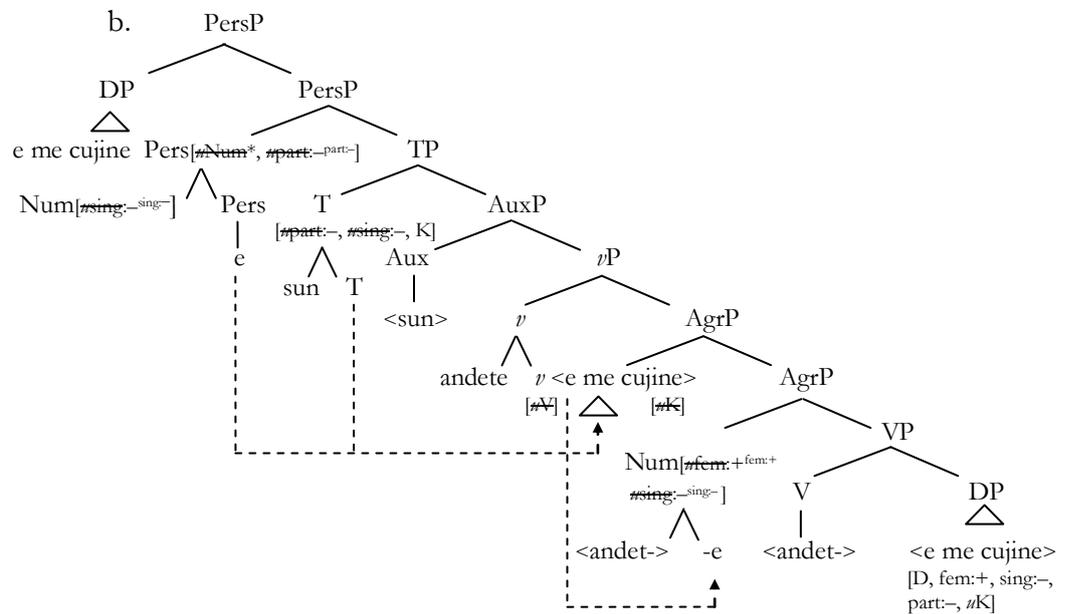
In (34.b), Num with its uninterpretable unvalued number and gender features is Merged on the head of lower AgrP, and the verb adjoins to the same head. Num checks its features via Agree with the subject that has raised from object position to the specifier of the participial projection. A copy of the features of Num is Merged onto the head of a NumP above TP (Copy Full Set), and later this copy adjoins to PersP where Pers and its participant feature are also Merged. From the specifier of lower AgrP the subject checks the uninterpretable features of T (and the participant feature on the head of PersP) via Agree. The subject then raises to the specifier of PersP arguably to check the EPP feature on Agr(Pers/Num)/T.

When Num has valued number and gender features and it is Merged on the head of lower AgrP, the copy of its features on the head of NumP/PersP involves only number (i.e., $[\#sing:-]$) and the categorial feature Num (Copy Subset). In this case, the feature specification of the inflection head Pers/Num is realized either by overt variant *i*, as in (35), or by overt variant *e*, as in (35)'. The two variants do not co-occur as they realized the same inflectional head.

- (35) a. e me kujine i sun andet-e (COPY SUBSET)
 the my cousinsF.PL SCl are.3PL gone-F.PL
 'my cousins (all females) went'



- (35)' a. e me kujine e sun andet-e (COPY SUBSET)
 the my cousinsF.PL SCl are.3PL gone-F.PL
 'my cousins (all females) went'



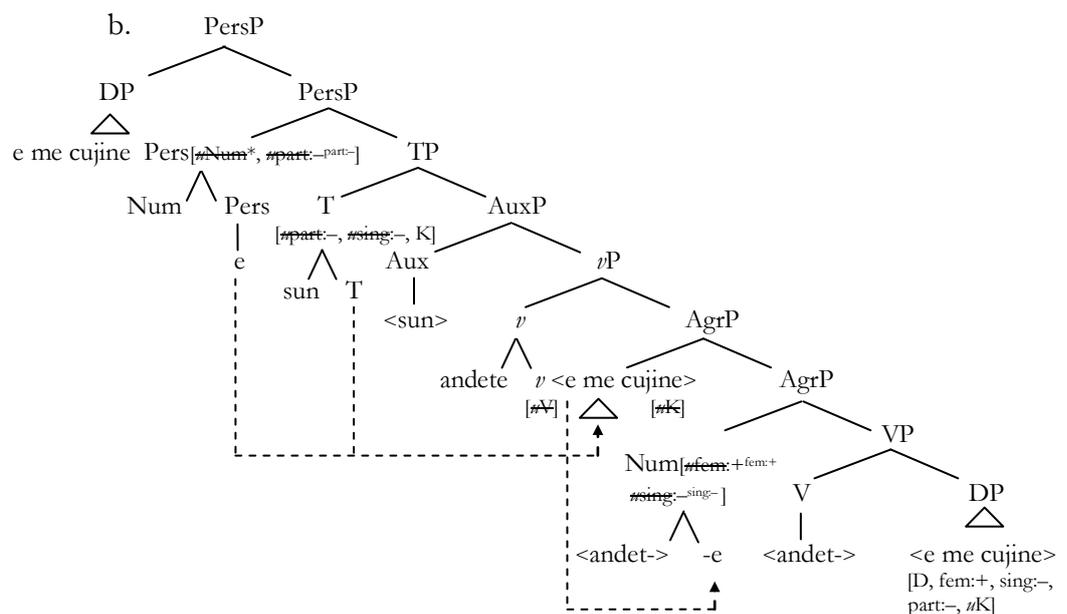
The structures in (35.b)-(35'.b) resemble that in (34.b). The two derivations differ in that in (35.b)-(35'.b) the copy of Num in the inflectional head contains only the number feature and the categorial Num feature (Copy Subset). In this case, the feature combination

resulting in the head of PersP is that of number and participant, which is phonologically rendered by variant *i* if Num is expressed (cf. (35.b)), or by variant *e* if Pers is realized (cf. (35'.b)). The choice of the variant that realizes Num/Pers is determined mainly by phonological factors, and by the need of the SCl to overtly express the number feature (cf. section 4.2.1.3.2, and see discussion on verb syncretisms in Chapter 6, section 6.2.3).

Given that variant *e* expressing the participant feature of Pers does not alternate with any of the 3rd singular SCl variants, and given that the latter are all specified for gender, I will assume that the realization of Pers or Num may alternate only when Num does not include a gender feature. If gender is included in the specification of Num, the SCl must realize (also) the features of Num (see further the discussion on the minimal specification of the SClS in Chapter 6).

Finally, I propose that the copy of the subset of the features of Num may fail to include any phi-feature, particularly, if the number feature of Tense is morphologically expressed on the finite verb. In this case the copy of Num includes only the categorial feature that adjoins to Pers in order to check its μ Num* feature, as in (36).

- (36) a. e me kujine e sun andet-e (COPY ONLY CATEGORY)
 the my cousins.F.PL SCl are.3PL gone-F.PL
 'my cousins (all females) went'



In (36.b), number agreement is morphologically specified on auxiliary *sunt* and the SCl may but does not require to realize number. In a case like (36.b), the copy of Num may include only the categorial feature Num and no phi-features. Thus, the SCl realizes only the participant feature of Pers (and the category Num). No overt SCl alternation occurs in this case as Num has no phi-feature specification. The analysis of the minimal feature specification of the SCls that will be provided in Chapter 6 (section 6.1.3) will reveal that the variant *e* in (35'.b) and in (36.b) does not have two underlying forms involving a difference in the presence or absence of phi-features of Number, but is in fact the realization of Person in both cases.

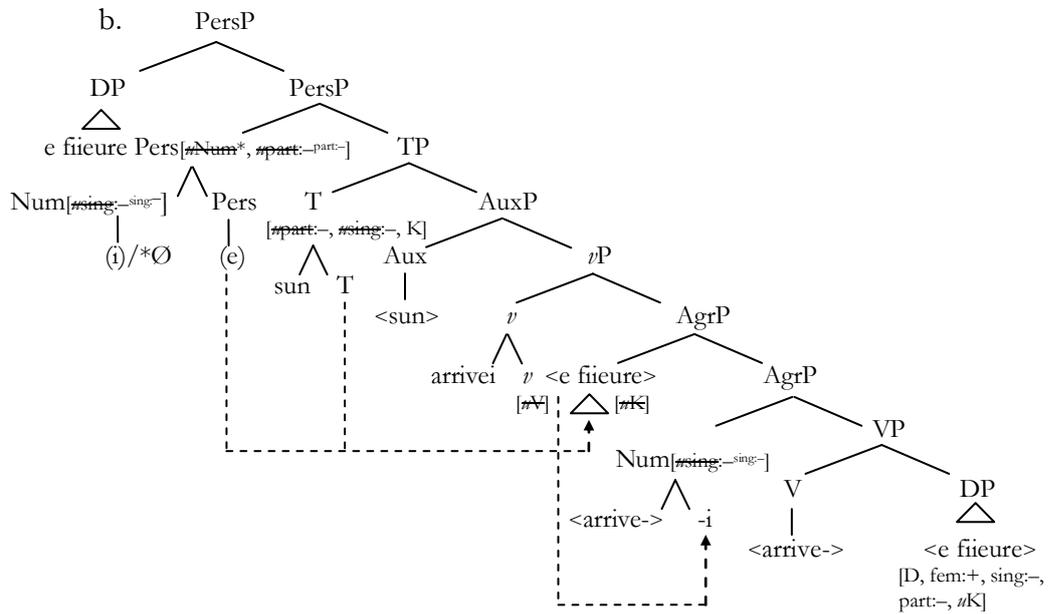
Past participle with defective subject agreement. When the past participle shows only number agreement with the subject (what I referred to as a ‘defective past participle’), overt SCl variants (*i/e*) are attested whereas the null underlying variant \emptyset is ungrammatical.

I propose that in sentences with a defective past participle the category Number is underspecified for gender in the numeration.

In 3rd plural compound tenses, underspecified Number is Merged in the participial head and checks its number feature with the subject (via Agree). Then, a copy of the number feature of underspecified Number and its categorial feature is Merged onto the head of NumP (Copy Full Set) and adjoins to Pers. The feature combination on the head of NumP/PersP including only number and participant phi-features is phonologically realized by overt variant *i* or by overt variant *e*.²⁰ Since the copy of the features of Num involves number but not gender (as shown on the past participle), the head of higher NumP/PersP cannot be expressed by a null variant as this must include also a gender feature in its specification (cf. section 4.3.1).

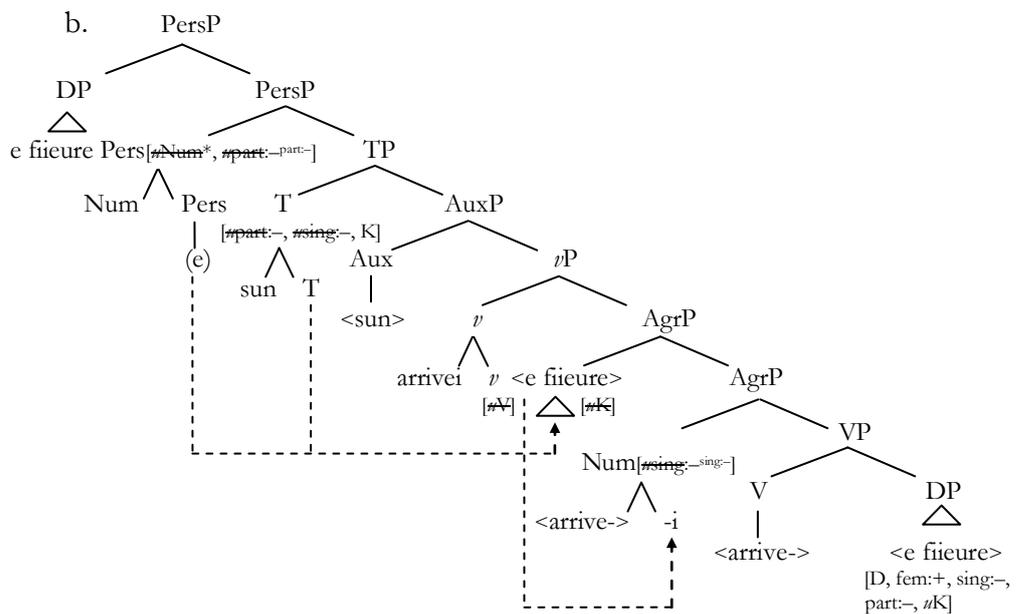
²⁰ In the structure in (37.b), variant *i* and variant *e* are the phonological expression of two distinct feature specifications, respectively, the features of Num and Pers (*i*), and the participant feature of Pers (*e*). I use brackets to represent the fact that these variants cannot co-occur.

- (37) a. e filleure i/e/*Ø sun arrive-i (COPY FULL SET)
 the girls.F.PL SCL are.3PL arrived-PL
 ‘the girls have arrived’



Like in the case of full subject agreement, if copying of the number feature of Num does not take place in the numeration and only the categorial feature is copied and Merged (Copy only Category), the only phi-feature on the Num/Pers head, namely the participant feature of Pers, is phonologically expressed by variant *e*, as in (38).

- (38) a. e filleure e sun arrive-i (COPY ONLY CATEGORY)
 the girls.F.PL SCL are.3PL arrived-PL
 ‘the girls have arrived’

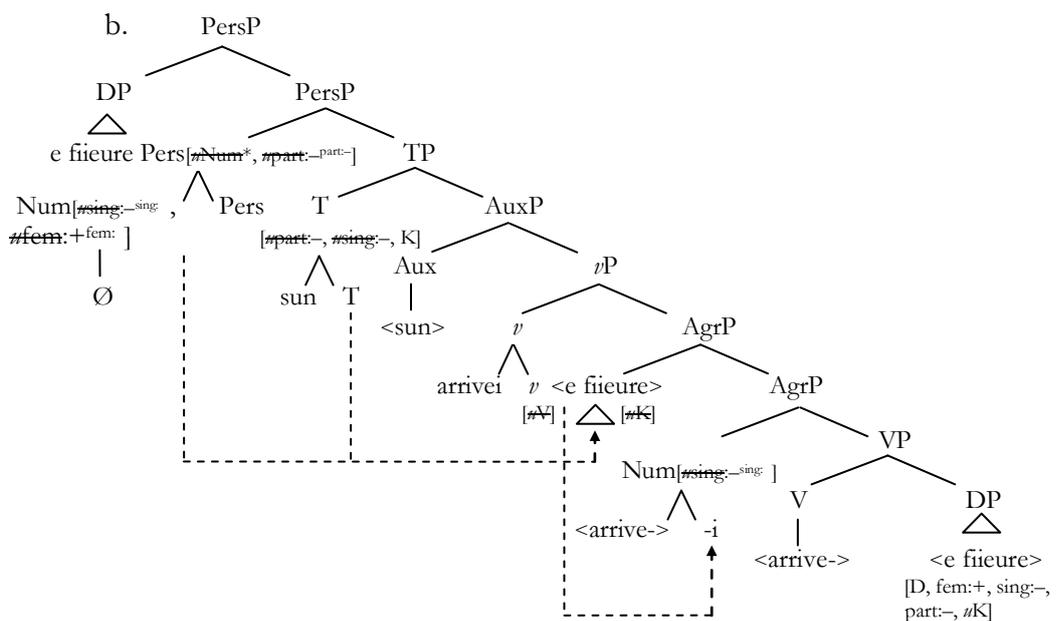


The formal analysis of SCl variation with agreeing past participles in 3rd plural contexts leads to the stipulation in (39).

- (39) In 3rd plural contexts that involve an agreeing past participle, the SCl is either the realization of a copy of the phi-features that are morphologically specified on the past participle (i.e., number and gender), or a subset thereof (i.e., number), or else the expression of a participant feature. The realization of number and gender (and participant) features by a SCl requires that number and gender are both specified and morphologically expressed also on participial agreement, but not vice versa. If the gender feature is present and can be morphologically realized it must be realized.

The stipulation in (39) accounts for the fact that apparently grammatical cases like (40) are not accepted in Ligurian.

- (40) a. * e fiieure Ø sun arrive-i
 the girls.F.PL (SCl) are.3PL arrived-PL
 ‘the girls have arrived’



In (40), the numeration includes a fully specified copy of Number and a copy of Number that is underspecified for gender. The category Number that is specified for both (unvalued) number and gender is Merged in the head Num/Pers and is phonologically realized as a null SCl variant. The underspecified copy of Number that lacks gender is Merged in the participial head and it is morphologically expressed as past participle ending *-i*. According to the stipulation in (39), the structure in (40) is illformed because the copy of Number that includes the gender feature lacks phonological realization (i.e., it is expressed by a null SCl variant), whereas the participial head that realizes all phi-features by means of a morphological ending (regardless of their phonological index), and could thus morphologically realize gender, lacks gender, despite the fact that this feature is present (on another copy of Number) in the numeration.

Past participle agreement with masculine plural referents. Past participles that agree with masculine plural referents show a single morphological ending *-i*. I assume that, like with feminine referents, also with masculine referents the category Number that expresses participial agreement is specified for number and gender or only the number feature. However, both fully specified and underspecified participial agreement are assigned morphological ending *-i*, thus full and defective nonfinite verb agreement cannot be distinguished.

Masculine plural contexts show full SCl variation (*i/e/∅*) when they occur with an agreeing past participle. However, following the theory proposed for feminine plural referents, overt/null SCl variation can only be found when the past participle has full number and gender agreement (41).

- (41) b. SCl \emptyset \Leftarrow COPY FULL SET \Leftarrow pp-*i*
 Pers[μ part:-part-]
 Num[μ sing:-sing-, μ fem:-fem-]
 Num[μ sing:-sing-, μ fem:-fem-]
- a. SCl *i/e* \Leftarrow COPY SUBSET \Leftarrow pp-*i*
 Pers[μ part:-part-]
 Num[μ sing:-sing-]

$$\begin{array}{lcl}
 \text{c.} & \begin{array}{l} \text{SCl } e \\ \text{Pers}[\text{/part:-part:-}] \\ \text{Num} \end{array} & \begin{array}{l} \Leftarrow \text{COPY ONLY CATEGORY} \Leftarrow \text{pp-}i \\ \text{Num}[\text{/sing:-sing:-, /fem:-fem:-}] \end{array}
 \end{array}$$

In (41.a), both number and gender features of Num are copied and realized by the null SCl (Copy Full Set). In (41.b), only the number feature of Num is copied (Copy Subset): given the lack of gender on the specification of Num, the SCl either expresses Num and Pers (variant *i*) or only Pers (variant *e*). In (41.c), no phi-feature is copied but only the categorial feature Num (Copy only Category), and the SCl variant *e* expresses the participant feature of Pers.

When the past participle is defective, copying of the full set of features of Number involves only copying of the number feature and of the categorial feature, as no gender feature is present (42).

$$\begin{array}{lcl}
 (42) & \text{a.} & \begin{array}{l} \text{SCl } i/e \\ \text{Pers}[\text{/part:-part:-}] \\ \text{Num}[\text{/sing:-sing:-}] \end{array} \Leftarrow \text{COPY FULL SET} \Leftarrow \begin{array}{l} \text{pp-}i \\ \text{Num}[\text{/sing:-sing:-}] \end{array} \\
 & \text{b.} & \begin{array}{l} * \text{SCl } \emptyset \\ \text{Pers}[\text{/part:-part:-}] \\ \text{Num}[\text{/sing:-sing:-}] \end{array} \Leftarrow \text{COPY FULL SET} \Leftarrow \begin{array}{l} \text{pp-}i \\ \text{Num}[\text{/sing:-sing:-}] \end{array} \\
 & \text{c.} & \begin{array}{l} * \text{SCl } \emptyset \\ \text{Pers}[\text{/part:-part:-}] \\ \text{Num}[\text{/sing:-sing:-, /fem:-fem:-}] \end{array} \Leftarrow \text{COPY FULL SET} \Leftarrow \begin{array}{l} \text{pp-}i \\ \text{Num}[\text{/sing:-sing:-}] \end{array} \\
 & \text{d.} & \begin{array}{l} \text{SCl } e \\ \text{Pers}[\text{/part:-part:-}] \\ \text{Num} \end{array} \Leftarrow \text{COPY ONLY CATEGORY} \Leftarrow \begin{array}{l} \text{pp-}i \\ \text{Num}[\text{/sing:-sing:-}] \end{array}
 \end{array}$$

In (42.a), the copy of Num includes the only phi-feature, namely number, and the categorial feature (Copy Full Set). In (42.b), despite being a copy of the full set of features of Num, the copy of Num does not include gender, hence its specification cannot be realized by a null SCl variant. Following the stipulation in (39), also (42.c) is illformed because the copy of Num that is realized by the SCl contains more phi-features than the past participle, that is, number and gender, and gender is not phonologically realized. Finally, in (42.d) copying of the number feature does not occur, and SCl *e* expresses only the participant feature of Pers.

4.3.3 I/e/∅ variation with generics

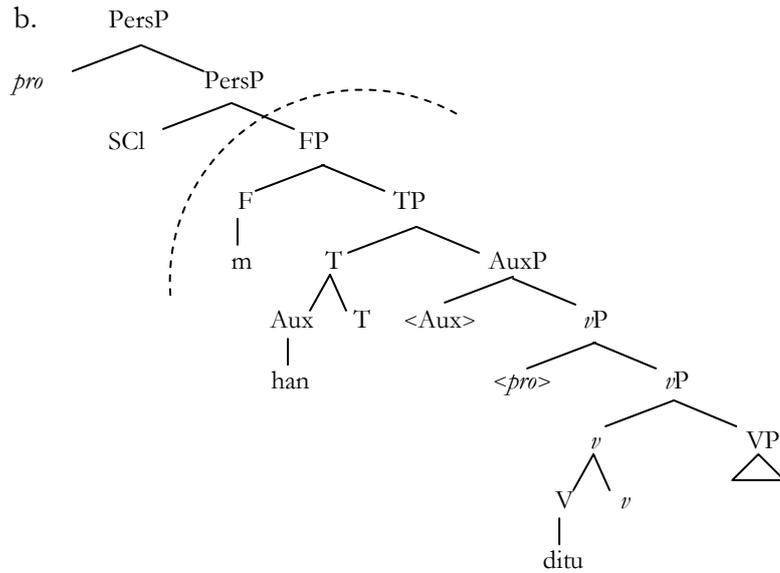
Generic contexts show *i/e/∅* variation when they occur with a null subject, categorical use of SCl *i* when the subject is a bare quantifier, and almost categorical use of SCl *i* with the lexical DP subject *e gente*. This section provides an account for the variability of the zero SCl form across generic contexts, and proposes a speculative explanation for the categoricity of SCl *i* with bare quantifiers.

Overt vs. zero SCl alternation. Generic contexts do not show gender agreement. Following the theory of feature underspecification that I proposed in the previous sections (cf. section 4.3.1 and 4.3.2), I claim that the category Number is always underspecified for gender in generic contexts. As a result, the phonological realization of the head Num/Pers may be an overt SCl variant (*i/e*) but not the null SCl variant, which requires gender specification.

Thus, the occurrence of the zero SCl form in generic contexts is to be considered only as nonpronunciation of the SCl projection, which is triggered by clitics in independent functional positions (e.g., negation and OCl), or by recency of the same syntactic structure (Branigan's (1995) 'syntactic priming') (cf. section 4.2.2.2).

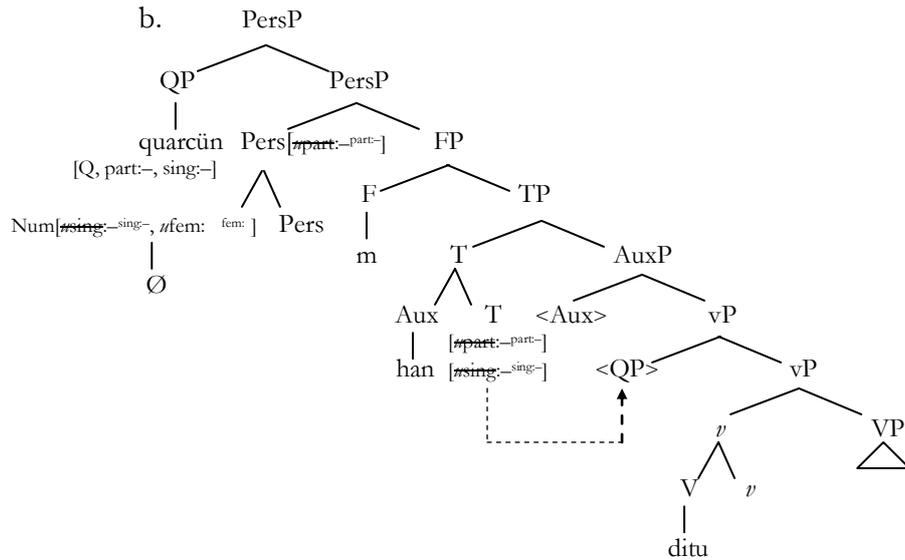
With generics the zero SCl form is attested with null subjects as these allow phonological truncation of the SCl position and all other projections above it to occur, as in (43).

- (43) a. ∅ m'han ditu
 (SCl) to-me.have.3PL told
 'someone told me...'



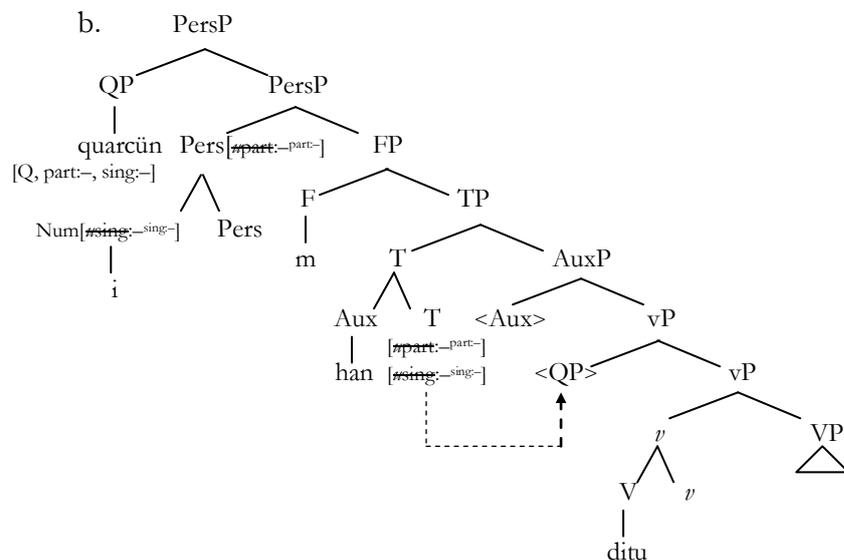
If the subject is a bare quantifier or a generic lexical DP (*e gente*) it raises to the canonical subject position, which must be projected. Sentences that involve the presence of an overt generic subject do not allow for higher functional positions to be phonologically truncated, and an AgrP (NumP/PersP) is always projected above TP. In generic contexts the realization of Num and/or Pers can only be an overt SCl variant and not a null underlying variant, due to lack of gender specification on the overt subject referent. Both nonpronunciation of the SCl position and null SCl variant fail to occur with generic overt subjects. The ungrammaticality in (44) is due to the fact that, in order to be realized by a null variant, Num should include a gender feature that cannot be checked by the subject.

- (44) a. *quarcün Ø m'han ditu
 someone (SCl) to-me.have.3PL told
 'someone told me...'



Only a category Number that is underspecified for gender may occur in the numeration of generic contexts. Categoricality of an overt SCl follow, as in (45).²¹

- (45) a. quarcün i m'han ditu
 someone SCl to-me.have.3PL told
 'someone told me...'



The generic lexical DP *e gente* shows almost full categoricality of SCl *i*, as it occurs with the zero SCl form only in one instance in the Ligurian corpus (for the lack of overt *i/e* alternation see the next subsection). The sporadic occurrence of a zero SCl with the

²¹ Unlike bare quantifiers, quantifiers that are followed by a noun may occur with a zero SCl form which is, in fact, a null underlying variant. With these quantifiers the category Number may occur with a gender feature that is checked by the interpretable gender feature on the noun. Such cases are included in the analysis of referential contexts (cf. section 4.2.1.2).

nominal (preverbal) generic expression *e gente* is to be attributed to the fact that, despite losing gender specification in the process of lexicalization, the DP *e gente* may occasionally be treated as the original lexical DP which is fully specified for number and gender. The presence of gender on the subject referent allows a null SCl variant to realize a fully specified category Number, as in the case of referential contexts, thus explaining the (rare) occurrence of a zero SCl with preverbal *e gente*.

Overt SCl alternation. Null generic subjects show *i/e* SCl variation. Assuming that the phi-features of *pro* are recovered by the SCl and by the verb inflection, the presence or absence of a number feature on Number does not affect proper licensing of the null subject in these contexts.

Overt generic subjects differ from null subjects in this respect. The DP *e gente* shows very rare occurrence of SCl *e*, whereas bare quantifiers display categorical use of SCl *i*. Although the (almost complete) lack of overt SCl variation with the two types of overt subject appears related, I ignore the DP *e gente* and I focus on SCl categoricity with bare quantifiers.

Since I proposed that overt SCl variants realize a different feature composition and that the difference involves the expression of the number feature (cf. section 4.3.1), I assume that the lack of overt SCl variation with bare quantifiers in generic contexts is related to the realization of number by the SCl.

Unlike referential contexts, *i/e* variation in generics is not significantly affected by the morphological specification of number on the finite verb (cf. Table 17). For this reason, I suppose that bare quantifiers require expression of number agreement not on any inflectional element, but specifically on the SCl.

Although I cannot provide a strong argument for the lack of SCl variation with bare quantifiers, I propose a speculative analysis based on the standard view that bare quantifiers are operators that bind a variable.

Even though bare quantifiers *quarcün* and *tütti* in generic contexts have the meaning of ‘someone’ and ‘all the people/everyone’ respectively, they only bear the semantic quantificational meaning. Number is expressed on the variable that the quantifier binds. This variable is the SCl, and the only SCl variant that phonologically realizes a number feature is *i*.²²

Evidence for this tentative analysis of quantification is provided by the bare quantifier *quarcün* ‘someone/some people’. *Quarcün* may occur with singular (46.a) or plural SCl/verb agreement (46.b). In both structures, the only element that always conveys number agreement is the SCl (i.e., the variable bound by the quantifier).

- (46) a. quarcün u ghe l’ajeva
 someone SCl.3SG LocCl OCl.had.3
 ‘someone had it/some people had it’
- b. quarcün i ghe l’ajeva
 someone SCl.3PL LocCl OCl.had.3
 ‘someone had it/some people had it’

Data involving bare quantifiers and SCls suggest that quantifiers only provide their semantic interpretation, while the variable that they bind absorbs (and expresses) their syntactic feature(s). Further research is needed to determine the syntactic function of the variable in the expression of the meaning of quantifiers.

²² Notice that, although, it realizes a number feature, the null variant is ruled out here, because of the lack of gender specification on the bare quantifier.

4.4 Conclusion

In this chapter, I investigated overt/zero SCl variation and overt SCl (*i/e*) alternation in 3rd plural referential and generic contexts, and I proposed a formal feature-based approach that allows us to account for both types of variation. Variation is captured by assuming that SCl variants phonologically realize different feature specifications of the functional categories of Agreement, namely Number and Person. This involves underspecification of features (variant *i/e*) or feature values (null variant).

The zero SCl is interpreted either as a null underlying variant or as phonological truncation of the SCl position due to the blocking effect of clitics that fill independent functional heads. The null underlying variant has unvalued gender and number features, and it occurs only in contexts that allow checking of the gender feature and where gender is morphologically realized by all elements that allow for it to be expressed (namely, the SCl and the agreeing past participle of unaccusative-like verbs). These cases do not include generic contexts and defective past participle agreement. In these contexts the zero SCl form can only be interpreted as nonpronunciation. Failure to meet the conditions for a null underlying variant or for nonprojection of the SCl position leads to categoricity of overt SCl variants.

As for *i/e* alternation, the variability of overt SCl forms is significantly affected by phonological and morpho-syntactic factors (variant *e*), and by morpho-syntactic and processing factors (variant *i*). Despite the effect of preceding phonology on variant *e*, the two overt variants need not be considered as mere allophones. The impact of morpho-syntactic factors supports the claim that SCl *i* and *e* express different feature combinations of Num/Pers, with SCl *i* expressing both participant and number features, and SCl *e* expressing only participant. Categorical use of variant *i* occurs only with bare quantifiers in

generic contexts because, as I tentatively proposed, they must realize number on the variable they bind, namely, the SCl.

Finally, for one speaker the effect of phonological factors is evident on all SCl variants, thus suggesting that for this speaker phonological factors trigger phonological deletion of the SCl, which affects the variability of both zero and overt SCl forms (inter-speaker variation).

CHAPTER 5

FIRST PERSON SUBJECT CLITIC VARIATION

This chapter investigates overt/zero SCl alternation and overt SCl variation in 1st person singular and plural contexts. A variationist analysis reveals that the two types of variation are influenced by language-internal and external factors, and that inter-speaker variation occurs. A feature-based approach, which involves underspecification of feature values, is used to account for SCl variation in 1st person contexts. Syntactic and phonological factors are identified that affect the variability of the SCl variants. Ongoing change, particularly in the use of the overt SCl variants, is suggested by the significant effect of the external variable age.

In Ligurian, 1st person contexts show alternation of overt SCl variant *e* and *a*. Overt SCl variation occurs with 1st person singular (1) and plural (2).

- (1) a. *e* l'ho telefonau au megu
SCl Cl.have.1SG phoned to-the doctor
'I have called the doctor'
- b. *a* parlavu de seu nevu
SCl talked.1SG of your nephew
'I was talking about your nephew'
- (2) a. *e* l'emmu ciammau stu avvucattu
SCl Cl.have.1PL called this solicitor.Obj
'we called this solicitor'
- b. *a* ghe semmu zà ndeti
SCl there.LocCl are.1PL already gone
'we went there already'

Overt SCl *e* and *a* alternate with a zero SCl form in both 1st singular (3) and 1st plural contexts (4).

- (3) Ø sentivu piccà
(SCl) heard.1SG to.bang.Inf
'I could hear banging'

- (4) *inte stu bombardamentu Ø sentìmu sti curpi*
 in this bombardment (SCI) heard.1PL these bangs.Obj
 ‘in this bombardment, we could hear these bangs’

First person contexts occur with a null subject, or with a pronominal subject *mì* ‘I’ or *nüatri/nui* ‘we’. When the subject is null, overt SCI variants and the zero form alternate (5).

- (5) a. *poi pro e fassu a menestra*
 then pro.1SG SCI make.1SG the minestrone.Obj
 ‘then I make minestrone’
- b. *pro a fassu u té*
 pro.1SG SCI make.1SG the tea
 ‘I am making tea’
- c. *l’annu scursu pro Ø l’ ho vista li*
 the.year last pro.1SG (SCI) her.OCl have.1SG seen here
 ‘last year I saw her here’

Similarly, overt pronominal subjects show *e/a* variation and overt/zero alternation when they occur preverbally in canonical subject position (6);

- (6) a. *mì e parlu de seculi*
 I.SubjPron SCI talk.1SG of centuries
 ‘I’m talking about centuries’
- b. *mì a parlu de ina villa*
 I.SubjPron SCI talk.1SG of a villa
 ‘I am talking about a villa’
- c. *mì Ø staggu ben*
 I.SubjPron (SCI) stay.1SG well
 ‘I’m fine’

when they are topicalized (7);

- (7) a. *mì u bajericò e l’ho appena semenau*
 I.SubjPron the basil.Obj SCI OCl.have.1SG just sowed
 ‘me, the basil, I have just sowed it’
- b. *mì i fajeui a i veuiu inte l’egua*
 I.SubjPron the beans.Obj SCI them.OCl toss.1SG in the.water
 ‘me, the beans, I toss them in the water’
- c. *mì Ø sun sta li*
 I.SubjPron (SCI) am.1SG this.F.SG here
 ‘me, I am this one here’

and when they appear in postverbal position (8).

- (8)
- a. *e* organizzu mi
 SCl organize.1SG I.SubjPron
 ‘I will organize it!’
 - b. de vote *a* ghe telefonu mi
 sometimes SCl to.her.IOCl phone.1SG I.SubjPron
 ‘sometimes I call her’
 - c. aa fin Ø P ho vistu mi là
 in.the end (SCl) him.OCl have.1SG seen I.SubjPron there.Loc
 ‘in the end, I saw him (= the cat) over there’

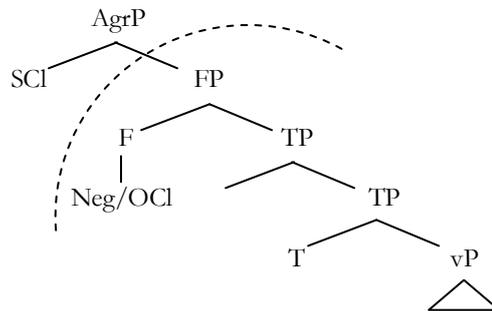
Unlike 3rd singular and 3rd plural SCl variables, 1st person SCl variable *e/a/Ø* does not show cases in which the zero form or indeed any of the overt variants are ungrammatical.

In this chapter, I will provide the results of the variationist analysis of SCl variable *e/a/Ø* for what concerns the variability of the zero SCl form and overt SCl *e/a* alternation.

For most speakers, the zero form is affected by syntactic, verb-related and subject-related factors, as well as by processing factors. For two of the six speakers, the occurrence of a zero SCl is mainly influenced by phonological factors (inter-speaker variation).

I will propose three ways of accounting for the zero SCl form in 1st person contexts. First, zero SCl is interpreted as blocking of the pronunciation of the SCl position that is caused by the presence of adjacent clitics in a high functional position (9).

(9)



Second, the surface zero form is in fact absence of any feature F in the SCl position, when the same feature F is already semantically expressed by an overt lexical element in the sentence. For 1st person contexts, this feature is [author] and it can be semantically

expressed also by an overt subject pronoun (10.a), a reflexive clitic (10.b), or a verb of opinion (10.c).

- (10) a.
-
- b.
-
- c.
-

Third, zero SCl involves the phonological deletion of an overt SCl (*e/a*) with a following plosive (11.a) and a following fricative (11.b).

- (11) a. SCl *e/a* ⇒ ___#plosive ⇒ {Ø}
 b. SCl *e/a* ⇒ ___#fricative ⇒ {Ø}

Inter-speaker variation arises because although all Ligurian speakers have zero SCl as nonpronunciation of the SCl position, as lack of a lexical item in the SCl position, and as phonological deletion of an overt form, for some speakers the effect of some of the syntactic and/or phonological factors on the production of the zero form is greater than for other speakers (involving also difference in the factor ranking).

As for *e/a* alternation, the occurrence of the two overt variants is mainly affected by phonological and syntactic factors, and by the sociolinguistic variable age. One speaker who belongs to the group of older speakers makes extensive use of SCl *a*, and her choice of this variant is triggered by morpho-syntactic factors and not by phonological ones (inter-speaker variation).

In order to account for *e/a* alternation and for the presence of inter-speaker variation, I will argue for the existence of two distinct types of overt SCl variation.

In the first type, the two variants are allophones which share the same underlying form. Following phonological factors determine the form of the SCl, as they trigger the choice of a variant that has similar phonological traits, namely, variant *e* [-LOW] and its allophone *a* [+LOW] (i.e., vowel coalescence) (12).

- (12) a. SCl *e* ⇒ ___# [-LOW] vowel ⇒ /e/
 b. SCl *e* ⇒ ___# [+LOW] vowel ⇒ /a/

In the second type, SCl *e* and SCl *a* are two distinct morpho-syntactic variants which have different underlying forms, and whose variability is affected by morpho-syntactic factors. In particular, I will propose that both overt variants express an author feature but they differ in the specification of the value of this feature, with variant *a* expressing a positive value and variant *e* having no value (i.e., underspecification of feature value) (13).

- (13) a. [_{!author: auth:}] SCl *e*
 b. [_{!author: +auth:+}] SCl *a*

For speakers who have distinct underlying overt variants, SCl *a* is the element that expresses the author feature, even though there are elements that bear the same feature (e.g., reflexive clitics). In contrast, SCl *e* is favoured when the subject includes also referents other than the author (i.e., 1st person plural).

For most speakers variant *a* is an allophone of SCl *e* and its use is affected by phonological factors. Only one of the older speakers shows the occurrence of variant *a* as a different underlying variant, which is affected by morpho-syntactic factors. I will suggest

that the distinct underlying variant *a* is likely to be an old trait of the dialect, and its use has been lost among younger speakers who have developed the use of SCl *a* as an allophonic form (a phenomenon also known as ‘reallocation’ (e.g., Trudgill, 1986)). In general, older speakers significantly favour the occurrence of variant *a* because they make use of it as an allophone, but they also partially retain its original form as an underlying variant. Hence, the significance of age for *e/a* alternation.

In section 5.1, I define the variable context and I illustrate the specification of each factor group included in the analysis. In section 5.2, I provide the findings of the variationist analysis for the zero form and the single overt variants, and I compare them with the results of data from speakers who show inter-speaker variation. In section 5.3, I show that SCl variation in 1st person contexts is accounted for by a feature-based approach to variation involving underspecification of feature values, and in section 5.4, I illustrate the syntactic and phonological processes that influence the variability of the SCl variants including in cases of inter-speaker variation. Finally, in section 5.5 I summarize my findings.

5.1 Data analysis

A variationist analysis is carried out for the variant *e/a/∅* that aims to determine the effect of internal, processing, and sociolinguistic factors on overt/zero SCl alternation and on overt SCl variation in 1st person contexts. In what follows, first I show the ambiguous contexts have been excluded from the analysis and I provide the reason why (section 5.1.1); then, I characterize the specification for each factor group (section 5.1.2).

5.1.1 Circumscribing the variable context

Clause type. As was the case for 3rd plural contexts, the analysis of 1st person SCl variable *e/a/Ø* is restricted to main clauses. This is due to the fact that in Ligurian SClS generally cliticize onto complementizers *che* ‘that’ and *se* ‘if’, and onto most wh-elements (e.g., *dunde* ‘where’, *quande* ‘when’, *cumme* ‘how’). Whether these complementizers/wh-elements occur with a cliticized SCl *e* (14.a) or with a zero SCl form (14.b), the phonological output is the same and the two variants cannot be distinguished. For this reason, all subordinate clauses are excluded from the analysis.

- (14) a. e dijevu *ch'e/dund'e* vaggiu a cattà
 SCl say.1SG that-SCl/where-SCl go.1SG to buy
 ‘I said that/where I am going shopping’
- b. e dijevu *che Ø/dunde Ø* vaggiu a cattà
 SCl say.1SG that (SCl)/where (SCl) go.1SG to buy
 ‘I said that/where I am going shopping’

Fillers. In Ligurian some 1st person singular expressions can occur as fillers. These are *e diggu* ‘I say’, *e te diggu* ‘I say to you’ (15.a), and *mì e nu (u) so* ‘I don’t know (it)’ (15.b).

- (15) a. certe cose, e te diggu, i nu sun giüste
 some things.Subj SCl to.you say.1SG SCl not are.3PL right
 ‘certain things, I say to you, are not right’
- b. vella, mì e nu u so, a l’era a Leua
 she I SCl not it know.1SG SCl Cl.was.3SG in Leua
 ‘She, I think, lived in Loano’

In (15.a), the filler *e te diggu* ‘I say to you’, which occurs between the topicalized subject *certe cose* ‘some things’ and the rest of the clause, does not mean that ‘the speaker is saying it now’ but simply stresses the fact that she is expressing her opinion. Similarly, in (15.b) the filler *mì e nu u so* ‘I don’t know (it)’, which separates the topicalised subject pronoun *vella* ‘she’ from the rest of the clause, communicates that the speaker does not have full confidence in her knowledge of the facts, and not that ‘she does not know the facts at all’.

When these expressions occur as fillers they are coded separately from their lexical use and are not included in the main analysis of variable *e/a/Ø*, as they show greater occurrence of zero SCl form. Fillers are analysed independently of other contexts and the results are subsequently compared with those of the overall analysis (see section 5.2.1.2).

5.1.2 Factor group specification

The variationist analysis of 1st person contexts investigates the impact on SCl variability of a number of factors: subject-related factors (grammatical number, and presence and position of the pronominal subject), verb-related factors (finite verb morphology, nonfinite verb agreement, and verb class), phonological factors (preceding and following contexts), and finally, the processing factor recency of the same variant and the sociolinguistic variable age.

In what follows, the specification of phonological and processing factors and of the independent variable age is not given as it matches the one provided for the other two SCl variables under analysis.

5.1.2.1 Internal linguistic factors

Number of the subject. SCl variable *e/a/Ø* is used in 1st singular and plural contexts. Tokens are coded according to singular (16.a) and plural number (16.b), in order to determine whether number has an effect on the occurrence of the zero form and/or on the *e/a* alternation.

- | | | | |
|------|----|--|------------|
| (16) | a. | <i>e l'eru a cà</i>
'SCI I.was.1SG at home' | (singular) |
| | b. | <i>e l'eremu a scheura</i>
'SCI were.1PL at school' | (plural) |

Pronominality and position of the subject. For variable *e/a/∅* the groups involving pronominality and position of the subject referent are combined to form a single factor group, as 1st person contexts only occur with a null subject (*pro*) or with a pronominal subject, namely, *mì* ‘I’ or *nüatri/nui* ‘we’. Tokens are coded according to whether they show a null subject (17.a), or a preverbal (17.b), topicalized (17.c), or postverbal pronominal subject (17.d).

- | | | | |
|------|----|---|-----------------------|
| (17) | a. | <i>pro</i> e l’eru zeunetta
‘pro.1SG SCI I.was a young girl’ | (null subject) |
| | b. | <i>mì</i> e nu me ricordu
‘I SCI don’t remember’ | (preverbal pronoun) |
| | c. | <i>mì</i> a roba e gha-a do
‘I, the stuff, SCI I.give it to her’ | (topicalized pronoun) |
| | d. | e ghe ndaremmu <i>nüatri</i>
‘SCI there will.go we’ | (postverbal pronoun) |

Finite verb morphology. In 1st person contexts, finite verbs in the present tense show ending *-u* for 1st person singular and *-mu* for 1st person plural. These forms do not show syncretism with other persons of the verb paradigm.

In the remaining tenses, 1st person plural still appears with the unambiguous ending *-mu*, whereas 1st person singular may share its verb ending with other grammatical persons in the paradigm. For 1st person singular contexts the imperfect tense shows both ending *-u* and ending *-a*, the latter being a morphological ending that occurs also for 3rd person singular and plural.

Moods other than the indicative also show syncretism in the verb paradigm. In the conditional 1st person singular occurs only with ending *-a*, a form shared by 3rd person singular and plural. In the subjunctive the 1st person singular ending is *-e*, as is the case for 3rd person singular.

Tokens are coded according to whether the verb ending is unambiguous, namely, *-u* (18.a,b), or ambiguous but variable with an unambiguous form, that is, imperfect *-a* (18.c), or ambiguous and not variable, i.e., conditional *-a* and subjunctive *-e* (18.d)

- | | | | |
|------|----|--|-------------------------|
| (18) | a. | nüatri e ghe <i>muntai-mu</i> a zügà
'we SCI climbed-1PL there to play' | (unambiguous) |
| | b. | e ghe <i>pensav-u</i>
'SCI thought-1SG.Imp about it' | (unambiguous) |
| | c. | e ghe <i>pensav-a</i>
'SCI thought-1SG/3.Imp about it' | (ambiguous/variable) |
| | d. | e l' <i>avere-a</i> durmiu
'SCI I.would have-1SG/3.Cond slept' | (ambiguous/invariabile) |

Nonfinite verb morphology. Despite the fact that in 1st person contexts the subject referent does not have a (morpho-syntactic) gender feature (Harley & Ritter, 2002), the past participle of unaccusative-like verbs shows morphological number and gender agreement, just like in 3rd person context (see section 5.3.2).

Given the findings regarding nonfinite verb morphology in other SCI variables (cf. Chapter 3 and 4), its effect in 1st person contexts is tested, particularly in relation to the occurrence of the zero SCI form.

Tokens are coded according to whether the nonfinite verb agrees in number and (semantic) gender with the subject (19.a), or it agrees only in number with the subject (19.b), or else whether no agreement takes place on the nonfinite verb (19.c). Tokens with simple tenses are included in the latter.

- | | | | |
|------|----|--|---------------------|
| (19) | a. | <i>pro</i> e sun <i>rivà-a</i> lì
'pro.1SG.(F) SCI have arrived-F.SG there' | (gen/num agreement) |
| | b. | <i>pro</i> e semmu <i>ndet-i</i> via
'pro.1PL.(F) have gone-PL away' | (number agreement) |
| | c. | <i>pro</i> e gh'ho <i>dit-u</i>
'pro.1SG.(F) SCI have said-(M.SG) to him' | (no agreement) |

Verb class. Verbs are coded according to their class, namely transitive (20.a), unergative (20.b), unaccusative (20.c), reflexive (20.d), passive (20.e), raising verbs (20.f) and copular constructions (20.g). Moreover, a few lexical verbs are coded separately in order to determine whether the high frequency of these verbs in the discourse has an effect on SCI variability. These include the verb *dì* ‘to say/to tell’ when it is used to reproduce reported speech (20.h) or narration (20.i), and ‘verbs of opinion’ such as *savé* ‘to know’, *ricurdàse* ‘to remember’, *capi* ‘to understand’, *pensà* (‘to think’), *credde* (‘to believe’), as these are more frequent in 1st person than in other contexts (20.j) (D. Sharma, p.c.). Finally, fillers such as *e (te) diggu* ‘I say’ and *mì e nu (u) so* ‘I don’t know (it)’ are coded as a separate factor in this factor group (20.k).

- | | | | |
|------|----|--|-------------------|
| (20) | a. | <i>e l’bo missu</i> paregge ciente
‘SCI I have put a few plants’ | (transitive) |
| | b. | <i>chì e stemmu travaiiandu</i>
‘here SCI we are working’ | (unergative) |
| | c. | <i>e sun sciurtia</i>
‘SCI I have gone out’ | (unaccusative) |
| | d. | <i>e m’eru illiizza</i>
‘SCI I fooled myself’ | (reflexive) |
| | e. | <i>ormai e semmu abituuei</i>
‘nowadays SCI we got used (to it)’ | (passive) |
| | f. | <i>e pajevu ina rana</i>
‘SCI I seemed (like) a frog’ | (raising) |
| | g. | <i>e l’eru piccina</i>
‘SCI I was a little girl’ | (copula) |
| | h. | <i>e l’bo ditu</i> “ti veggghi!”
‘SCI I said “you see!”’ | (reported speech) |
| | i. | <i>e gb’bo ditu</i> s’u gh’ha a zuena
‘SCI I told him if he has a girlfriend’ | (narration) |
| | j. | <i>e creddu</i> ch’u vegne ancurra
‘SCI I believe that he is still coming’ | (opinion) |

- k. a gh'ha *e nu so* in po' de freve (filler)
 'she has, I don't know, a little temperature'

Adjacency. Tokens of SCl variable *e/a/Ø* are coded according to whether the element that follows the SCl is negation (21.a); a direct or indirect OCl of 1st or 2nd person *me* 'me/to me', *te* 'you/to you', *ne* 'us/to us', *ve* 'you(pl.)/to you(pl.)' (21.b); a reflexive clitic *me* 'myself' or *se* 'ourselves' (21.c); a vocalic 3rd person OCl *u* 'him/it (m.)', *a* 'her/it (f.)', *i* 'them', *e* 'them (fem.)' (21.d); 3rd person OCl allomorph *l'* in front of vowel-initial auxiliaries (21.e); indirect 3rd person OCl *ghe* 'to him/her/them' (21.f); partitive clitic *ne* 'of it/them' (21.g); auxiliary/copula clitic *l'* (21.h); locative clitic *ghe* 'there' (21.i). If the adjacent element is not a clitic but a verb (auxiliary or main verb) tokens are coded for SCl-verb adjacency (21.j).

- | | | | |
|------|----|--|--|
| (21) | a. | <i>e nu</i> u sajevu
'SCI I not.Neg knew it' | (negation) |
| | b. | <i>e ve</i> incuntravu
'SCI you.PL.Obj I.used to meet' | (1 st /2 nd OCl) |
| | c. | mì <i>e me</i> scordu
'I SCI myself forget' | (reflexive clitic) |
| | d. | nüatri <i>e a</i> ciammemmu 'cutre'
'we SCI it call 'cutre' (=blanket) | (3 rd direct vocalic OCl) |
| | e. | <i>e l'</i> ho vista
'SCI her.Obj I.have seen.F.SG' | (3 rd direct OCl <i>l'</i>) |
| | f. | mì <i>e ghe</i> l'ho ditu
'I SCI to.her have said it' | (3 rd indirect OCl <i>ghe</i>) |
| | g. | <i>e n'</i> ho vistu ün
'SCI of.them I.have seen one' | (partitive clitic <i>ne</i>) |
| | h. | <i>e l'</i> eemu scappei in galleria
'SCI Cl we.had fled into the tunnel' | (aux/copula clitic <i>l'</i>) |
| | i. | <i>e ghe</i> ndavu
'SCI there I.used to go' | (locative clitic <i>ghe</i>) |
| | j. | mì <i>e sun nata</i> a Arbenga
'I SCI was born in Albenga' | (SCl-verb adjacency) |

5.2 Results

The distributional results for 1st person data show extensive production of the zero form and overt variant *e*, and low occurrence of variant *a* (Table 1).

Overall (N)	variant <i>e</i> (N) (%)		variant <i>a</i> (N) (%)		zero form (N) (%)	
1808	847	47	226	12	735	41

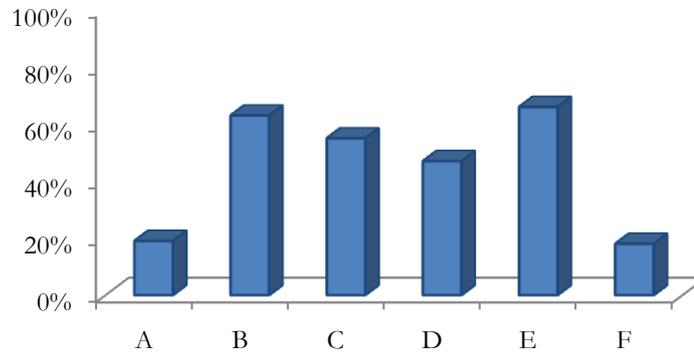
However, the occurrence of zero SCl form and *e/a* alternation show similar patterns only for four of the six speakers. The remaining two speakers differ substantially from the other speakers, as they show low production of zero form and opposite patterns as far as *e/a* alternation is concerned (inter-speaker variation).

Unlike in other SCl variables, in 1st person contexts speaker B does not show inter-speaker variation. Her data are included in the main analysis because, for each variant, she exhibits variability patterns that are similar to those of most other speakers.¹

Overt/null SCl variation. Figure 1 illustrates the occurrence of zero SCl form for individual speakers. While most speakers show large use of the zero form, for speaker A and speaker F this figure decreases considerably.

¹ At first, speaker B's data are analysed independently from other speakers in order to determine whether the fact that she shows similar variability patterns to other speakers also entails the significance of the same factors. As this proves to be the case, speaker B's data are ultimately considered as part of the main analysis.

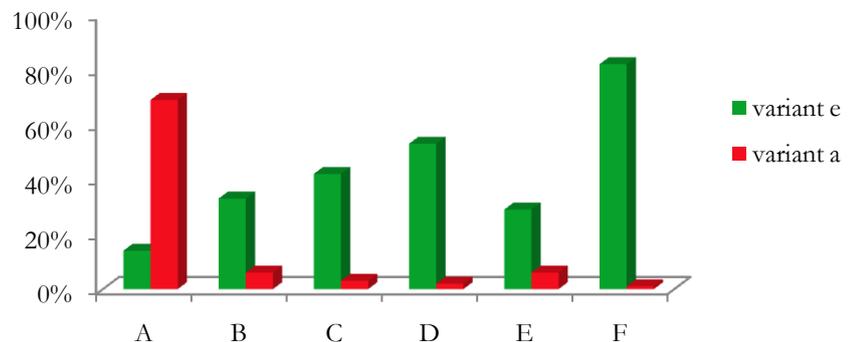
Figure 1. Percentage of the occurrence of zero SCl form for individual speakers.



Data from speaker A and speaker F are not included in the overall investigation and are considered in a separate analysis. The analysis of their data aims to find out whether the factors that affect the occurrence of the zero form for these speakers differ from those attested for other speakers, and ultimately what causes the decrease in their production of the zero form.

Overt SCl e/a alternation. Figure 2 provides the percentage of use of the two overt SCl variants *e* and *a* for individual speakers.

Figure 2. Percentage of the occurrence of overt SCl variants (*e/a*) for individual speakers.



Speakers who show a similar level of occurrence of the zero form make very low use of variant *a* and consistent use of variant *e*.

Speakers who show inter-speaker variation for the zero form do so also for the *e/a* alternation, even though they favour different overt variants. Speaker F shows almost no occurrence of variant *a*, whereas her use of variant *e* increases drastically. Speaker A makes little use of variant *e* and clearly favours overt variant *a* in 1st person contexts.

In the analysis of variant *e*, speaker F's data are considered separately from those of all other speakers in order to determine what factors generate the increase in her use of this variant. In the analysis of variant *a*, speaker A's data are examined independently of all other speakers in order to find out why this variant, despite being productively used by all speakers, is used consistently only by one of them.

5.2.1 Overt/zero SCl variation

The first part of the variationist analysis investigates the occurrence of the zero SCl form, and it aims to determine what are the factors that affect its alternation with overt variants.

In the Ligurian data, 1st person contexts show no cases of categoricity of overt SCl variants. Only one factor involving finite verb morphology is omitted from the analysis due to its occurrence with a limited number of speakers.

Finite verb morphology. Tokens that show variable ambiguous verb morphology (*-a/-u*) are excluded from the multivariate analysis because they only occur in the speech of two of the older speakers, and appear with a zero SCl form in the speech of only one them (Table 2).²

² I assume this to be an old feature of the dialect that is retained by (some) older speakers, and whose impact on SCl variability cannot be investigated due to the lack of potential variable context across both age groups. The effect of variable ambiguous verb morphology on SCl variability is tested only in the individual analysis of speaker A's speech (for variant *a*) (see section 5.2.3.1).

Table 2. Distribution of variable *e/a/Ø* with ambiguous verb morphology (variable), across speakers.

<i>Speaker</i>	Overall (N)	variant <i>e</i> (N) (%)		variant <i>a</i> (N) (%)		zero form (N) (%)	
Speaker A	13	1	8	12	92	0	0
Speaker C	8	6	75	0	0	2	25
Other speakers	0	0	0	0	0	0	0

In the regression, this factor group includes only unambiguous verb morphology and (invariable) ambiguous verb morphology, which are productively used across both age groups.

Multivariate analysis. All other factors are considered in the multivariate analysis. The factors that are statistically significant for the occurrence of the zero form in 1st person contexts are adjacency, verb class, pronominality and position of the subject, and recency of the same variant. The remaining factors are nonsignificant for the zero SCl variability (Table 3).

Table 3. Significant and nonsignificant factor groups for the zero SCl form (\emptyset), for all speakers (excluding speakers A and F).

<i>Variable</i>	Overall (N)	\emptyset (N)	\emptyset (%)	VARBRUL weight
<i>Adjacency</i>				
Negation	230	184	80	.710
Reflexives	97	71	73	.668
Auxiliary clitics	430	204	47	.452
SCl-verb	241	111	46	.386
OClS	90	30	33	.292
<i>Range</i>				418
<i>Verb class</i>				
Verbs of opinion	242	179	74	.615
Unaccusative	197	119	60	.519
Unergative	68	34	50	.505
Transitive	521	244	47	.451
Copula	59	24	41	.386
<i>Range</i>				229
<i>Pronominality and position of the subject</i>				
Preverbal pronoun	167	123	74	.661
Topicalized pronoun	110	58	53	.494
Null subject	783	405	52	.467
Postverbal pronoun	28	14	50	.467
<i>Range</i>				194
<i>Recency</i>				
Recent \emptyset	381	228	60	.549
Recent <i>a</i>	61	35	57	.531
Lack of recent variable	128	76	59	.507
Recent <i>e</i>	366	184	50	.442
<i>Range</i>				107
<i>Following phonology</i>				
Liquid	188	91	48	[.590]
Plosive	339	167	49	[.564]
Nasal	324	247	76	[.436]
Vowel	70	24	34	[.433]
Fricative	160	71	44	[.419]
<i>Range</i>				171
<i>Preceding phonology</i>				
Vowel	937	531	57	[.522]
Pause	113	49	43	[.407]
<i>Range</i>				115
<i>Age</i>				
Old	578	339	59	[.552]
Young	510	261	51	[.441]
<i>Range</i>				111
<i>Finite verb morphology</i>				
Ambiguous (invariable)	13	8	62	[.550]
Unambiguous	1075	592	55	[.499]
<i>Range</i>				51
<i>Nonfinite verb agreement</i>				
Subject agreement	88	54	61	[.541]
No subject agreement	1000	546	55	[.496]
<i>Range</i>				45
<i>Number of the subject</i>				
Singular	887	504	57	[.506]
Plural	201	96	48	[.474]
<i>Range</i>				32

Note. Input value: .570; significance threshold: .05; values in brackets are nonsignificant.

Adjacency. In the analyses of other SCl variables, adjacency factors show a clear split in the effect they have on the zero SCl variability. Clitics that occur higher in the structure (i.e., negation and OClS) favour the zero form, whereas clitics that are merged in a lower structural position (namely, auxiliary and locative clitics) disfavour it.

In 1st person contexts, individual high clitics do not show the same effect, as negation favours the zero form (weight .710) while OClS disfavour it (weight .292). Among OClS, only reflexive clitics are found to favour the zero form (weight .668). For this reason, negation, reflexive clitics and the remaining OClS (which include 1st/2nd person OClS, vocalic OClS, and the partitive clitic) are recoded as distinct factors.

With adjacent negation, the zero form is interpreted as nonpronunciation of the SCl position. With other high clitics (i.e., OClS and reflexive clitics), the hypothesis of phonological truncation is not tenable, as it should apply to reflexives but not to the remaining OClS, some of which occur higher than reflexives in the syntactic structure (Cardinaletti, 2008; Manzini & Savoia, 2001).

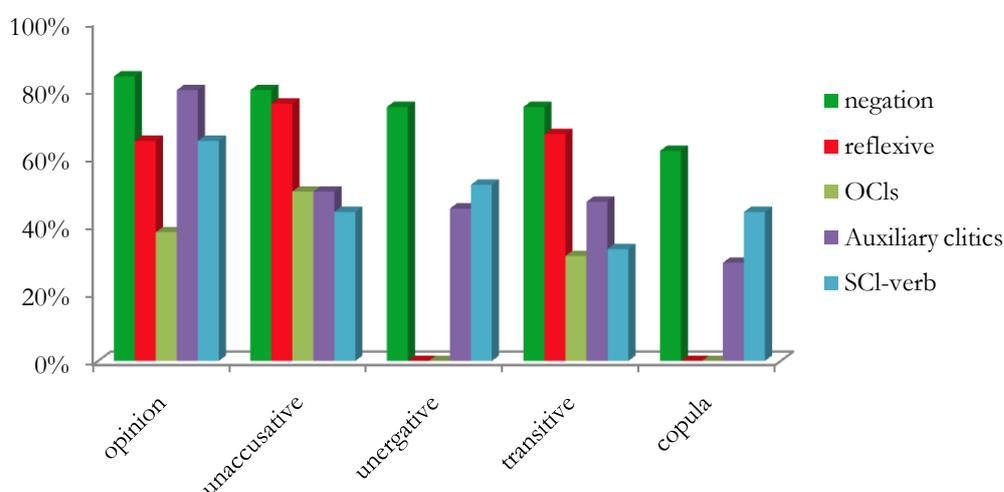
What distinguishes reflexive clitics from other OClS is the fact that they have the subject as their antecedent, and they share (part of) its features. In particular, I will propose that, in 1st person contexts, reflexive clitics share the author feature with the subject. If it is present on a reflexive clitic, the author feature does not need to be realized by a SCl, hence the absence of SCl form that surfaces as zero (for discussion, see section 5.4.1 and 5.4.1.1).

Verb class. In this group, verbs of opinion are the only factor that favours the occurrence of the zero SCl form (weight .615). Reflexive and passive verbs are recoded with unaccusatives as they share the same syntactic structure, and none of these verbs affects the variability (weight .519). Unergative verbs show no impact (weight .505), whereas transitive verbs (weight .451) and copula (weight .386) disfavour the zero form.

Raising verbs are not included in the analysis of this factor group due to low numbers. Among lexical verbs, both narrative and ‘reported speech’ uses of the verb *di* ‘to say/tell’ are recoded as transitive verbs because they show the same effect on the zero form.

A comparison with adjacency reveals that the favouring/disfavouring effect of adjacent factors is visible with all other verbs but not with verbs of opinion (Figure 3).

Figure 3. Percentage of the occurrence of zero SCl form for verb class factors in relation to adjacency.



Verbs of opinion show great occurrence of the zero form with both negation and reflexive clitics, and with auxiliary clitics and SCl-verb adjacency, which fail to show their disfavouring effect in this case. With all other verbs, the occurrence of zero SCl form with auxiliary clitics and SCl-verb adjacency decreases. Interestingly, OCl have the same disfavouring effect with all verb class factors, including verbs of opinion.

The variation involving verbs of opinion and their high occurrence with a zero SCl form is likely to be due to the frequency of these verbs (cf. Table 3). Although transitive verbs are also extremely recurrent, frequency effects do not influence the SCl variability with these verbs because their type-to-token ratio is lower than that of opinion verbs (D. Sharma, p.c.).

I will tentatively claim that verbs of opinion differ from other verbs in their impact on the zero SCl because, also given their higher frequency with 1st person than with other persons, these verbs are undelyingly characterized by a semantic disjunctive author feature (cf. D'Alessandro, 2004) that can acquire multiple values but has the value [author:+] as default. As in the case of reflexive clitics, if the author feature, that is, the feature that the SCl realizes, is conveyed syntactically or semantically by another element adjacent to the SCl (in this case the verb), it does not need to be expressed by an overt SCl. Hence the absence of SCl (see section 5.4.1 and 5.4.1.1 for discussion).

Pronominality and position of the subject. A zero SCl form is favoured when the subject is an overt pronoun *mì* 'I' or *niiatri/nui* 'we', and when the pronoun is in the canonical subject position (weight .661). Topicalized subjects do not affect the variability (weight .494), whereas postverbal subjects disfavour the zero form (weight .467). When the subject is null, the zero SCl is also disfavoured (weight .467).

As is the case of reflexive clitics and verbs of opinion, the expression of the author feature on an element adjacent to the SCl, i.e., the subject pronoun in canonical subject position, causes absence of material on the SCl position, thus a zero output. When the author feature is expressed by a null subject or by an overt pronoun in postverbal position, this feature tends to be phonologically expressed (also) by the SCl (for further discussion, see section 5.4.1 and 5.4.1.1).

Recency. Variability of the zero SCl form in 1st person contexts is subject to processing effects. As is the case for other SCl variables, a recent zero form favours the occurrence of the same SCl form in the following token (weight .549). Little or no effect is attested with a recent variant *a* (weight .531) and with lack of the same recent SCl variable (weight .507). In

contrast, the presence of a recent variant *e* disfavors the occurrence of the zero form (weight .442).³

Nonsignificant factor groups. The nonsignificant factor groups for the zero SCl form are preceding and following phonology, finite verb morphology and nonfinite verb agreement, number of the subject, and age of the speaker.

Phonological factors. In 3rd singular and plural contexts, the presence of a zero SCl form is generally influenced by phonological factors, in particular preceding pause and, occasionally, following nasal or vowel. In contrast, in 1st person contexts the occurrence of the zero SCl is not significantly affected by phonological context.

Finite verb morphology. Unlike 3rd plural contexts, the presence of a syncretic verb form for 1st person does not affect the choice of a zero SCl form. Ambiguous (invariable) verb forms have a weight that is above .5 ([.550]), but most tokens occur with a recent zero form which triggers the occurrence of the same SCl form. Indeed, unambiguous verb forms have a weight that has no impact on the variability, as it is very close to .5 ([.499]).

Nonfinite verb agreement. The presence of number (and gender) agreement on the past participle does not affect the variability of the zero SCl. Contexts that show only number agreement are very low in number (2 Ns). These tokens are recoded with fully agreeing past participles as they occur with a zero SCl form.

³ At first, the effect of recency is tested in two separate analyses, one that involves tokens in which the SCl variant has the same referent as the recent variant, and another that only considers tokens which do not share their referent with the recent variant. This is done in order to determine whether the impact of the recent zero form is due in fact to identity of the subject referent between the two sentences. The results of the two analyses show that a recent zero form favors a following same variant in both cases. As a consequence, both types of tokens are reconsidered in a unique analysis.

Contrary to what happens in 3rd plural contexts, 1st person contexts allow the zero SCl to appear when the nonfinite verb agrees only in number with the subject, although this context occurs in small numbers.

I will show that this finding is accounted for by assuming that 1st person SClS do not express number and gender, but only an author feature (i.e., 1st person SClS only realize Pers). Thus, given that these SClS do not realize any feature of the category Num (i.e., number and gender), the set of variants for variable *e/a/∅* does not include a null underlying variant. In 1st person contexts, the zero output can only be nonpronunciation of the SCl projection, or lack of syntactic material in the SCl position due to the expression of the author feature by another element adjacent to the SCl (see section 5.3 and 5.3.1 for discussion).

Number of the subject. Although 1st person plural is found to slightly disfavour the occurrence of the zero SCl form (weight [.474]), the effect of number of the subject is nonsignificant.

Age. As in the case of the other SCl variables, the occurrence of the zero SCl in 1st person contexts is not affected by the age of the speaker. Although this factor does not play a role in the variability of the zero form in this SCl variable, it will prove to be significant for overt SCl *e/a* alternation (see section 5.2.2).

To summarize, in 1st person contexts the occurrence of the zero SCl form is influenced by internal linguistic factors involving adjacency, verb class, and pronominality and position of the subject, and by processing effects. Since the number and gender features of the category Number are not realized by 1st person SClS, the zero form is interpreted not as a null underlying variant, but as blocking of the phonological expression

of the SCl position, or as an empty SCl position due to the expression of the author feature by another (adjacent) element, e.g., the overt subject, a reflexive clitic or a verb of opinion.

5.2.1.1 Inter-speaker variation

Two of the six speakers, that is, speaker A and speaker F, make considerably less use of the zero SCl form in 1st person contexts when compared to other speakers (cf. Figure 1), despite the fact that they favour opposite overt variants.

At first, data of speaker A and speaker F are analysed individually for the zero form. This preliminary analysis shows that, for these speakers, the variability of the zero form is significantly affected by the same factors. As a result, a new analysis is carried out which includes both speakers.

The only factor group that is not included in the multivariate analysis of zero SCl for speaker A and speaker F is age. Although the two speakers belong to different age groups, data from a single member cannot be considered as representative of an entire age group. The results of the regression are given in Table 4.

Table 4. Significant and nonsignificant factor groups for the zero SCl form (\emptyset), for speaker A and speaker F.

<i>Variable</i>	Overall (N)	\emptyset (N)	\emptyset (%)	VARBRUL weight
<i>Following phonology</i>				
Fricative	98	19	19	.735
Plosive	183	23	13	.598
Liquid	97	5	5	.466
Nasal	239	64	27	.401
Vowel	53	6	11	.232
	<i>Range</i>			503
<i>Adjacency</i>				
Negation	138	40	29	.746
Reflexives	85	24	28	.719
OClS	75	15	20	.715
Auxiliary clitics	167	24	14	.356
SCl-verb	209	14	7	.278
	<i>Range</i>			468
<i>Verb class</i>				
Verbs of opinion	203	58	29	.609
Unergative	26	4	15	.584
Transitive	297	38	13	.491
Unaccusative	113	15	13	.390
Copula	35	2	6	.258
	<i>Range</i>			351
<i>Finite verb morphology</i>				
Ambiguous	7	3	43	[.814]
Unambiguous	667	114	17	[.496]
	<i>Range</i>			318
<i>Recency</i>				
Recent <i>a</i>	110	23	21	[.601]
Lack of recent variable	95	20	21	[.554]
Recent \emptyset	152	27	18	[.505]
Recent <i>e</i>	243	33	14	[.430]
	<i>Range</i>			171
<i>Pronominality and position of the subject</i>				
Preverbal pronoun	74	18	24	[.576]
Postverbal pronoun	22	3	14	[.576]
Null subject	514	90	18	[.493]
Topicalized pronoun	64	6	9	[.438]
	<i>Range</i>			138
<i>Nonfinite verb agreement</i>				
Subject agreement	38	7	18	[.620]
No subject agreement	631	110	17	[.493]
	<i>Range</i>			127
<i>Preceding phonology</i>				
Pause	84	21	25	[.585]
Vowel	572	95	17	[.487]
	<i>Range</i>			98
<i>Number of the subject</i>				
Plural	115	16	14	[.522]
Singular	559	101	18	[.495]
	<i>Range</i>			27

Note. Input value: .143; significance threshold: .05; values in brackets are nonsignificant.

For speaker A and speaker F, the zero SCl form is significantly affected by following phonological context, adjacency and verb class. Two of the factors that are significant in

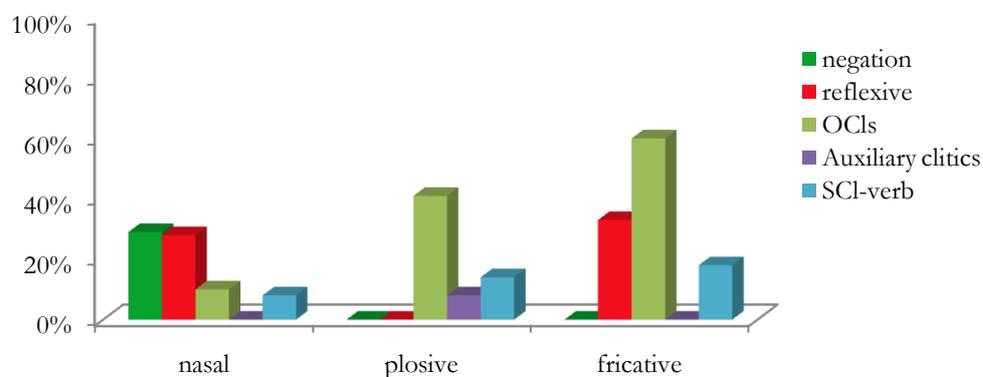
the analysis of all other speakers' data, namely pronominality and position of the subject, and recency, are nonsignificant for these two speakers.

Following phonology. The phonological factors that favour the zero SCl form are following fricative (weight .735) and following plosive (weight .598), whereas all other phonological contexts disfavour the zero form. The significance of following phonology is crucial for the analysis of inter-speaker variation, particularly in relation to adjacency.

Adjacency. The results for adjacency show one important finding in the analysis of inter-speaker variation. In the analysis of all other speakers, the high/low clitic split in the impact on the zero SCl is not evident because OCl's other than reflexives show a disfavouring effect (cf. section 5.2.1). For speaker A and speaker F, the high/low clitic split is clearly visible. All high clitics favour the zero form (negation (.746), reflexive clitics (.719), OCl's (.715)), whereas low clitics (auxiliary/locative clitics (.278)) and absence of clitics (SCl-verb adjacency (.356)) disfavour it.

Figure 4 considers the results of following phonological factors in relation to adjacency.

Figure 4. Percentage of the occurrence of zero SCl form for following phonological factors in relation to adjacency (for speaker A and speaker F).



The results in Figure 4 reveal that phonological factors are responsible for the different effect of OCl's on the zero SCl. The occurrence of the zero form increases with

OClS when these are plosive- and fricative-initial, whereas it decreases with nasal-initial OClS. While the effect of plosive is only visible with OClS, that of fricative is also found with reflexive clitics.⁴

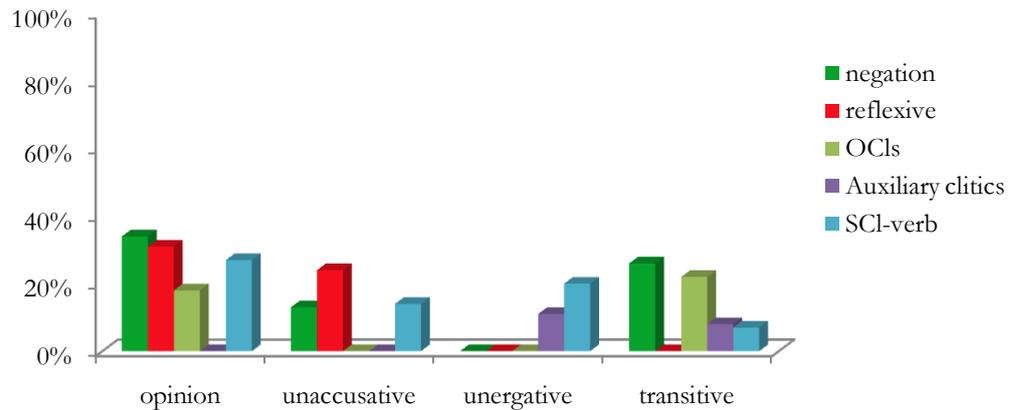
As for nasal-initial elements, the pattern shown in Figure 4 is similar to the one attested for adjacency in the analysis of other speakers, where negation and reflexives favour the zero form whereas all other adjacent factors disfavour it.

The remaining following phonological factors, that is, liquid and vowel, are not included in Figure 4 because they only occur with, respectively, auxiliary clitics and (vocalic) OClS and, as suggested from the results of the regression (cf. Table 4), they show low occurrence of the zero form.

Verb class. Like for other speakers, the factor that most favours the zero SCl form involves verbs of opinion (weight .609). In the analysis for other speakers, the effect of verbs of opinion is evident with all adjacent factors, including low clitics (cf. Figure 3). In contrast, when we consider the individual verb class factors in relation to adjacency for speaker A and speaker F, we see that verbs of opinion only show a zero SCl form if they occur with a high clitic or without a clitic. Out of ten tokens that involve a verb of opinion with a low clitic, none occurs with a zero SCl form (Figure 5).

⁴ Following plosive has no effect on reflexive clitics because these clitics are only fricative- and nasal-initial (i.e., *me* 'myself/to myself' and *se* 'ourselves/to ourselves').

Figure 5. Percentage of the occurrence of zero SCl form for verb class factors in relation to adjacency (for speaker A and speaker F).



Other verb class factors show occurrence of the zero SCl form with negation and reflexive clitics.⁵ Low clitics show the presence of a zero SCl only with unergative verbs, which have a weight above .5 in the regression (.584), and, to a lesser extent, with transitive verbs (.491).⁶

All verb classes show a zero SCl form with SCl-verb adjacency, although its occurrence increases with verbs of opinion and with unergative verbs.

For speaker A and speaker F, the effect of verb class is only visible when the SCl occurs with an adjacent finite verb. When the SCl appears with an adjacent clitic, it is the nature of the clitic that determines the effect on the zero form, and not the verb class.

A note on nonsignificant factor groups. Some of the nonsignificant factors for the zero SCl in the speech of speaker A and speaker F are also found in the analysis of other speakers. These are finite verb morphology, nonfinite verb agreement, number of the subject and preceding phonology. The nonsignificance of these factors will not be discussed any further.

⁵ The lack of zero SCl with reflexive clitics for unergative and transitive verbs is due to the fact that these verbs do not occur with these clitics, whereas the lack of zero SCl with negation for unergative verbs is due to nonoccurrence of these combination in the corpus.

⁶ Copula is not included in Figure 5 as only two tokens occur with a zero SCl form, both showing an adjacent auxiliary/copula clitic *l'*.

The remaining nonsignificant factors are pronominality and position of the subject, and recency. This finding is salient as it contrasts with the analysis of the zero form in other speakers' speech, where these factors are statistically significant.

Pronominality and position of the subject. Unlike other speakers, speaker A and speaker F do not show a significant increase of the zero SCl form when the subject is expressed by an overt pronoun in the canonical subject position.

I will propose that, for speaker A and speaker F, the presence of an author feature on an element adjacent to the SCl does not impact on the zero SCl form as much as it does for other speakers. This claim is also supported by the results for other adjacent factors, such as reflexive clitics and OCl. In the analysis of other speakers' data, the effect of reflexives on the zero SCl form differs from that of OCl because the former, unlike the latter, bear the author feature. In the analysis for speaker A and speaker F, OCl have the same favouring effect of reflexive clitics, thus letting us suppose that it is their syntactic position, more than their feature composition, that determines their impact on the zero SCl form.

Similarly, the effect of verbs of opinion is to be attributed primarily to their co-occurrence with favouring adjacent clitics rather than to their semantics (for discussion, see section 5.4.1).

Recency. The occurrence of the zero SCl is not affected by recency of the same SCl form in the discourse. Indeed, the factor 'recent zero form' has a weight that is very close to .5 ([.505]), thus it has no effect on the zero form. This finding differs from the one involving recency in the analysis of other speakers, where the factor 'recent zero form' significantly favours the occurrence of the zero SCl form.

In order to explain why the significance of recency varies among speakers, I will suggest that while nonpronunciation of the syntactic structure due to blocking and

specification of the author feature generate syntactic priming (Branigan, 1995), phonological deletion fails to do so. For most speakers, the zero SCl form is interpreted as the outcome of either of the two syntactic phenomena, and in contexts that would not normally show a zero SCl the effect of recency is entirely due to syntactic priming.

In contrast, data from speaker A and speaker F show that only one of the two syntactic processes, namely, blocking of pronunciation by high clitics, has a significant impact on the zero form for these speakers. As a result, the probability of syntactic priming decreases, and recency is no longer significant for the occurrence of a zero SCl form (see also section 5.4.2).

5.2.1.2 Zero SCl form and fillers

Although they are coded among verb class factors, fillers are excluded from the main analysis. The zero SCl form is extremely recurrent with fillers. I assume that this is due to the lexicalization process that characterizes 1st person singular clauses, such as *e diggu* ‘I say’, *e te diggu* ‘I say to you’, and *mì e nu (u) so* ‘I don’t know (it)’.

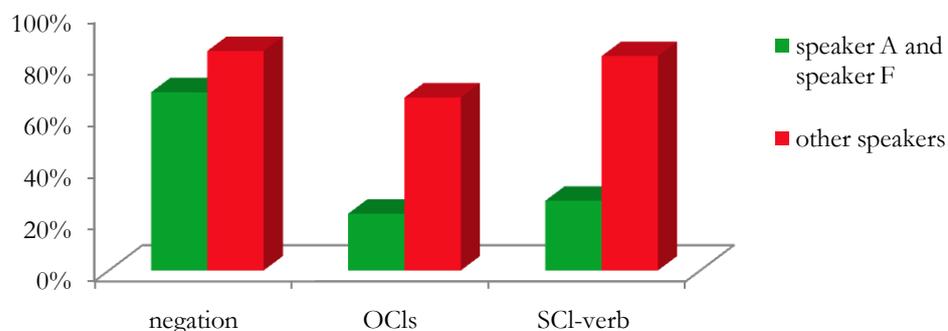
Table 5 shows the distribution of zero SCl form with fillers for speaker A and speaker F, and for other speakers.

	<i>Speaker A and speaker F</i>			<i>Other speakers</i>		
	Overall (N)	\emptyset (N)	\emptyset (%)	Overall (N)	\emptyset (N)	\emptyset (%)
Fillers	67	23	34	91	74	81

Also fillers show inter-speaker variation in the occurrence of zero SCl between speaker A and speaker F, and all other speakers. The zero form is much less frequent in the speech of the former than in that of the latter.

Figure 6 shows the variability of the zero SCl with adjacent factors in fillers for speaker A and speaker F, and for the other speakers.⁷

Figure 6. Percentage of the occurrence of zero SCl form with fillers in relation to adjacency, for speaker A and speaker F, and for other speakers.



Speaker A and speaker F show great occurrence of the zero form when fillers include negation, but rather less when they occur with OCl or with an adjacent finite verb.⁸ In contrast, most speakers favour the occurrence of the zero form with fillers regardless of the effect of the adjacent element.

Overall, the results of fillers further support the analysis of inter-speaker variation in 1st person contexts. For speaker A and F, the occurrence of the zero form is mainly dependent on the impact of adjacent factors. For the remaining speakers, the choice of the zero SCl form with those adjacent factors which generally disfavour it must be triggered by other factors, such as the expression of the author feature by another element.

To sum up, inter-speaker variation is attested for the zero SCl form. For two of the six speakers, the variability of zero SCl is mainly affected by adjacency and by phonological factors. In their speech, the zero SCl form is mainly characterized by phonological

⁷ The adjacent factors involving reflexive and auxiliary clitics are not included because fillers do not occur with these clitics.

⁸ For speaker A and speaker F, the results of fillers with OCl is surprising given that the only OCl that occurs in fillers, namely, *te* (in *e te diggu* 'I say to you?'), is plosive-initial and plosive is found to favour the occurrence of the zero SCl form (cf. Table 4).

truncation of the SCl projection and by phonological deletion of the overt SCl with following fricative- and plosive-initial elements. Inter-speaker variation is also found in the use of the SCl variable in fillers.

5.2.2 Overt SCl variation (variant *e*)

The second part of the variationist analysis examines the variability of overt SCl variants *e* and *a*. Two analyses are carried out for the overt variants. These analyses differ because the two speakers who show overproduction of either variant *e* or variant *a*, respectively speaker F and speaker A, are considered in a separate analysis for the variant that they favour but in the main analysis for the remaining overt variant.

In the distribution of SCl *e* (cf. Figure 2), most speakers show a similar trend in the use of this variant. The extensive use of SCl *e* in data from speaker F appears to follow the usage of this variant by other speakers, simply to an extreme degree. However, data from speaker F are considered in a separate analysis in order to determine whether there are any specific factors that trigger the extremely frequent use of variant *e* for this speaker. A comparison between the results of the main analysis and the analysis of speaker F shows that variant *e* is affected mostly by the same factor groups in all speakers, but crucially speaker F's data reveal a difference in the ranking of factors (see section 5.2.2.1).

In the main analysis, data from the remaining speakers are all included in the analysis, as there are no cases that show categorical use of this variant, or that make no use of it.

Multivariate analysis. The regression shows that overt SCl *e* is significantly affected by phonological factors (preceding and following phonological contexts); by syntactic factors (adjacency, verb class and number of the subject); by processing factors (recency); and finally, by the sociolinguistic variable age. Other subject- and verb-related factors are found nonsignificant (Table 6).

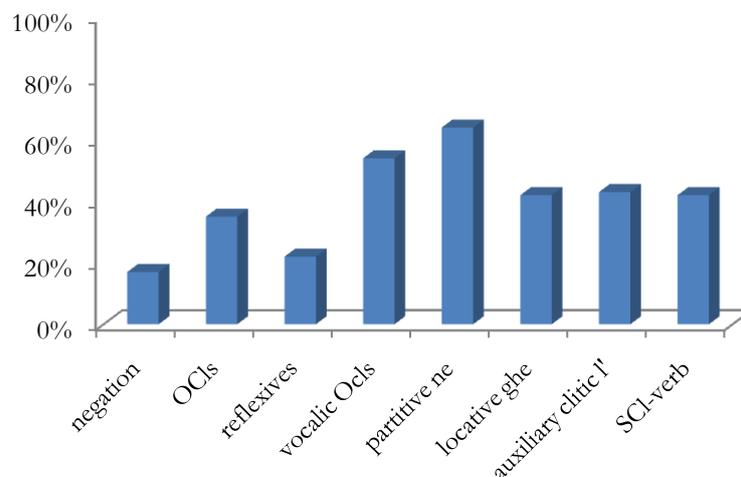
Table 6. Significant and nonsignificant factor groups for SCL variant *e*, for all speakers (excluding speaker F).

<i>Variable</i>	Overall (N)	<i>e</i> (N)	<i>e</i> (%)	VARBRUL weight
<i>Following phonology</i>				
Vowel [-LOW]	60	42	70	.782
Nasal	424	84	20	.536
Fricative	195	84	43	.512
Plosive	416	173	42	.463
Liquid	227	97	43	.460
Vowel [+LOW]	26	3	12	.129
<i>Range</i>				653
<i>Adjacency</i>				
OClS/Auxiliary clitics	648	283	44	.598
SCL-verb	304	129	42	.592
Reflexives	113	25	22	.326
Negation	308	52	17	.282
<i>Range</i>				316
<i>Preceding phonology</i>				
Pause	142	67	47	.614
Vowel [-LOW]	916	337	37	.526
Vowel [+LOW]	272	66	24	.355
<i>Range</i>				259
<i>Recency</i>				
Recent <i>e</i>	401	179	45	.581
Recent \emptyset	459	150	33	.502
Lack of recent variable	177	55	31	.469
Recent <i>a</i>	169	31	18	.339
<i>Range</i>				242
<i>Verb class</i>				
Unergative	79	38	48	.566
Copula	74	33	45	.565
Transitive	654	269	41	.545
Unaccusative	240	79	33	.491
Verbs of opinion	325	69	21	.387
<i>Range</i>				179
<i>Age</i>				
Young	519	235	45	.596
Old	854	254	30	.441
<i>Range</i>				155
<i>Number of the subject</i>				
Plural	230	104	45	.581
Singular	1143	385	34	.484
<i>Range</i>				97
<i>Pronominality and position of the subject</i>				
Null subject	1004	378	38	[.523]
Topicalized pronoun	139	54	39	[.505]
Postverbal pronoun	38	11	29	[.440]
Preverbal pronoun	186	44	24	[.389]
<i>Range</i>				134
<i>Nonfinite verb agreement</i>				
No subject agreement	1265	456	36	[.507]
Subject agreement	103	32	31	[.417]
<i>Range</i>				90
<i>Finite verb morphology</i>				
Unambiguous	1336	477	36	[.501]
Ambiguous (invariable)	16	5	31	[.455]
<i>Range</i>				46

Note. Input value: .321; significance threshold: .05; values in brackets are nonsignificant.

Adjacency. The distribution of variant *e* with individual adjacent factors is given in Figure 7.

Figure 7. Percentage of the occurrence of overt SCl *e* with individual adjacent factors, for all speakers (excluding speaker F).

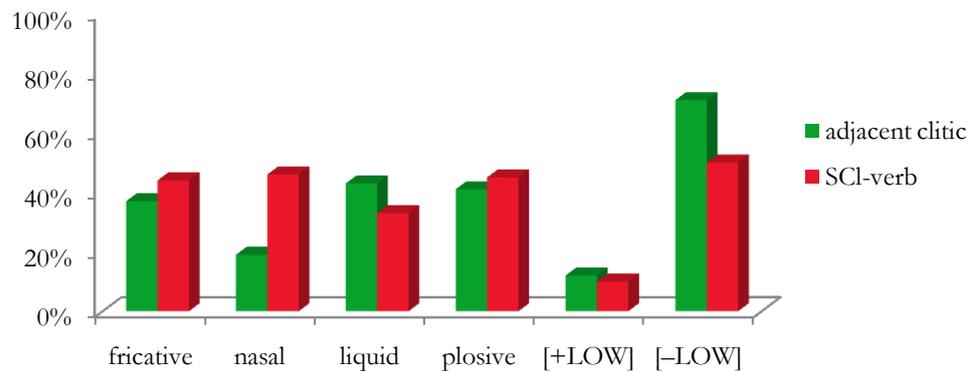


OCls, vocalic clitics and partitive *ne* are recoded with auxiliary clitics as they show similar occurrence of variant *e* and they significantly favour this variant (weight .598). SCl-verb adjacency also favours the occurrence of overt variant *e* (weight .592). As expected, reflexive clitics and negation disfavour the presence of an overt variant, as they favour the zero form.

Following phonology and adjacency. In the regression, the factors that favour the occurrence of variant *e* are following [–LOW] vowel (weight .782), which includes high and mid vowels, and following nasal (weight .536). Among other factors, fricative does not show any effect on the SCl variability (weight .512), whereas plosive, liquid, and [+LOW] vowel /a/ disfavour SCl variant *e*.

In Figure 8, individual following phonological factors are considered in relation to adjacency of a clitic element or a finite verb.

Figure 8. Percentage of the occurrence of overt SCl *e* for following phonological factors in relation to adjacency, for all speakers (excluding speaker F).



Following fricative, liquid and plosive show similar distribution of variant *e*, whether they occur as part of a clitic element or as initial consonants of a finite verb. Following nasal, instead, shows an increase in the occurrence of SCl *e* only when the nasal-initial element is a verb but not when the adjacent element is a clitic. This result explains why following nasal is considered as a significant factor for SCl *e*.

As for vocalic contexts, following [+LOW] vowel /a/ shows very low occurrence of SCl *e* whether it occurs as part of a vocalic clitic element or of a finite verb. In contrast, [-LOW] vowels show great occurrence of SCl *e* in both contexts. However, the effect of [-LOW] vowels on SCl *e* differs from that of other phonological contexts only when the vowel-initial element is a clitic (i.e., a 3rd person vocalic OCl).

The analysis of SCl *e* shows real effect of following phonological context with all consonantal factors, particularly with nasal, and with [+LOW] vowel.

The results for the factor involving [-LOW] vowels are influenced by adjacency. However, adjacency only increases the already favouring pattern of [-LOW] vowels. I claim that the significant effect of following [-LOW] vowel on SCl variant *e* is accounted for by the phonological process of vowel coalescence, whereby the presence of a following

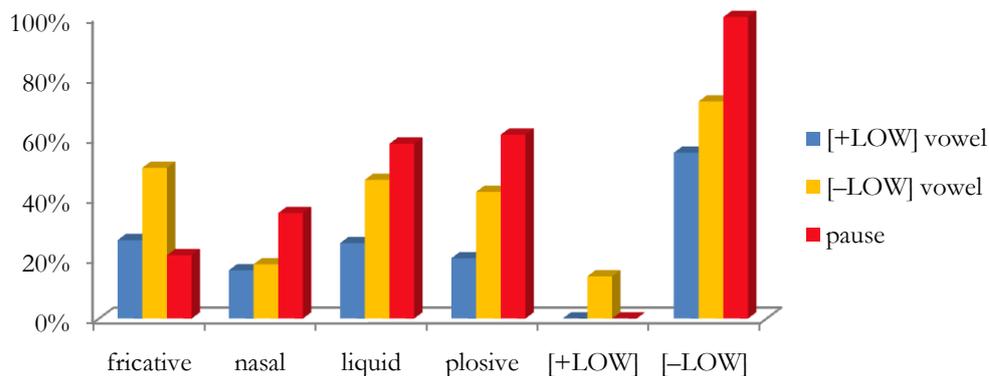
[–LOW] feature triggers the choice of a variant that shares the same phonological feature, namely SCl *e* [–LOW] (cf. Anttila, 2002; Clements, 1999).

Preceding and following phonological context. Like in following phonological contexts, preceding high and mid vowels are recoded as [–LOW] vowels as they show similar occurrence of SCl *e*, and their effect differs from that of the [+LOW] vowel /a/.

In the regression, preceding pause favours variant *e* (weight .614), [+LOW] vowel disfavours it (weight .355), whereas [–LOW] vowels show little impact (weight .526).

Figure 9 shows how the effect of following phonological factors varies in relation to preceding phonological contexts.

Figure 9. Percentage of the occurrence of overt SCl *e* for following phonological factors in relation to preceding phonology, for all speakers (excluding speaker F).



In Figure 9, each preceding phonological factor shows a similar effect on the occurrence of variant *e* whether it occurs with following nasal, liquid, plosive or [–LOW] vowels. What determines the variability is the following context.

The pattern in the effect of preceding factors only changes with following fricative and following [+LOW] vowel, which show lower (or no) occurrence of variant *e* with a preceding pause. Following fricative and [+LOW] vowel reduce the effect of pause on the

choice of variant *e*, thus confirming the significant role of following phonology in determining the variability of this SCl.

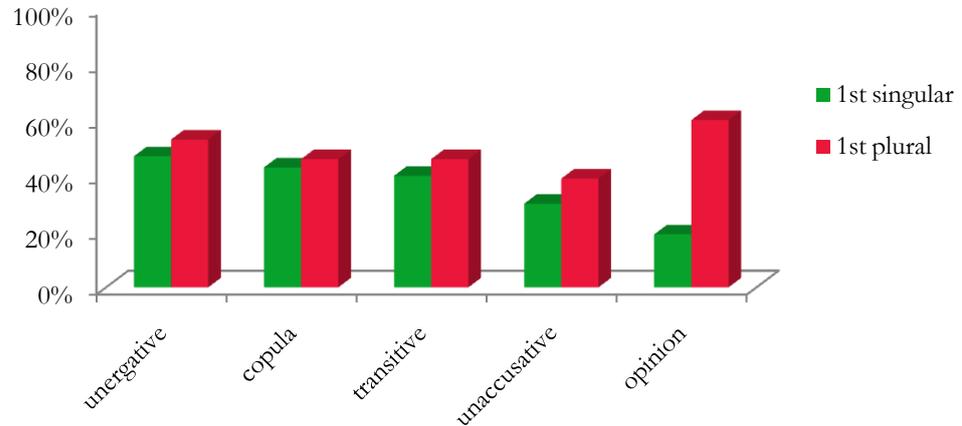
Verb class. In this group, variant *e* is favoured by unergatives (weight .566), copula (weight .565) and transitive verbs (weight .545), whereas unaccusative verbs show no effect on the variability (weight .491). Verbs of opinion disfavour the occurrence of SCl *e* (weight .387). The lexical verb *dì* ‘to say/tell’ in its narrative and ‘reported speech’ use is recoded with transitive verbs as they show the same effect on SCl variability.

As expected, the results for this factor group show that the presence of an overt variant is disfavoured with verbs that are usually associated with a semantic specification that involves author, such as verbs of opinion (due to frequency). Other verbs show little or no effect on the SCl variability.

Number of the subject. SCl variant *e* is favoured with 1st person plural subjects (weight .581), whereas its variability is almost not affected if the subject is 1st person singular (weight .484).

A comparison with verb class shows that 1st singular and plural contexts show little variation with most verb class factors, but crucially differ regards verbs of opinion (Figure 10).

Figure 10. Percentage of the occurrence of overt SCl *e* for verb class factors in relation to number of the subject, for all speakers (excluding speaker F).



The findings in Figure 10 suggest that the disfavouring effect shown by verbs of opinion (cf. Table 6) only involves tokens that occur in the 1st person singular. When verbs of opinion appear with a 1st plural subject, they show relatively high occurrence of SCl variant *e*.

The discrepancy in the behaviour of verbs of opinion in relation to number of the subject is accounted for if we assume that the frequency effect of verbs of opinion concerns 1st singular but not 1st plural forms, which are much less recurrent. Thus, 1st plural verbs of opinion do not include a default [author:+] feature in their semantics, also because the presence of only this default feature would fail to include reference to an addressee ('first person inclusive') or a nonparticipant ('first person exclusive').

According to Harley and Ritter (2002), 1st person plural is more marked than 1st person singular because it includes at least one extra node of the feature geometry. I will propose that verbs of opinion favour the choice of a zero SCl form only with a 1st singular subject because their (default) semantics satisfies the expression of its author feature. With a 1st plural subject, verbs of opinion disfavour the occurrence of a zero SCl, and favour overt SCl *e*, because their semantics does not express the markedness of the subject. This must be realized by an overt SCl form (see section 5.4.2.1 for discussion).

Recency. The results for recency show that processing affects the variability of overt SCl *e*. As expected, the presence of a recent variant *e* favours the choice of the same variant in the following 1st person token (weight .581). While a recent zero SCl and the lack of the same variable show no effect on the variability, a recent variant *a* disfavors the occurrence of a following variant *e* (weight .339).

Age. Given its nonsignificance in the analyses of the other SCl variables, the significance of age for SCl *e* is an unexpected result. Even more startling is the fact that age is found as significant for the occurrence of an overt variant and not for that of the zero form (cf. Moretti, 1999).

In particular, younger speakers favour the occurrence of overt SCl *e* (weight .596), whereas older speakers disfavour it (weight .441). In considering this result one must take into account that speaker F, whose data are omitted from the main analysis because of her overproduction of variant *e*, belongs to the younger group.

I defer the discussion of the significance of age to the analysis of variant *a*, as this factor is found to affect the variability of both overt SCl variant *e* and *a* (see section 5.2.3).

Nonsignificant factor groups. The groups that are nonsignificant for the occurrence of variant *e* are pronominality and position of the subject, nonfinite verb agreement and finite verb morphology.

Pronominality and position of the subject. Unlike what happens for the zero form, the presence or absence of an overt subject pronoun and its position do not affect the occurrence of overt variant *e*.

The expression of the author feature by an overt pronominal subject in the canonical position affects the occurrence of the zero SCl form, but the opposite does not hold for

variability of overt variant *e*. That is, the fact that the author feature is not overtly expressed by a pronoun in subject position does not favour the choice of overt SCl *e*.

Nonfinite verb agreement. This group considers past participles that agree in number (and gender) with the subject, and lack of agreement on the nonfinite verb (including simple tenses). Past participles that agree only in number with the subject occur in very small Ns (5Ns) and, like fully agreeing past participles, they allow both overt and zero SCl. As a consequence, these tokens are recoded with fully agreeing past participles.⁹

The expression of number (and gender) agreement on the past participle does not influence the variability of overt variant *e*. I will claim that the presence of number (and gender) agreement with the subject on the nonfinite verb does not affect the overt SCl form because the latter only conveys an author feature (see section 5.3.1).

Finite verb morphology. The results for this group show that the presence or absence of an overt SCl *e* does not depend on the morphological specification of the finite verb. Although ambiguous (invariable) verb forms are found to slightly disfavour the occurrence of variant *e*, their effect is nonsignificant for the choice of the variant. Despite occurring only in two speakers' data, ambiguous (variable) verb forms are included because they show *e/a* or *e/∅* variability. However, ambiguous (variable) tokens are recoded as unambiguous because in the two speakers who make use of these verb endings ambiguous (variable) and unambiguous morphology show the same lack of effect on variant *e*.

⁹ In the analysis for zero SCl form (cf. section 5.2.1), the number of tokens that occur with a partially agreeing past participle differs because tokens from speaker A are excluded.

To summarize, the occurrence of overt variant *e* is affected by internal factors including adjacency, preceding and following phonology, verb class, and number of the subject. Processing factors and the external variable age are also significant.

The regression shows that overt variant *e* is disfavoured by factors that trigger nonpronunciation of the SCl position (i.e., negation) and by two of the factors that express the author feature, namely, reflexive clitics and verbs of opinion, when these occur in the 1st person singular. Moreover, the choice of overt SCl *e* is affected by two factors that do not influence the variability of the zero SCl form, namely, phonological factors and the sociolinguistic variable age. The investigation of overt SCl *a* is to cast a light on their effect on the *e/a* alternation.

5.2.2.1 *Inter-speaker variation*

Speaker F is excluded from the main analysis because her production of SCl *e* more than doubles the average production of this variant by other speakers (Table 7) (cf. also Figure 2).

<i>Speaker</i>	Overall (N)	<i>e</i> (N)	<i>e</i> (%)
Speaker F	435	358	82
Other speakers	1373	489	36

Data by speaker F show only one case in which SCl *e* is used categorically. This is with copular constructions (Table 8).

Table 8. Distributin of SCl variant *e* according to verb class, for speaker F.

<i>Verb class</i>	Overall (N)	<i>e</i> (N)	<i>e</i> (%)
Copula	24	24	100
Unaccusative	74	65	88
Transitive	172	147	86
Unergative	16	12	75
Verbs of opinion	149	110	74

Copula is excluded from the analysis of the group involving verb class. Since no other context shows categoricity of SCl *e* or, indeed, of the other two SCl forms, all other factors are included in the regression.

Multivariate analysis. In speaker F's speech, the occurrence of variant *e* is significantly affected by three language-internal factors, namely, following phonology, adjacency and verb class. All other factors are nonsignificant (Table 9).

Table 9. Significant and nonsignificant factor groups for SCl variant *e*, for speaker F.

<i>Variable</i>	Overall (N)	<i>e</i> (N)	<i>e</i> (%)	VARBRUL weight
<i>Following phonology</i>				
Liquid	69	67	97	.760
Vowel [-LOW]	30	27	90	.725
Nasal	152	112	74	.603
Plosive	116	96	83	.317
Fricative	65	53	82	.217
<i>Range</i>				543
<i>Adjacency</i>				
SCI-verb	119	104	87	.740
Auxiliary clitics	126	116	92	.657
OCLs	48	37	77	.329
Negation	71	52	73	.252
Reflexives	71	49	69	.208
<i>Range</i>				532
<i>Verb class</i>				
Unaccusative	74	65	88	.695
Transitive	172	147	86	.500
Verbs of opinion	149	110	74	.430
Unergative	16	12	75	.229
<i>Range</i>				466
<i>Finite verb morphology</i>				
Unambiguous	431	355	82	[.503]
Ambiguous (invariable)	4	3	75	[.240]
<i>Range</i>				263
<i>Pronominality and position of the subject</i>				
Topicalized pronoun	39	35	90	[.566]
Null subject	331	273	83	[.504]
Preverbal pronoun	55	42	76	[.454]
Postverbal pronoun	9	7	78	[.338]
<i>Range</i>				228
<i>Recency</i>				
Recent <i>e</i>	216	185	86	[.561]
Recent \emptyset	91	73	80	[.439]
Lack of recent variable	59	42	71	[.374]
<i>Range</i>				187
<i>Nonfinite verb agreement</i>				
Subject agreement	24	22	92	[.588]
No subject agreement	411	336	82	[.495]
<i>Range</i>				93
<i>Preceding phonology</i>				
Vowel [-LOW]	293	243	83	[.510]
Vowel [+LOW]	68	56	82	[.489]
Pause	61	47	77	[.464]
<i>Range</i>				46
<i>Number of the subject</i>				
Plural	349	284	81	[.504]
Singular	86	74	86	[.484]
<i>Range</i>				20

Note. Input value: .862; significance threshold: .05; values in brackets are nonsignificant.

Following phonology. In speaker F's speech, the occurrence of SCl variant *e* is favoured by a following liquid (weight .760), [-LOW] vowels (weight .725), and nasal (weight .603).

Following plosive (weight .317) and fricative (weight .217) disfavour variant *e*. No tokens are attested with a following [+LOW] vowel.

The results for following phonology support the hypothesis that speaker F (like speaker A) shows phonological deletion of an overt SCl when the following context is plosive- or fricative-initial (cf. section 5.2.1.1). Since they trigger phonological deletion, these factors disfavour the occurrence of an overt SCl variant.

Phonological factors that favour variant *e* show a crucial difference with the analysis of other speakers involving factor ranking (cf. Table 6). In the main analysis, following [-LOW] vowel and nasal have a favouring effect on SCl *e*, whereas following liquid disfavours it. For speaker F, all three factors favour variant *e*, and following liquid has the biggest impact.¹⁰

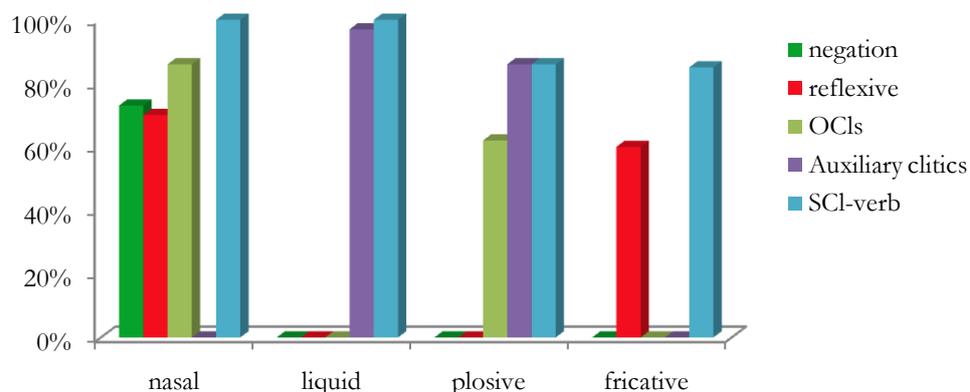
This finding suggests that inter-speaker variation for overt SCl variant *e* is (partly) due to variation in the effect of the single phonological factors.

Adjacency. The occurrence of SCl *e* is favoured when there are no adjacent clitics (weight .740) or when the following clitic is an auxiliary or locative clitic (weight .657). Unlike in the main analysis, for speaker F auxiliary clitics and OClS are not merged into a single factor because their effect on SCl *e* differs, with OClS disfavours the variant (weight .329).

As expected, the two factors that favour the zero form, namely, negation and reflexive clitics, disfavour an overt variant. However, also for the occurrence of overt variant *e* the effect of adjacent factors is related to their phonological features (Figure 11).

¹⁰ The favouring effect of a following liquid on overt variants is recurrent across all SCl variables. Moreover, in the 3rd plural *i/e/Ø* (cf. Chapter 4, section 4.2.1.3.1) and in 1st person *e/a/Ø* this factor influences also the choice of the overt variant at the level of the group and/or at the level of the individual speaker. One of the reasons to account for the favouring effect of following liquid on overt variants is the fact that most tokens involve a low auxiliary clitic *l'*, an element that fails to trigger blocking of the pronunciation of the SCl projection. However, the effect that liquid-initial elements have in determining the form of the overt variant (overt SCl variation) remains unexplained.

Figure 11. Percentage of the occurrence of overt SCl *e* for following phonological factors in relation to adjacency, for speaker F.



In Figure 11, reflexive clitics and OClS tend to be more recurrent with SCl variant *e* when the clitic is nasal-initial and less recurrent when the clitic begins by plosive or fricative.¹¹ Similarly, with auxiliary clitics and adjacent finite verbs the occurrence of variant *e* decreases when the following phonological element is a plosive or a fricative.

SCl variability with nasal-initial elements is accounted for if we assume that high clitics (i.e., negation, reflexive clitics, and OClS) trigger nonpronunciation of the SCl position regardless of the following phonological context. Moreover, following plosive and fricative cause phonological deletion of the overt SCl in contexts that are already subject to truncation, namely, with reflexive clitics and OClS. In Figure 11, the combination of (syntax-triggered) nonpronunciation of the SCl position and (phonological) SCl deletion can be seen in the drop of the occurrence of SCl *e* with plosive- and fricative-initial reflexives and OClS.

On the other hand, low clitics and SCl-verb adjacency do not generate blocking of the pronunciation of the syntactic structure, and phonological factors can show their effect on the SCl form.

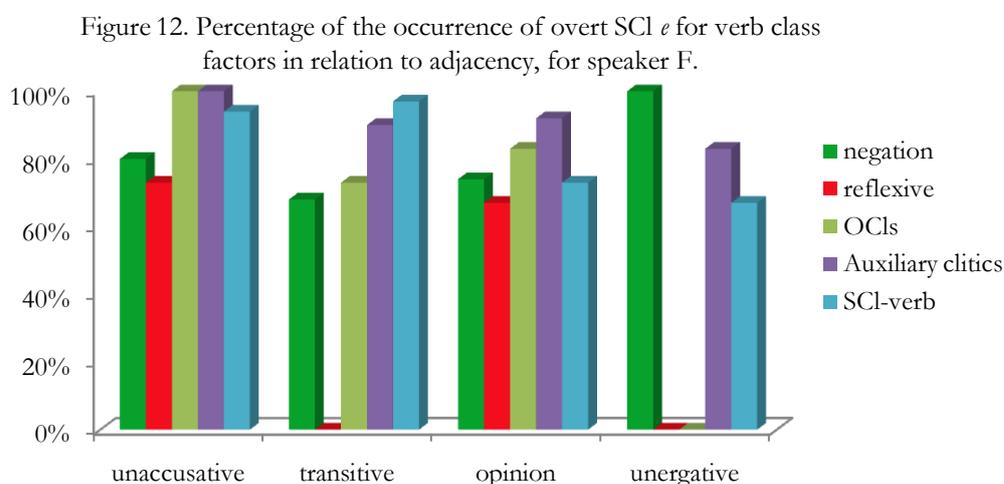
¹¹ Combinations that show lack of tokens do so because there are no clitics of that type bearing those phonological features.

Verb class. In speaker F's data, unaccusative verbs favour the occurrence of SCl *e* (weight .695), whereas verbs of opinion (weight .430) and unergatives (weight .229) disfavour it. Transitive verbs show no effect on the SCl variability (weight .500). Copula is not considered because it occurs categorically with SCl *e* (cf. Table 8).

In the main analysis for SCl *e*, this factor group is also significant and shows a clear split in the effect on SCl variability between verbs of opinion, which disfavour the overt variant, and all other verb classes, which show little or no effect on its occurrence (cf. Table 6).

For speaker F, the effect of verb class on the variability of SCl *e* does not single out verbs of opinion from other verbs but distinguishes between unaccusative and unergative verbs, the former favouring the occurrence of SCl *e* and the latter disfavouring it.

Figure 12 shows the distribution of SCl *e* for individual verb class factors in relation to adjacency.



The effect of adjacent clitics differs across verb class factors. With transitive verbs and verbs of opinion all high clitics show a disfavouring effect on SCl *e*. With unaccusatives the occurrence of variant *e* decreases with negation and reflexive clitics, but not with OCl. With unergatives the effect of adjacent factors is reversed, as negation favours overt variant *e* and low clitics and SCl-verb adjacency disfavour it.

Thus, for speaker F the significance of verb class is due mainly to the impact of unaccusative and unergative verbs. These verbs differ for their syntactic structure, in particular regarding the position in which the subject is generated (cf. Burzio, 1986). For this speaker, the expression of an overt SCl is favoured if the subject is merged as the complement of the verb (i.e., with unaccusatives). If the subject originates in the specifier of little *v*P (i.e., with unergatives), a zero SCl form is favoured over the occurrence of an overt variant (cf. also Table 4).¹²

A note on nonsignificant factor groups. Like in the analysis for other speakers, the groups involving finite verb morphology, pronominality and position of the subject, and nonfinite verb agreement are nonsignificant for the variability of SCl *e*.

The remaining groups, namely, number of the subject, preceding phonology, and recency are significant for other speakers but nonsignificant for speaker F. Given this discrepancy, the nonsignificance of these three factors will be briefly discussed in what follows.

Number of the subject. In the main analysis, the significant effect of number of the subject is visible with verbs of opinion but not with other verbs. For speaker F, this group is nonsignificant because verbs of opinion affect the variability of SCl *e* only in relation to adjacent factors.

This finding supports the hypothesis that in speaker F's speech variability of SCl *e* is not influenced by the presence of an element that carries the author feature (see discussion in section 5.4.2).

¹² Transitive verbs also generate the subject in the specifier of *v*P, however, they are found to neither favour nor disfavour the occurrence of variant *e* (weight .500). I assume that the lack of effect that transitive verbs show on SCl variability is due the impact of adjacent factors.

Preceding phonology. The marginal results for this factor show relatively larger occurrence of SCl *e* with preceding [–LOW] vowel /a/ for speaker F than for all other speakers. However, none of the preceding phonological factors shows any effect on SCl *e* in its weight value. Despite showing some evidence of vowel coalescence, the group involving preceding phonology is considered as nonsignificant for the variability of overt variant *e*.

Recency. Like in the analysis of the zero form, speaker F shows no significant effect of processing factors on SCl *e*. The occurrence of variant *e* is not only favoured by syntactic factors, whose effect can undergo syntactic priming (Branigan, 1995), but also by phonological factors. Phonological factors affect the form of the relevant SCl, but their effect is not passed on to the following token (see section 5.4.2).

To sum up, inter-speaker variation for the occurrence of SCl *e* is due to differences in the effect of syntactic and phonological factors (internal factor ranking). Overt SCl *e* is less recurrent in contexts that favour nonpronunciation of the SCl position and, for speaker F, these include all adjacent high clitics. The probability of choosing variant *e* decreases further when these adjacent clitics are plosive- and fricative-initial. The occurrence of overt variant *e* is favoured with following phonological contexts (e.g., liquid) that do not trigger phonological deletion of the SCl.

Unlike in the main analysis, elements that express the author feature show little effect on the SCl variability, as is the case for verbs of opinion. In speaker F's speech, verb class factors affect the occurrence of overt SCl *e* for their syntactic structure rather than for their semantic features.

5.2.3 Overt SCl variation (variant *a*)

The analysis of overt variant *a* includes data from all speakers but speaker A. This is because speaker A shows much greater frequency of this SCl variant. As was the case for speaker F and her overproduction of variant *e*, speaker A's data are analysed separately in order to attest whether any of the factors investigated has a role in triggering her extended use of variant *a*. The analysis of speaker A's data is subsequently compared with the results for all speakers (see section 5.2.3.1).

The distributional analysis identifies two categorical cases. The first context involves verb class, and in particular unergative verbs. The second context concerns finite verb morphology.

Verb class. Table 10 shows the distribution of overt SCl *a* for verb class.

Table 10. Distribution of SCl variant *a* according to verb class, for all speakers (excluding speaker A).

<i>Verb class</i>	Overall (N)	<i>a</i> (N)	<i>a</i> (%)
Lexical verb <i>dì</i>	192	14	7
Copula	84	3	4
Transitive	505	20	4
Unaccusative	273	3	1
Verbs of opinion	405	4	1
Unergative	84	0	0

All verb class factors show low occurrence of overt variant *a*. Unergative verbs never occur with this SCl variant and are omitted from the analysis of this factor group.

The lexical verb *dì* 'to say/tell' is not recoded with transitive verbs because its marginal results show an increase in the occurrence of SCl *a*, when compared to any other factor. However, the distributional analysis reveals that most of the tokens of this lexical

verb that occur with a SCl *a* belong to the same speaker (10 out of 14 Ns). For this reason, tokens with the lexical verb *dî* are excluded from the analysis of the factor group.

Finite verb morphology. The factor group involving finite verb morphology is not included in the analysis because SCl *a* is only attested with unambiguous verb endings (Table 11).

Table 11. Distribution of SCl variant *a* according to finite verb morphology, for all speakers (excluding speaker A).

<i>Finite verb morphology</i>	Overall (N)	<i>a</i> (N)	<i>a</i> (%)
Unambiguous	1519	44	3
Ambiguous (invariable)	17	0	0
Ambiguous (variable)	8	0	0

Ambiguous (invariable) and ambiguous (variable) endings show no instance of overt variant *a*. Moreover, tokens that occur with an ambiguous (variable) ending are excluded from the overall analysis, because they belong to the same speaker, namely speaker C (cf. Table 2).

Multivariate analysis. The results of the regression for overt variant *a* are given in Table 12. The occurrence of SCl *a* is significantly influenced by phonological factors (preceding and following phonology), verb class, adjacency, and by the external variable age. All other factors are nonsignificant.

Table 12. Significant and nonsignificant factor groups for SCl variant *a*, for all speakers (excluding speaker A).

<i>Variable</i>	Overall (N)	a (N)	a (%)	VARBRUL weight
<i>Following phonology</i>				
Vowel [+LOW]	24	8	33	.981
Fricative	225	7	3	.845
Plosive	462	15	3	.522
Vowel [-LOW]	83	2	2	.489
Liquid	262	8	3	.448
Nasal	481	4	1	.278
<i>Range</i>				703
<i>Verb class</i>				
Transitive	505	20	4	.659
Copula	84	3	4	.642
Verbs of opinion	405	4	1	.458
Unaccusative	273	3	1	.241
<i>Range</i>				418
<i>Preceding phonology</i>				
Vowel [+LOW]	274	23	8	.819
Vowel [-LOW]	1044	18	2	.418
Pause	175	2	1	.405
<i>Range</i>				414
<i>Adjacency</i>				
Negation/OClS	612	15	3	.621
Auxiliary clitics	563	21	4	.550
SCl-verb	369	8	2	.245
<i>Range</i>				376
<i>Age</i>				
Old	590	27	5	.631
Young	954	17	2	.418
<i>Range</i>				213
<i>Pronominality and position of the subject</i>				
Postverbal pronoun	35	3	9	[.813]
Null subject	1131	35	3	[.522]
Topicalized pronoun	151	3	2	[.417]
Preverbal pronoun	220	3	1	[.388]
<i>Range</i>				425
<i>Nonfinite verb agreement</i>				
Subject agreement	109	3	3	[.819]
No subject agreement	1431	41	3	[.471]
<i>Range</i>				348
<i>Recency</i>				
Recent <i>a</i>	67	6	9	[.725]
Lack of recent variable	193	5	3	[.553]
Recent \emptyset	481	16	3	[.542]
Recent <i>e</i>	586	10	2	[.421]
<i>Range</i>				304
<i>Number of the subject</i>				
Singular	1257	34	3	[.506]
Plural	287	10	4	[.475]
<i>Range</i>				31

Note. Input value: .009; significance threshold: .05; values in brackets are nonsignificant.

Following phonology and adjacency. The following phonological factors that affect the variability of SCl *a* are [+LOW] vowel /a/ (weight .981) and fricative (weight .845). Following nasal is

the only factor that strongly disfavours the SCl variant (weight .278). Plosive, [-LOW] vowels and liquid show little or no impact on the variability.

The effect of phonological factors is analysed in relation to adjacency (Figure 13).

Figure 13. Percentage of the occurrence of overt SCl *a* for following phonological factors in relation to adjacency, for all speakers (excluding speaker A).

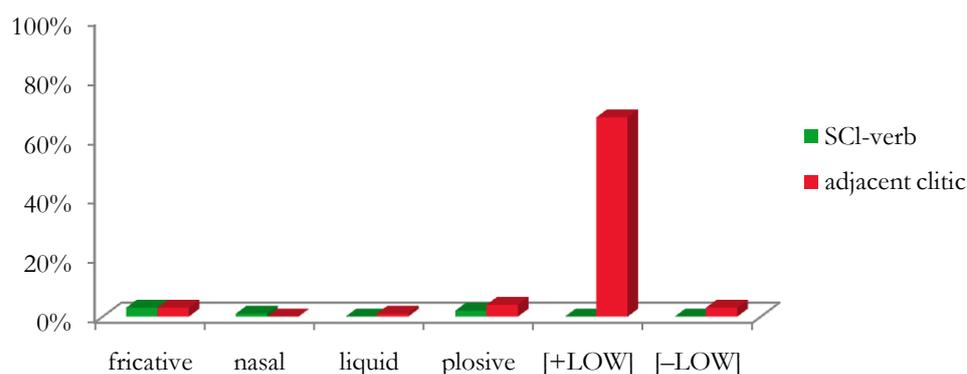


Figure 13 shows the distribution of SCl *a* depending on whether a phonological factor is part of a finite verb or of a clitic element. Clearly, the effect of following [+LOW] vowel /a/ is related to the fact that the element in which it occurs is a clitic, in particular a vocalic 3rd person direct OCIs *a* ‘her’. When the adjacent element is a finite verb beginning with a [+LOW] vowel, SCl *a* never occurs.

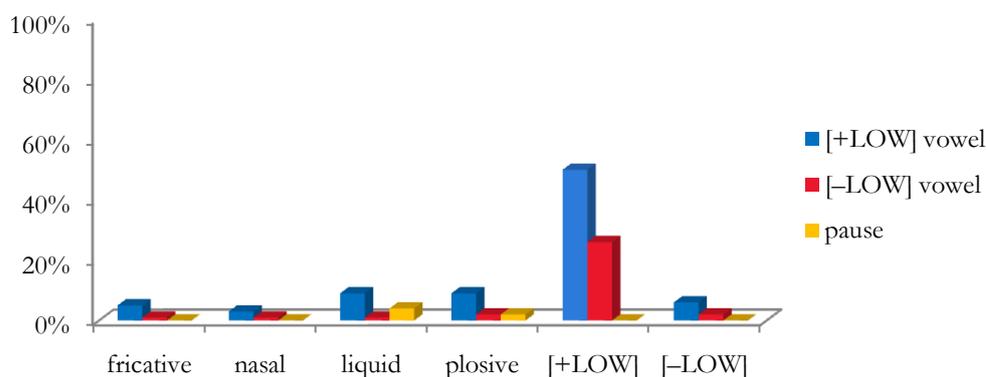
Moreover, from the results in Figure 13 we notice that the favouring effect of high clitics (weight .621) is mostly due to 3rd person direct OCl *a*, given that nasal-initial clitics (i.e., negation *nu*, OCl *me*, *ne*, reflexive *me*, and partitive *ne*) and fricative-initial clitics (e.g., reflexive *se*) show very little occurrence of overt SCl *a*.

Among other adjacent factors, the favouring effect of auxiliary clitics (weight .550) is to be attributed to plosive-initial locative clitic *gbe*, whereas the disfavouring effect of SCl-verb adjacency (weight .245) is evident with all phonological factors.

Preceding and following phonology. SCl *a* is favoured by the presence of a preceding [+LOW] vowel (weight .819). Preceding [-LOW] vowels (weight .418) and pause (weight .405) show the opposite effect on the SCl variability.

The effect of preceding phonological factors is analysed in relation to following phonological context (Figure 14).

Figure 14. Percentage of the occurrence of overt SCl *a* for preceding phonological factors according to following phonology, for all speakers (excluding speaker A).



Each preceding phonological factor shows a similar effect on the occurrence of SCl *a* across following phonological contexts. What affects the SCl variability is following [+LOW] vowel. When the phonological context involves both preceding and following [+LOW] vowel it triggers feature spreading/vowel coalescence, and the occurrence of the [+LOW] SCl *a* increases considerably.

Verb class. The results for verb class show that transitive verbs (weight .659) and copula (weight .642) favour the occurrence of overt SCl *a*, whereas verbs of opinion (weight .458) and unaccusative verbs (weight .241) disfavour it.

Given the effect of 3rd person direct OCl *a* on the SCl variability, the effect of transitive verbs is explained by the fact that 3rd person direct OCls can only occur with these verbs.

As for copula, only three tokens occur with a SCl *a* and all involve the verb form *sun* ‘I am’. Given the low number of tokens that occur with SCl *a* in copular constructions, I assume that the effect of copula on the SCl variability is due to the fact that the verb form with which the SCl occurs is fricative-initial, following fricative being a favouring factor.¹³

Age. As is the case for variant *e*, also the occurrence of variant *a* is significantly affected by the age of the speaker. Older speakers favour the use of variant *a* (weight .631) whereas younger speakers disfavour it (weight .418).

The fact that speaker A, that is, the speaker who is singled out because of her extensive use of SCl *a*, belongs to the older group suggests that SCl *a* is likely to be an old feature of the dialect that is being lost among younger generations, at least in its original underlying form and use (cf. fn.13). Younger speakers retain variant *a* only as an allophone of SCl *e* whose variability is affected mainly by phonological factors.

The analysis of speaker A’s data will reveal that in its original use SCl *a* is affected by morpho-syntactic factors, and the *e/a* alternation will be explained by hypothesizing different underlying feature specifications for the two overt variants (see section 5.2.3.1 and section 5.3.1).

Nonsignificant factor groups. The factors that do not affect the variability of SCl *a* are pronominality and position of the subject, number of the subject, nonfinite verb agreement, and recency.

¹³ Another possible explanation for the effect of copula *sun* involves the fact that this verb form is syncretic for 1st person singular and 3rd person plural. In Ligurian, it is the form of the SCl that distinguishes between the two referents of copula *sun*. However, since both 1st person singular and 3rd person plural have a SCl variant *e*, variant *a* is favoured in these contexts in order to differentiate between the two persons.

This hypothesis is only tentative as it considers the use of variant *a* beyond the effect of phonological context, in contrast with the findings of the main analysis of SCl *a* (cf. Table 12). Crucially, the effect of copula *sun* is only attested in older speakers. The analysis of speaker A, a member of the older group, will show that the occurrence of SCl *a* with copula *sun* in older speakers can be interpreted as use of an old SCl form of the dialect, which is not a mere allophone of variant *e*, but has a different underlying feature specification (see section 5.2.3.1 and 5.4.3.1).

Pronominality and position of the subject. Overt SCl *e/a* alternation is not affected by the presence of a pre- or postverbal subject pronoun or of a null subject.

Number of the subject. The occurrence of overt SCl *e* is triggered by subjects that show plural number, particularly with verbs of opinion (cf. 5.2.2). In contrast, the choice of overt variant *a* is not affected by the number of the subject.

Nonfinite verb agreement. The specification on the past participle of number (and gender) agreement with the subject or indeed the lack of it are nonsignificant for overt SCl *e/a* variation.

Recency. The nonsignificance of recency for *e/a* alternation shows once more that processing effects do not influence SCl variability when this is mainly triggered by phonological factors.

To summarize, for most speakers the variability of SCl *a* is affected primarily by phonological factors, and in particular by the presence of a preceding and following [+LOW] vowel that triggers feature spreading/vowel coalescence. Syntactic factors also influence the occurrence of variant *a*, however their effect is strictly related to the phonological features of the factors involved.

The age of the speaker is also significant for SCl *a*, with older speakers favouring the use of the variant.

5.2.3.1 Inter-speaker variation

Speaker A's data for overt variant *a* are investigated in a separate analysis due to the greater use that this speaker makes of the variant when compared to other speakers. The distribution of SCl *a* for speaker A and for the other speakers is illustrated in Table 13.

<i>Speaker</i>	Overall (N)	<i>a</i> (N)	<i>a</i> (%)
Speaker A	257	182	71
Other speakers	1544	44	3

Speaker A shows neither cases of categorical use of SCl *a* nor cases where this variant does not appear. For this reason, all tokens are included in the regression.

Multivariate analysis. The results of the multivariate analysis for overt variant *a* are presented in Table 14. Only morpho-syntactic factors are significant for the use of SCl *a* in speaker A's speech. These factors are adjacency and number of the subject. All other factors, including those regarding phonological context, are nonsignificant.

Table 14. Significant and nonsignificant factor groups for SCl variant *a*, for speaker A.

<i>Variable</i>	Overall (N)	a (N)	a (%)	VARBRUL weight
<i>Adjacency</i>				
Reflexive	16	14	88	.723
Auxiliary clitics	92	74	80	.607
SCl-verb	49	36	74	.557
Negation/OClS	100	58	58	.339
<i>Range</i>				384
<i>Number of the subject</i>				
Singular	228	166	73	.526
Plural	29	16	55	.309
<i>Range</i>				217
<i>Finite verb morphology</i>				
Ambiguous (variable)	13	12	92	[.730]
Unambiguous	241	169	70	[.491]
Ambiguous (invariable)	3	1	33	[.172]
<i>Range</i>				558
<i>Pronominality and position of the subject</i>				
Postverbal pronoun	12	11	92	[.761]
Null subject	197	140	71	[.516]
Topicalized pronoun	27	20	74	[.430]
Preverbal pronoun	21	11	52	[.286]
<i>Range</i>				475
<i>Following phonology</i>				
Vowel [+LOW]	5	4	80	[.702]
Fricative	35	26	74	[.604]
Plosive	71	58	82	[.517]
Nasal	93	61	66	[.510]
Liquid	34	25	74	[.430]
Vowel [-LOW]	18	7	39	[.268]
<i>Range</i>				434
<i>Nonfinite verb agreement</i>				
No subject agreement	238	170	71	[.532]
Subject agreement	16	10	63	[.128]
<i>Range</i>				404
<i>Verb class</i>				
Unaccusative	41	32	78	[.753]
Copula	14	12	86	[.752]
Lexical verb <i>dî</i> 'to say'	39	32	82	[.503]
Unergative	11	7	64	[.463]
Transitive	90	61	68	[.420]
Verbs of opinion	62	38	61	[.378]
<i>Range</i>				375
<i>Recency</i>				
Lack of recent variable	41	33	81	[.654]
Recent <i>e</i>	31	24	77	[.615]
Recent \emptyset	66	47	71	[.493]
Recent <i>a</i>	108	74	69	[.411]
<i>Range</i>				243
<i>Preceding phonology</i>				
Vowel [+LOW]	65	50	77	[.554]
Vowel [-LOW]	161	114	71	[.506]
Pause	26	15	58	[.333]
<i>Range</i>				221

Note. Input value: .723; significance threshold: .05; values in brackets are nonsignificant.

Adjacency. The results for the effect of adjacent factors show the usual high/low clitic split.

Low clitics (weight .607) and SCl-verb adjacency (weight .557) favour the occurrence of

overt variant *a*, as they do not trigger blocking of the pronunciation of the SCl position. High clitics, such as negation and OClS which generate phonological truncation of the syntactic structure, disfavour the overt variant and are considered as a single factor (weight .339). However, among high clitics reflexive clitics show the opposite effect, as they largely favour the occurrence of SCl *a* (weight .723).

In order to account for the results of SCl *a* with reflexive clitics in speaker A's data, I will propose a feature-based account of *e/a* SCl alternation that involves underspecification of the value of the author feature that these SClS express. In particular, I will claim that SCl *a* realizes an author feature that has a positive value, whereas SCl *e* expresses an author feature that originally lacks value and acquires a positive (or negative) value in the derivation. Hence, the occurrence of SCl *e* in both 1st person and 3rd person plural contexts (cf. Chapter 4 and see further Chapter 6 for discussion).¹⁴

The behaviour of reflexive clitics is accounted for by this feature-based account of SCl variation. For most speakers, particularly younger speakers, overt variant *a* has lost its underlying feature specification and has been retained as a mere allophone of SCl *e*. If speakers have lost a SCl variant that expresses a fully specified author feature, this feature is to be expressed by reflexive clitics, when these are present. If speakers have retained the original feature specification of variant *a*, as in the case of speaker A, it is the SCl and not the reflexive clitic that is required to express the author feature.

In either case, with reflexives the occurrence of SCl *e*, which has an unvalued author feature, is disfavoured (cf. Table 6, and see further section 5.4.3.1).

Number of the subject. While 1st person singular shows little impact on the SCl variability (weight .526), 1st person plural disfavors the occurrence of variant *a* (weight .309).

¹⁴ SCl *e* also occurs in 2nd plural contexts. Its occurrence with 2nd person plural is accounted by the hypothesis of underspecification of the value of the author feature, because when it acquires a negative value this feature can be interpreted both as 2nd and 3rd person (see further Chapter 6).

Tentatively, I will claim that this result supports the hypothesis of underspecification of the value of the author feature. First plural contexts disfavour the choice of SCl *a* with a valued author feature, and consequently favour the unvalued SCl *e* (cf. Table 6), because the latter, but not the former, is disjunctive in the sense of D'Alessandro (2004) and can potentially include also a nonauthor referent, namely a participant or a nonparticipant (cf. Benincà & Poletto, 2005; Harley & Ritter, 2002) (see discussion in section 5.4.2.1 and 5.4.3.1).

A note on nonsignificant factor groups. Two factor groups that are significant for the occurrence of overt variant *a* in other speakers' data, namely, phonology and verb class, are nonsignificant for the variability of SCl *a* in speaker A's speech. All other factors are nonsignificant in both analyses.

Phonological factors. Interestingly, phonological factors affect the occurrence of SCl *a* for all other speakers but not for speaker A, despite her greater use of the variant. The nonsignificance of preceding and following phonological context on variant *a* in speaker A's data supports the hypothesis that this speaker has retained the original underlying form of the SCl variant, and its occurrence is only affected by morpho-syntactic factors.

Verb class. Although the factor group involving verb class is not significant, its internal factor ranking reveals that copular constructions favour the occurrence of SCl *a* (weight [.752]). This finding suggests that the significant result of copula in the main analysis may be due to the fact that also other older speakers have retained, though partially, the original underlying form of variant *a*, and they show this in their use of variant *a* in copular constructions (cf. fn.13).

To sum up, both overt SCl variants *e* and *a* show inter-speaker variation. However, while inter-speaker variation for SCl *e* is caused by differences in the factor ranking within the same syntactic and phonological groups, inter-speaker variation for SCl *a* is affected by distinct types of factors. In particular, the variationist analyses of SCl *a* suggest that there are two forms of this variant, one that is an allophone of SCl *e* and is subject to the effect of phonological factors, the other that has a different underlying feature specification. SCl *a* is retained as a different underlying variant only by older speakers, and consistently by only one of them. Younger speakers have retained SCl *a* only in its allophonic form.

5.3 Formal analysis of *e/a/Ø* variation

In Ligurian, there are no 1st person contexts that show ungrammaticality of overt SCl variants *e* and *a* nor of the zero SCl form.

Empirical data exhibit a number of cases in which either one of the overt variants or the zero SCl is the only attested form or never occurs. However, the choice of one variant over another varies from speaker to speaker (inter-speaker variation), and no variant is considered as ungrammatical in these contexts. These cases include categoricity of variant *e* with copular constructions for speaker F but not for other speakers (cf. section 5.2.2.1), and lack of variant *a* with ambiguous verb endings for all speakers but speaker A (cf. section 5.2.3.1).

Following the standard theory that considers SCls as agreement elements (cf. Poletto, 2000, among others), I assume that, like the other SCl variables, 1st person SCls are the phonological expression of the functional categories of Agreement. However, I propose that 1st person overt SCl variants realize only the author feature of the category Person, which may be underspecified for its value, and the categorial Number feature.

I assume that in 1st person contexts Number carries a number feature but lacks a syntactic gender feature due to the fact that the subject referent also lacks this feature. However, the realization of the number feature of Number by the SCl is not required because in 1st person contexts number is always recoverable via the verb morphology (unlike 2nd and 3rd person contexts, see Chapter 6, section 6.2.3 for discussion). Thus, although Number includes a number feature, the copy of Num that adjoins to Pers to check its μ Num* feature bears only the categorial feature, leaving the number feature to interact with the verbal inflection (see Chapter 6).

Moreover, given the lack of gender on the category Number, I claim that the set of variants for 1st person contexts does not include a null variant. The zero SCl form is either nonrealization or absence of material due to syntactic processes, or SCl deletion due to phonological processes.

5.3.1 Feature specification of the SCl variants

In 1st person contexts, I assume that the SCl does not realize a number feature because both overt variant *e* and *a*, and the zero form, are used with singular and plural subjects. Nor does it bear a gender feature, since syntactic gender is a feature that is only characteristic of 3rd person referents (cf. Harley and Ritter, 2002). As a consequence, I claim that 1st person SClS express Person and the only phi-feature that this category bears, namely, [μ author].

Despite the fact that it does not realize gender and number, the SCl nonetheless expresses the category Number, as its categorial feature is copied and adjoins to Pers to check its strong μ Num* feature.

In order to account for overt SCl *e/a* variation, I propose that the two overt variants differ for the value of the author feature. Given that the overt form *e* realizes also the (non)participant feature of Person in 3rd plural contexts (cf. Chapter 4, section 4.3.1), I

assume that SCl *e* is the phonological expression of an uninterpretable author feature that has underspecified value. SCl *a* instead expresses the same uninterpretable feature but with a positive value (22).

(22)

variant <i>e</i>	Pers[μ auth: , μ Num*], Num
variant <i>a</i>	Pers[μ auth:+, μ Num*], Num

Given that the two overt variants only differ for the value of the feature of Pers (valued or unvalued), and not for the type of phi-feature(s) they express, they can alternate in all contexts. The (under)specification of the feature value determines the form of the variant (*e/a*) and does not affect the presence/absence of this type of overt variation (see section 5.4.2 and 5.4.3).

Given the lack of a syntactic gender feature in the specification of 1st person referents, the zero form never occurs as a null underlying variant, as this realizes both number and gender features (cf. Chapter 3, section 3.3.2).

According to the analysis I propose here, in 1st person contexts the category Number never overtly realizes a syntactic gender feature. However, like in Italian, also in Ligurian compound tense past participles of unaccusative-like verbs show gender and number agreement with the subject even when the subject is a 1st or 2nd person referent. This creates a problem for the analysis of past participle agreement in Romance outlined in the previous chapters, according to which participial agreement is the morphological expression of the phi-features of a unique category Number in the numeration (whose copy is merged in the inflectional head). In the following section, I illustrate D'Alessandro's (2004) analysis of participial agreement which involves both a semantic and a syntactic feature set, and I claim that only syntactic features (i.e., the category Num) are copied in the inflectional domain and are expressed by the SCl. Given that the subject in these contexts

has no syntactic gender feature, no syntactic gender is required on the copy of Num, which includes only number.

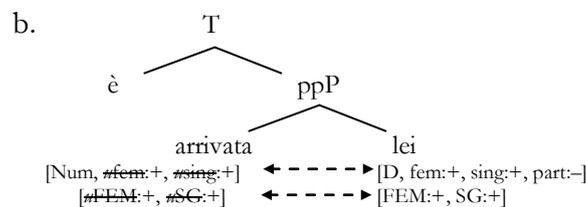
Cases of defective past participle agreement (i.e., lacking gender specification in the morphology) in 1st plural contexts are accounted for by claiming that with plural referents both feature sets (syntactic and semantic) optionally fail to occur with a gender feature, due to the very marked status of gender agreement with 1st and 2nd plural subjects.

5.3.2 Past participle (subject) agreement in first person contexts

According to D'Alessandro (2004) (cf. also Wechsler & Zlatic, 2001), in Italian, past participle agreement with the subject involves both a set of syntactic features and a set of semantic features. These features are checked via two distinct operations, namely Agree (for syntactic features) and Concord (for semantic ones). Participial agreement is ultimately determined by semantic features (i.e., syntactic features with semantic content (cf. also Sauerland (2003))).

When the subject is specified for both syntactic and semantic phi-features (e.g., 3rd person singular pronouns), each set on the past participle is checked by the corresponding interpretable set on the subject via either (syntactic) Agree or (semantic) Concord.¹⁵ In the simplified structure in (22), semantic phi-features are represented in capitals.¹⁶

(22) a. è arrivata lei
is arrived.F.SG she.3F.SG

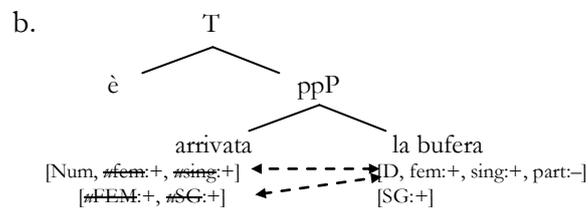


¹⁵ According to D'Alessandro (2004:103), syntactic phi-features on the past participle receive their value not directly from the subject but through T, once it Agrees with the subject. However, there are no elements in D'Alessandro's analysis that exclude checking of syntactic features via Agree between past participle and the subject. Only the domain of Concord is restricted to the phrase.

¹⁶ Other semantic features that are irrelevant to past participle agreement (e.g., animacy) are not considered in the following structures ((22)-(25)).

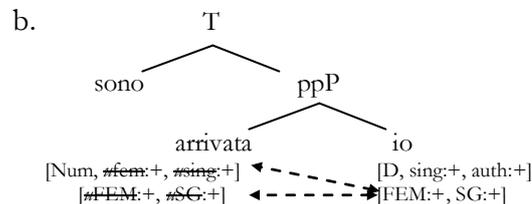
When the subject lacks the gender feature of one of the two sets, participial agreement is obtained by means of a “take over mechanism” in which the gender feature of one set provides the missing specification for the checking of gender on the past participle (D’Alessandro, 2004:35). If the subject lacks specification of semantic gender (e.g., inanimate 3rd person nominals), semantic gender on the past participle is checked via Concord with the syntactic gender feature of the subject, which thus determines (semantic) gender agreement on the past participle, as in (23).

- (23) a. è arrivata la bufera
is arrived.F.SG the storm.F.SG



Conversely, if the subject lacks a syntactic gender feature (e.g., 1st and 2nd person pronouns), the syntactic gender feature of the past participle turns to the semantic set of the subject and is checked via Agree with its semantic gender feature. Despite checking of the syntactic gender feature, participial agreement is still determined by Concord between the semantic features of the past participle and those of the subject.

- (24) a. sono arrivata io
am arrived.F.SG I.1SG

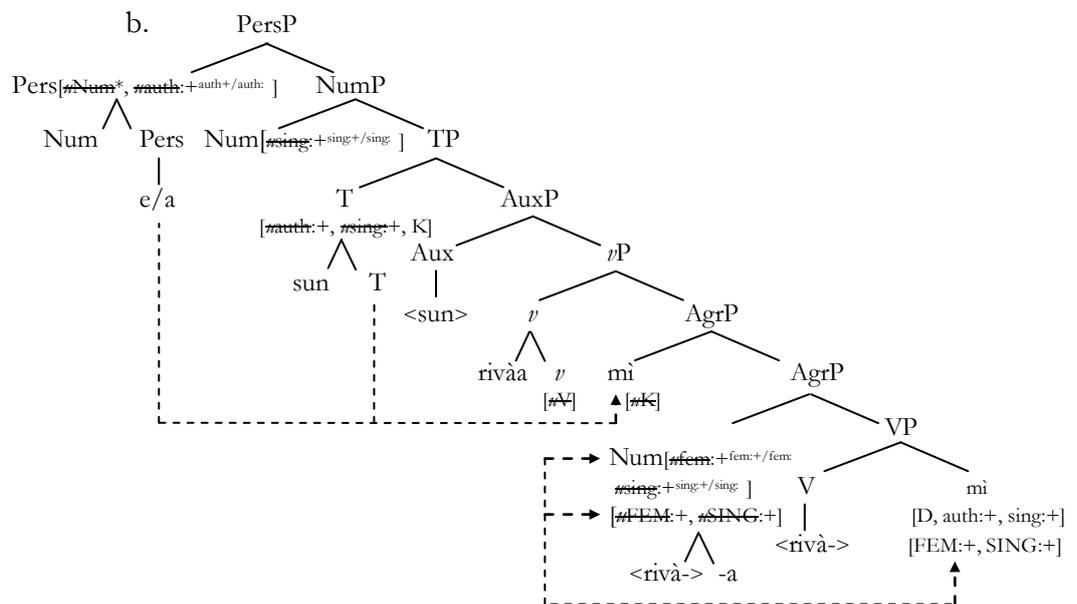


In the analysis of SCIs and participial agreement I presented in the previous chapters (cf. Chapters 3 and 4), I claimed that a copy of the phi-features that are morphologically expressed on the past participle is realized by the SCI as part of the inflectional

morphology. This analysis is reviewed following D'Alessandro's analysis of participial agreement as the result of joint operations (Agree and Concord) involving syntactic and semantic feature sets, which is ultimately realized by semantic features (i.e., syntactic features with semantic content).

In accounting for cases of participial agreement and SCl variation in 1st person contexts, I claim that only syntactic features, and not semantic ones, are copied and merged in the inflectional domain (whose elements show only syntactic features). Moreover, given that the subject (overt or null) does not carry syntactic gender, the copy of this feature is not required on the inflectional head, particularly because *pro* does not need recovery of a gender feature. An example of this is provided in (25).

- (25) a. e/a sun rivàa mi
 SCl am.1SG arrived.F.SG I.SubjPron.1SG
 'I arrived'



In (25.b), the syntactic and the semantic gender features Agree and Concord respectively with the semantic gender feature of the subject *mi* in object position. Participial agreement on *rivàa* is given by the semantic features of the past participle. A copy of the (syntactic) category Number is merged in the head of NumP above TP. However, only syntactic number is copied to the inflectional domain, because the subject does not require

gender to be syntactically specified. As we will see, in 1st person contexts the number feature of Num remains in the head of NumP, and only the categorial feature Num adjoins to Pers (cf. discussion in Chapter 6). Thus, the SCl expresses only the author feature of Pers, and the form of the variant (*e/a*) is determined by its phonological index ([auth:] for variant *e* and [auth:+] for variant *a*).

Finally, the lack of gender (and number) on Num/Pers implies that the zero form in 1st person contexts cannot be interpreted as a null underlying variant. The occurrence of *e/a/Ø* variation with defective past participles (i.e., past participles lacking gender specification) corroborates this claim.

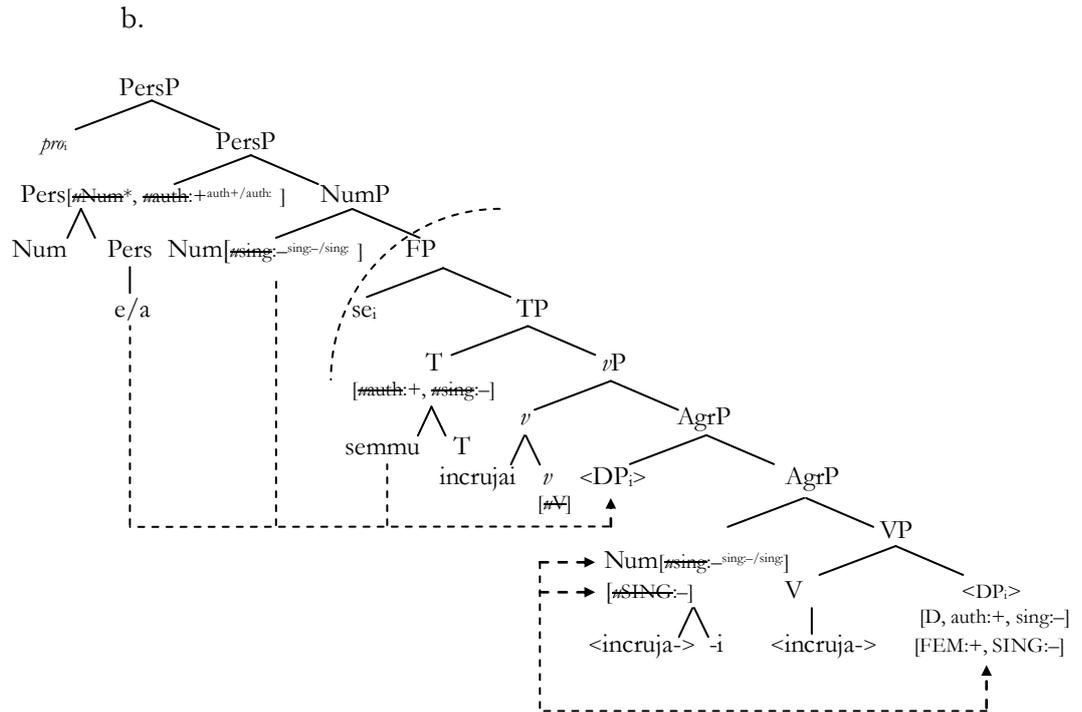
5.3.3 *E/a/Ø variation and defective past participle agreement*

In 1st person contexts, full SCl *e/a/Ø* variation is regularly attested in the corpus with past participles that only show number agreement with the subject (i.e., defective past participles), as in (26).

- (26) *e/a/Ø* se semmu incruja-i
 (SCl) ourselves are.1PL met-PL
 ‘we met (all females)’

I claim that, like in 3rd person plural contexts (cf. Chapter 4), also in 1st person plural contexts the gender feature of Number can be underspecified in Ligurian. Following the account of participial agreement that we saw in the previous section, I assume that when there is no syntactic gender feature on Number also the semantic feature is underspecified on the past participle. Thus, only semantic number agreement is morphologically realized on the past participle. The derivation of (26) is provided in (27).

- (27) a. Ø se semmu incrujai
 (SCl) ourselves.ReflCl are.1PL met.PL
 ‘we met (all females)’



In (27.b), like in 3rd plural contexts, the past participle agrees only in number with the subject as the participial head lacks (syntactic and semantic) gender. Subsequently, a copy of Number and its syntactic number feature is merged onto the inflectional head. However, since this copy does not include gender, it cannot be realized by a null subject clitic variant. The head of Pers where the copy of Num adjoins (to check its $\#Num^*$ feature) is realized by an overt variant *e/a*, which conveys the author feature of Pers. The zero SCL form in (27.a) is therefore interpreted as nonpronunciation of the SCL projection (PersP/NumP) due to blocking by the reflexive clitic *se* that occupies an independent functional head.

Given the interpretation of a zero SCL with defective past participles as phonological truncation, I conclude that the lack of zero form with 3rd person plural (defective) compound tenses (cf. Chapter 4) is due both to the fact that a null variant is ungrammatical in those contexts and to nonoccurrence in the corpus of tokens that involve blocking by a high clitics.

In what follows, I propose a further interpretation of the zero SCL form, namely, as absence of syntactic material in head of PersonP.

5.4 SCl variability

Although SCl *e/a/∅* variation is attested in all 1st person contexts, the variability of the single variants, that is, the variation in their level of occurrence, is affected by a number of internal and external linguistic factors.

In the remainder of this chapter, I show that the factors that influence the variability of overt variants and of the zero form do so partly because of the feature specification of the overt SCl variants. In section 5.4.1, I illustrate the impact of feature specification and of syntactic and phonological processes on the variability of the zero form. In section 5.4.2, I distinguish between two uses of SCl *a*, namely, as an allophone of SCl *e* and as a distinct variant with a valued author feature.

5.4.1 Variability of zero SCl

The factors that are found to affect the variability of the zero SCl form in 1st person contexts are summarized in (28), where the analysis of most speakers is distinct from that of speaker A and speaker F (inter-speaker variation).

(28)

Zero form (other speakers): <i>Adjacency, verb class, pronominality and position of the subject, recency.</i>
Zero form (speaker A and speaker F): <i>Following phonology, adjacency, verb class.</i>

In 1st person contexts, the occurrence of the zero form is triggered by three distinct phenomena. These include: (i) nonpronunciation of the SCl position, which is caused by the presence of clitics that occur in independent functional projections between the SCl and the finite verb; (ii) phonological deletion of an overt SCl in a given phonological context; and (iii) absence of the author feature in the SCl position due to the expression of

the same interpretable feature by another element that is adjacent to the SCl (i.e., the subject pronoun, the verb or the reflexive clitic).

For most speakers, the zero SCl form involves (i) and (iii). Phonological truncation of the syntactic structure is triggered by the highest element in the clitic string, namely negation, and not by other OCl's. Among OCl's, only reflexive clitics favour the zero SCl form. These clitics trigger the choice of zero SCl because they express an author feature in their semantics, just like the overt subject pronoun and verbs of opinion (see section 5.4.2.1).

In the speech of speaker A and speaker F, the zero form is triggered mostly by (i) and (ii). Phonological truncation is caused by all high clitics (namely negation, reflexives and other OCl's), whereas phonological deletion of the overt SCl occurs with following plosive and fricative. As is evident from the nonsignificance of pronominality and position of the subject in their data, these speakers show little occurrence of (iii). Also the effect of verb class is predominantly due to the impact of adjacent factors.

For speaker A and speaker F, a difference in the variability of the zero SCl arises when their data are compared with those of all other speakers because fewer factors trigger the choice of this form, and its probability of occurrence decreases.

5.4.1.1 Zero SCl as absence of author feature

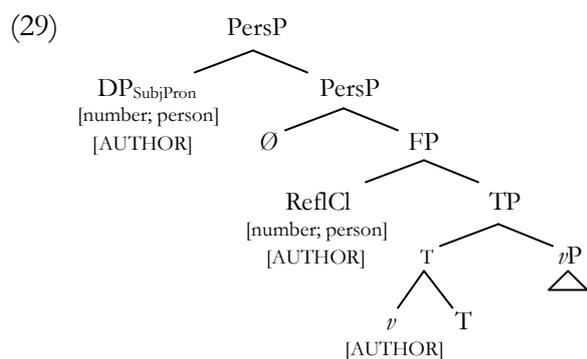
Ligurian data show that for most speakers the occurrence of the zero SCl increases with overt subject pronouns that appear in canonical subject position, with reflexive clitics, and with verbs that express an opinion or a belief of the subject referent and whose 1st person (singular) form has a high frequency (cf. Table 3).

These three elements all involve a semantically interpretable author feature: a 1st person subject pronoun expresses the author feature; a 1st person reflexive clitic carries the same semantic features as its antecedent, thus including the author feature; frequent verbs

of opinion can be considered as bearing a (default) semantic author feature (cf. also Buescher, 2006).

If the numeration includes one of these elements, the category Person and its uninterpretable author feature may fail to occur in the numeration, and thus fail to be Merged in the inflectional head. In this case, the head of PersP remains empty, and Spell-Out rules do not apply. The zero surface form is simply expression of the empty head of PersP (i.e., absence of morpho-syntactic material).¹⁷

The simplified structure in (29) shows the position that the three elements occupy which express an author feature in their semantics, namely, the preverbal subject pronoun, the reflexive clitic and the verb of opinion. The occurrence of any one of these elements triggers the choice of a zero form as lack of morpho-syntactic material in the head of PersP.¹⁸



5.4.2 Variability of overt SCl *e*

Overt SCl *e/a* variation is affected by phonological and morpho-syntactic factors, by processing factors, and by the sociolinguistic variable age.

The factors that show a significant effect on the variability of variant *e*, for most speakers and for speaker F, are illustrated in (30).

¹⁷ Notice that, in this analysis, I take an empty head to be spelled out as zero and not as default (i.e., SCl *u*), as assumed in Distributive Morphology (cf. Halle & Marantz, 1993).

¹⁸ In the structure in (29), although present, the category Number is not represented because I claim that the phi-features of Number are not realized by the SCl in 1st person contexts (see Chapter 6).

(30)

Variant <i>e</i> (other speakers): <i>Following phonology, adjacency, preceding phonology, recency, verb class, age, number of the subject.</i>
Variant <i>e</i> (speaker F): <i>Following phonology, adjacency, verb class.</i>

For all speakers, including speaker F, the occurrence of variant *e* is triggered (i) by the phonological phenomena of vowel coalescence and phonological feature spreading, whereby following [–LOW] vowels, in particular, trigger the choice of a SCl variant with the same phonological traits; and (ii) by the adjacent factors that disfavour the blocking of the pronunciation of the SCl projection.

However, for speaker F the effect of phonological factors on the variability of SCl *e* extends to include other factors, such as following liquid, thus increasing the probability of occurrence of this overt variant.

For other speakers, the effect of phonological factors is limited to following [–LOW] vowels, and that of syntactic factors narrows down to less recurrent contexts such as plural number in verbs of opinion. Thus, the probability of occurrence of overt variant *e* is reduced when compared to that of speaker F (see section 5.4.2.1).

I assume that the significance of recency for the data of most speakers is due to the fact that the effect of syntactic factors can be passed on to a following token with similar syntactic traits (the phenomenon known as ‘syntactic priming’ (Branigan, 1995)).

On the other hand, the effect of phonological factors is only relevant to a specific token and is not involved in the processing phenomenon of priming. As variability of SCl *e* is mainly affected by phonological factors in speaker F’s speech, for this speaker recency is found as nonsignificant.

5.4.2.1 *SCL e and plural number*

For most speakers, the presence of a 1st plural subject significantly increases the occurrence of variant *e*. This happens mainly with verbs of opinion. I assume that verbs of opinion that occur with a 1st plural subject do not express the author feature as part of the (default) semantics of the verb, as this feature is attributed only to 1st singular forms with high frequency. Thus, with 1st plural verbs of opinion the author feature of Pers requires to be Merged in the head of PersP and realized by the SCL.

First person plural triggers the choice of SCL *e* over SCL *a* because variant *e* realizes an author feature that is underspecified for value ([μ auth:]) and can potentially include other participants and/or nonparticipants (cf. Benincà & Poletto, 2005; Harley & Ritter, 2002). Indeed, SCL *e* occurs also in 2nd and 3rd plural contexts because the unvalued author feature it expresses can acquire a negative value ([μ author:-]) (cf. Chapter 4, section 4.3.1, where SCL *e* is interpreted as [μ part:-], and see discussion in Chapter 6).

5.4.3 *Variability of overt SCL a*

The significant factors that influence the occurrence of variant *a* for most speakers and for speaker A are summarized in (31).

(31)

Variant <i>a</i> (other speakers): <i>Following phonology, verb class, preceding phonology, adjacency, age.</i>
Variant <i>a</i> (speaker A): <i>Adjacency, number of the subject.</i>

For most speakers, the variability of SCL *a* is affected mainly by the phonological factor involving following [+LOW] vowel, which triggers the choice of the variant with the same phonological trait (through vowel coalescence). The effect of adjacency and verb

class is directly related to phonological context as only [+LOW] vocalic OClS favour variant *e* consistently, and all occur with transitive verbs.

Age of the speaker is a significant factor for both overt SCl variants: younger speakers favour variant *e* whereas older speakers favour variant *a*.

The results for inter-speaker variation show that for speaker A, a member of the older group who shows much greater frequency of variant *a*, phonological factors do not play a role in the variability of this variant. In speaker A's speech, variant *a* is affected only by morpho-syntactic factors. In particular, it is favoured by the presence of reflexive clitics, and is disfavoured by 1st plural referents.

In what follows, I interpret the findings involving variant *a* and the significance of age by claiming that only speaker A shows the use of an underlying variant *a* that realizes an author feature which is originally fully valued.¹⁹ Other speakers, mainly those who belong to the younger group, have maintained the use of SCl *a*, but this has lost its original underlying form to become an allophone of SCl *e*, which is favoured only in certain phonological contexts.

5.4.3.1 SCl a as formal underlying variant

The use that speaker A makes of SCl *a*, particularly with reflexive clitics, is accounted for by assuming that, if the variable set includes a variant *a* which realizes a valued author feature [*uauth*:+], person agreement tends to be expressed by the SCl and not by the corresponding semantic feature of the reflexive clitic.

On the other hand, if the set of variants only includes a SCl variant that expresses an unvalued author feature, namely, variant *e*, the presence of a semantically interpretable

¹⁹ The claim that variant *a* realizes a distinct underlying form as an old feature of the dialect is based on the fact that the existence of this form emerges from the analysis of the data of older speakers. A diachronic analysis of Ligurian data should be carried out in order to provide historical support to this claim.

author feature on the reflexive clitic causes Person and its unvalued author feature not to be Merged in the inflectional head, which is spelled out as zero.

Moreover, in 1st plural contexts subject reference involves the author and another participant and/or nonparticipant. In speaker A's speech, variant *a* is disfavoured with 1st plural referents in all verb class factors because its valued feature specification [*author:+*] only conveys the semantic meaning of author and does not allow potential reference to other participants and/or nonparticipants (cf. Benincà & Poletto, 2005).

On the other hand, variant *e* is favoured because the unvalued author feature it realizes entails that this feature can potentially acquire both values and, as such, it can refer to both author and nonauthor (i.e., participant and/or nonparticipant) referents.

5.4.3.2 SCl *a* as allophone

Although they do not exhibit the frequency of use of variant *a* that speaker A shows, older speakers maintain a partial use of SCl *a* as a formal underlying variant with [*author:+*] specification.

However, like younger speakers, they have developed another use of SCl *a* that is mainly affected by phonological factors. For most speakers, SCl *a* has lost its underlying specification [*author:+*] and is now used as an allophone of SCl *e*, mainly in phonological contexts that involve a following [+LOW] vowel.

The occurrence of SCl *a* is favoured in older speakers' speech because two forms, namely, the underlying variant *a* and the allophone *a*, have the same phonological outcome and this generally increases the probability of occurrence of that SCl form. Younger speakers, instead, make use of SCl *a* only in its allophonic form.

5.5 Conclusion

In this chapter, I showed that in 1st person contexts SCl *e/a/∅* variation is always attested. The presence of the zero form is influenced primarily by morpho-syntactic and processing factors, whereas overt SCl *e/a* alternation is affected by phonological and morpho-syntactic factors. I argued that in 1st person contexts the SCl realizes person agreement, but not number and gender. Given the lack of number and gender specification, the zero SCl form is not interpreted as a null variant, but as phonological truncation, as absence of (morpho-) syntactic material, or as phonological deletion.

The account of overt SCl *e/a* alternation I provided, also on the basis of the significance of speaker's age, is twofold. For older speakers, overt variants are distinct realizations of different values of the person feature. For the younger and most of the older speakers, variant *e* and *a* are (also) allophones which share a single underlying form.

CHAPTER 6

AGREEMENT SUBJECT CLITICS AND SUBJECT CLITIC POSITIONS

In this chapter, I extend the formal analysis of SCl variation (cf. Chapter 3, 4, and 5) to include other variable and invariable SCl forms in the Ligurian SCl paradigm. The underlying forms of all SCl variants are refined (or determined) by the use of an algorithm (Adger, 2006), and the syntactic position of the SCl variants is established by taking into account their different feature composition (cf. Poletto, 2000).

The Ligurian SCl paradigm is repeated in (1), for convenience.

(1)

Ligurian subject clitic paradigm

	<i>singular</i>	<i>plural</i>
<i>1st person</i>	<i>e/a/∅</i>	<i>e/a/∅</i>
<i>2nd person</i>	<i>ti</i>	<i>i/e/∅</i>
<i>3rd person</i>	<i>masc. u/∅</i> <i>fem. a/∅</i> <i>expl. u/∅</i>	<i>i/e/∅</i>
	<i>default u</i>	<i>default u</i>

The paradigm in (1) shows that the same SCl form(s) may occur for more than one grammatical person (2):

- (2)
- a. SCl *e/a* for 1st person singular and plural;
 - b. Default SCl *u* for 3rd person singular and plural;
 - c. SCl *i/e* for 2nd and 3rd person plural;
 - d. SCl *e* for 1st singular and all plural persons;
 - e. SCl *a* for 1st person and 3rd person singular feminine.
 - f. Zero SCl form for all persons, but 2nd singular and 3rd person (with default subject-verb agreement).

In the first part of the chapter (section 6.1), I will show that most cases of syncretism involving overt SCl forms in Ligurian (cf. (2.a-e)) involve not only identity of the surface form, but also the same underlying form. In order to do so, I will begin by considering the feature composition of the SCl variants that was provided in the previous chapters (cf. Chapter 3, 4, and 5) and I will revise it by using the algorithm developed by Adger (2006), which I will amend to include underspecification of feature values.

In the second part of the chapter (section 6.2), I will show that the system that I have proposed in the previous chapters represents an improvement of the multiple agreement structure proposed by Poletto (2000), as it can crucially account for the prenegative position of agreement SCls in Ligurian, for SCl variation in the same grammatical person, and for syncretic forms across the SCl paradigm also in relation to verb morphology.

6.1 The feature composition of Ligurian SCl variants

In the previous chapters (cf. Chapter 3, 4, and 5), I have proposed that SCl variants are the phonological expression of the categories of Agreement, that is, Number and Person, and of their phi-features, respectively, number and gender for Number, and author and/or participant for Person (for the specification of Person see also Adger, 2006; Halle, 1997). SCl variation arises because in a same context different feature combinations may occur that involve underspecification of features (for the category Number) or feature values.

The analysis of SCl variation (cf. Chapter 3, 4, and 5) focused on three SCl variables, namely 3rd person singular/plural and 1st person, and did not include 2nd person due to lack of variation (i.e., 2nd singular SCl *tì*, cf. (1)) or low frequency of the variable in the data (as for the case of 2nd plural *i/e/Ø*).

A comprehensive account of the cases of syncretism in the Ligurian SCl paradigm (cf. (2)) cannot be carried out by simply comparing the feature specification of just some of the SCl forms that make up the paradigm. All SCl forms are required.

One way of determining the feature combination of all SCl variants is by using an algorithm, like the one proposed by Adger (2006). Adger's algorithm generates a set of the smallest possible lexical items (i.e., combinations that may involve feature underspecification) which can be mapped onto a single variant, while rejecting single lexical items that map onto more than one variant and multiple lexical items that map onto the same variant.

In what follows, I will show that the algorithm proposed by Adger (2006), amended to include underspecification of feature values, not only corroborates the feature compositions of the SCl variants that were hypothesized in the formal analyses of the SCl variables (cf. Chapter 3, 4, and 5), but also allows us to account for cases of syncretism of SCl variants across grammatical persons. Syncretisms in the Ligurian SCl paradigm are captured by the algorithm, as this reveals that variants which have the same surface form also have the same underlying form (that is, they are the morpho-phonological realization of the same phi-feature(s) of Number and/or Person).

In section 6.1.1, I show that the feature composition that the SCl variants realize, as it has been previously defined (cf. Chapter 3, 4, and 5), only partially accounts for the cases of syncretism in the Ligurian SCl paradigm, and requires a revision. In section 6.1.2, I describe the main points of Adger's algorithm, and I propose one amendment to the algorithm for it to be used to determine the form of Ligurian SCls. In section 6.1.2, I run the algorithm for all Ligurian SCls and I show that, in some cases, the results corroborate the feature specification of the SCl variants hypothesized in the analysis of SCl variation, whereas in others they fine-tune the characterization of the underlying forms.

6.1.1 Syncretisms in the Ligurian SCl paradigm

Cases that show Ligurian SCl forms occurring in more than one grammatical person (cf. (2)) are repeated in (3) below for convenience.

- (3)
- a. SCl *e/a* for 1st person singular and plural;
 - b. Default SCl *u* for 3rd person singular and plural;
 - c. SCl *i/e* for 2nd and 3rd person plural;
 - d. SCl *e* for 1st singular and all plural persons;
 - e. SCl *a* for 1st person and 3rd person singular feminine.
 - f. Zero SCl form for all persons, but 2nd singular and 3rd person (with default subject-verb agreement).

In the formal analysis of SCl variation (cf. Chapter 3, 4, and 5), I proposed that the feature specification of the SCl variants involves underspecification not only of feature(s) but also of feature value. The feature specification for each SCl variant is re-proposed in (4)-(6), namely, for 3rd singular SCls (4), for 3rd plural SCls (5) and for 1st person SCls (6).¹

- (4)
- a. Pers[*u*part:-], Num[*u*sing:+, *ufem*:-] *u* (3rd person singular)
 - b. Pers[*u*part:-], Num[*u*sing:+, *ufem*:+] *a*
 - c. Pers[*u*part:-], Num[*u*sing: , *ufem*:] \emptyset
 - d. Pers[*u*part:-], Num[*u*sing:+] *u* (default)²
- (5)
- a. Pers[*u*part:-], Num[*u*sing:-] *i* (3rd person plural)
 - b. Pers[*u*part:-], Num([*u*sing:-]) *e*
 - c. Pers[*u*part:-], Num[*u*sing: , *ufem*:] \emptyset
- (6)
- a. Pers[*u*auth:+], Num *a* (1st person)
 - b. Pers[*u*auth:], Num *e*

¹ Expletive *u* is not included among the variants in (4) because it has been described only as phonological expression of a Modality head, which does not involve phi-features (Poletto, 1993) (cf. Chapter 3, section 3.3.4).

² The feature specification in (4.d) shows the values that the phi-features of Person and Number acquire via vacuous Agree with a null locative argument, regardless of the phi-feature of the subject (cf. Chapter 3, section 3.3.3). In this case, the phi-features of Person and Number are morphologically realized as (default) SCl *u*.

Two cases of identity of surface form in (3) involve syncretism of the underlying form of the SCl. These are SCl *e/a* for 1st person singular and plural (cf. (3.a) and (6)), and default SCl *u* for 3rd person singular and plural (cf. (3.b) and (4.d)).

In the former, the use of SCls *e* and *a* in both 1st person singular and plural is accounted for because the underlying forms of the SCl variants do not realize the number feature of Num, but only its categorial feature.

In the latter, the SCl realizes the phi-features of Person and Number that are assigned default agreement via vacuous Agree with a null locative argument (cf. Chapter 3, section 3.3.3 and fn.3). Given that the second element of the Agree relation is the null locative and not the subject, the specification in (4.d) is taken to occur in both 3rd singular and plural contexts that include a null locative argument (in subject position), thus accounting for (3.b).

On the other hand, following the specification in (4)-(6), the use of the same SCl form *a* in 1st person and 3rd person feminine referents (cf. (3.e)) is to be attributed only to identity of the surface form. The two distinct underlying forms are repeated in (7).

- (7) SCl *a* for 1st person and 3rd person singular feminine:
- a. Pers[*u*part:-], Num[*u*sing:+, *u*fem:+] *a*
 - b. Pers[*u*auth:+], Num *a*

In (7.a), the SCl *a* realizes the (non)participant feature of Pers and gender and number of Number. In (7.b), variant a expresses the author feature of Pers. These distinct underlying forms happen to share the same phonological form, *a*. Thus, the syncretism for SCl *a* is only at the surface level.

The remaining cases of identity of overt SCl forms (cf. (3.c-e)) are not accounted for by the feature-form combinations in (4)-(6). In particular, the underlying forms in (4)-(6) fail to explain (3.c) and (3.d), that is:

- (i) why SCl variants *i/e* can alternate with both 2nd and 3rd plural referents (cf. (3.c)) if their specification involves being [*#*participant:–] (cf. (5.a,b));
- (ii) whether in 3rd person plural, 2nd person plural, and 1st person (cf. (3.d)) the SCl has different feature compositions that surface with a unique form *e* (e.g., (5.b) and (6.b)), or whether, given the presence of variant *e* with 2nd plural referents, the identity of the surface form is to be re-interpreted as identity of the underlying form.

As for the zero SCl form, the analysis of overt/zero alternation across three SCl variables (cf. Chapter 3, 4, and 5) revealed that the grammar of Ligurian speakers allows for multiple forms of zero SCl, and one of these forms involves a null underlying variant. The null underlying variant realizes the unvalued gender and unvalued number features of Number (cf. Chapter 3 and 4).

Given that it expresses a (syntactic) gender feature, the null form occurs with 3rd person singular and plural referents, which are always specified for syntactic gender, but fails to occur with 1st and 2nd person referents, as they lack syntactic gender (cf. Harley & Ritter, 2002). Thus, the zero form as an underlying null variant is syncretic (cf. (3.f)) only as far as 3rd person singular and plural referents are concerned.

Since both 1st and 2nd person lack syntactic gender in their specification, I will assume that with these referents the zero SCl form is lack of an overt SCl that is triggered by syntactic and phonological factors.

What remains to be accounted for, with regard to the zero SCl form, is:

- (iii) why default SCl *#* never alternates with a zero SCl form;
- (iv) why 2nd person singular *ti* differs from 2nd person plural *i/e* by not allowing syntactic and phonological factors to trigger the zero form (cf. (3.f)).

The answer to (iii) is provided by the fact that: (a) since the null locative lacks a gender feature, the category Number is only assigned a default number feature and it fails

to be realized by a null variant because its underlying form does not include gender; and (b) default agreement involves a vacuous Agree relation between the SCl, the verb and the null locative argument in which all elements that are assigned default morphology, namely, the SCl and the verb, must be overtly expressed. Thus, no type of zero SCl form (e.g., phonological nonrealization) tends to be found in default agreement contexts (see though the potential effect of phonological deletion in default contexts for speaker B, Chapter 3, section 3.2.1.4).

In order to answer (i), (ii) and (iv), in the following sections I fine-tune the feature specification of the SCl variants and extend it to include all SCl forms by using a revised version of Adger's (2006) algorithm.

6.1.2 Adger's (2006) algorithm revisited

Adger (2006) develops an algorithm that allows us to determine the minimal feature composition of a set of variants by testing all the potential feature-form relationships that the speaker is able to generate. He defines it as “an evaluation metric which chooses between sets of lexical items that the learner is able to construct as being compatible with the primary linguistic data” (Adger, 2006:519).

Adger's algorithm generates the set of smallest lexical items that map onto linguistic forms. The steps of the algorithm are the following (8):

- (8) a. It generates all possible lexical items that are characterized by a single feature.
- b. It maps these lexical items onto forms (i.e., the variants), and it rejects all lexical items that map onto more than one form ('Reject Optionality').
- c. If two or more lexical items map uniquely onto the same form, it deletes all but one of these lexical items ('Reject Synonymy').

- d. If not all forms are mapped onto a lexical item, it generates other lexical items by adding one feature. However, it rejects all lexical items that map onto a single form, if this form is already mapped onto a lexical item with a smaller number of features ('Minimize Lexicon').

The feature-form combinations generated by the algorithm may involve underspecification of some of the features. Feature underspecification is a consequence of the fact that the algorithm initially generates single-feature lexical items. The first step of the algorithm is quoted in (9) from Adger (2006:518).

- (9) Generating all n-feature LIs, where $n=1$.

In the previous chapters (cf. Chapter 3, 4, and 5), SCl variation in Ligurian was accounted for by assuming that variants are the phonological realization of the functional categories of Agreement, namely Number and Person, whose feature composition may involve underspecification of features and/or feature values.

In order to apply the algorithm, and thus determine the underlying form of Ligurian SCl variants, the first step (cf. (9)) is modified to include all potential values of a single feature, namely positive, negative, and lack of value (i.e., value underspecification). I assume that a feature is underspecified for value when it maps onto the same form, despite being assigned either a positive or a negative value in the derivation process (cf. also Adger, 2008).

The step in (9) is revised in (10).

- (10) Generating all n-feature:(value) LIs, where $n=1$ and (value)= \pm or lack of value.

In what follows, I apply Adger's (revised) algorithm to establish which features and feature values characterize the underlying forms of all Ligurian SClS, including those SClS

that were not considered in the analysis of variation, namely, 2nd person singular and plural forms. It is important to point out that Adger’s algorithm is applied in the present analysis only to determine the underlying form of the variants and not to generate probabilities of occurrence (cf. Adger, 2006).

6.1.3 Determining the underlying form of the SCl variants

I assume that the phi-features that potentially make up the underlying form realized by Ligurian SCl variants are number, gender, participant (cf. Poletto, 2000). Furthermore, I suggest that Ligurian SCls may also realize an author feature. Unlike Adger (2006) (cf. also Halle, 1997), I will not restrict the occurrence of the author feature to contexts where participant has a positive value (i.e., to distinguish between speaker and addressee). I will assume that the feature [participant:±] distinguishes between 1st/2nd person and 3rd person referents (i.e., between participants and nonparticipants), whereas [author:±] differentiates between 1st person and 2nd/3rd person subjects, namely, between author and referents other than author.³

Each feature occurs with a positive or a negative value, or else with no specified value (i.e., lack of value ±). The full set of features that make up the underlying forms of the Ligurian SCl variants is given in (11).

- (11) [usingular:±;]; [ufeminine:±;]; [uparticipant:±;]; [uauthor:±;]

A revised version of the Ligurian SCl paradigm is given in (12).

³ In Adger & Smith (to appear), the interpretation of the author feature extends to include nonparticipants, thus matching the one adopted in this analysis.

(12)

Ligurian subject clitic paradigm (revised)

	<i>singular</i>	<i>plural</i>
<i>1st person</i>	e/a ₂	e/a ₂
<i>2nd person</i>	ti	i/e
<i>3rd person</i>	<i>masc.</i> u/∅ <i>fem.</i> a ₁ /∅	i/e/∅
	<i>default</i> u	<i>default</i> u

In the paradigm in (12), for ease of interpretation, the zero SCl form is omitted from all contexts where a null variant is not involved, namely 1st and 2nd person, and nonreferential (expletive) SCl *u* is excluded due to lack of phi-features in its underlying form.

Moreover, the two instances of SCl *a* are considered as independent and unrelated forms, namely *a*₁ (3rd feminine singular SCl) and *a*₂ (1st person SCl). For some speakers, 1st person SCl *a* is an allophone of SCl *e* and the two SCls share the same underlying form (cf. Chapter 5). The grammar of these speakers generates *a*₁, but not *a*₂. For one speaker in particular, instead, 1st person SCl *a* is retained as an underlying variant, and this speaker's grammar generates both *a*₁ and *a*₂. For this reason, 1st person SCl *a*₂ is included in the forms that the algorithm maps onto lexical items, although it is kept distinct from 3rd person singular SCl *a*₁.

Finally, default SCl *u* realizes only morphological 3rd singular agreement. Thus, although it occurs with both 3rd singular and plural subjects, the number feature it expresses is taken to have default singular value in both contexts.

First, the algorithm generates lexical items that involve a single feature with a single value (or with underspecified value) and maps them onto a form or forms (cf. (8.a,b)). In order for a lexical item to be mapped onto a given SCl form, this form must occur only in contexts which show the feature with the relevant value. If the feature value is

underspecified, the lexical item can map only onto SCl forms that appear in contexts that show either values of the feature (13).

- (13)
- | | | | |
|----|---|---|--------------------|
| a. | * [using:+] <i>ti/a₁/u/u_{def}</i> | ⇒ | Reject Optionality |
| b. | [using:-] <i>i</i> | | |
| c. | * [using:] <i>e/a₂</i> | ⇒ | Reject Optionality |
| d. | [ufem:+] <i>a₁</i> | | |
| e. | [ufem:-] <i>u</i> | | |
| f. | [ufem:] <i>∅</i> | | |
| g. | [uauth:+] <i>a₂</i> | | |
| h. | * [uauth:-] <i>i/ti/u/a₁/∅/u_{def}</i> | ⇒ | Reject Optionality |
| i. | [uauth:] <i>e</i> | | |
| j. | * [upart:+] <i>ti/a₂</i> | ⇒ | Reject Optionality |
| k. | * [upart:-] <i>u_{def}/∅</i> | ⇒ | Reject Optionality |
| l. | * [upart:] <i>e</i> | ⇒ | Reject Synonymy |

Lexical items that map onto more than one form are rejected (Reject Optionality) (13.a,c,h,j,k). Moreover, lexical items that map onto the same individual form are all rejected but one (Reject Synonymy) (cf. (8.c)). This is the case for variant *e* that maps both onto [uauth:] (13.i) and [upart:] (13.l). The latter is rejected.⁴

The single-feature lexical items that are mapped onto one SCl form are summarized in (14).

- (14)
- | | |
|----|--------------------------------|
| a. | [using:-] <i>i</i> |
| b. | [ufem:+] <i>a₁</i> |
| c. | [ufem:-] <i>u</i> |
| d. | [ufem:] <i>∅</i> |
| e. | [uauth:+] <i>a₂</i> |
| f. | [uauth:] <i>e</i> |

Next, the algorithm generates lexical items made up of two features and maps them onto forms. If a two-feature lexical item maps onto a unique form that is already

⁴ The lack of value for author and participant renders these two features equivalent, as is evident from the fact that they map onto the same form. The choice of [uauth:] as the lexical item that maps onto variant *e* is made purely on the grounds that variant *e* alternates with variant *a*, which has [uauth:+] specification. However, for the purposes of this investigation, either of the two lexical items could be retained.

successfully defined by a single-feature lexical item, the lexical item with more features is rejected (Minimize Lexicon) (cf. (8.d)). The combinations of two-feature lexical items and their form(s) are given in (15). For ease of exposition, I only present lexical items that map onto some form or forms, and omit those lexical items that fail to map onto any of the SCl variants (for a full representation of the algorithm, see Appendix B).

- (15)
- | | | | |
|----|--|---|--------------------|
| a. | * [<i>u</i> sing:+],[<i>u</i> fem:+] <i>a</i> ₁ | ⇒ | Minimize Lexicon |
| b. | * [<i>u</i> sing:+],[<i>u</i> fem:-] <i>u</i> | ⇒ | Minimize Lexicon |
| c. | * [<i>u</i> sing:-],[<i>u</i> fem:] <i>i/e</i> | ⇒ | Reject Optionality |
| d. | * [<i>u</i> sing:],[<i>u</i> fem:] \emptyset | ⇒ | Minimize Lexicon |
| e. | * [<i>u</i> sing:+],[<i>u</i> auth:-] <i>ti/u/a</i> ₁ / <i>u</i> _{def} | ⇒ | Reject Optionality |
| f. | * [<i>u</i> sing:-],[<i>u</i> auth:-] <i>i/e</i> | ⇒ | Reject Optionality |
| g. | * [<i>u</i> sing:],[<i>u</i> auth:+] <i>a</i> ₂ | ⇒ | Minimize Lexicon |
| h. | * [<i>u</i> sing:],[<i>u</i> auth:-] \emptyset | ⇒ | Minimize Lexicon |
| i. | * [<i>u</i> sing:],[<i>u</i> auth:] <i>e</i> | ⇒ | Minimize Lexicon |
| j. | [<i>u</i> sing:+],[<i>u</i> part:+] <i>ti</i> | | |
| k. | * [<i>u</i> sing:+],[<i>u</i> part:-] <i>u/a</i> ₁ / <i>u</i> _{def} | ⇒ | Reject Optionality |
| l. | * [<i>u</i> sing:],[<i>u</i> part:-] \emptyset | ⇒ | Minimize Lexicon |

The complete feature-form mapping for the Ligurian SCl variants, which is derived via the algorithm, is provided in (16).

- (16)
- | | |
|----|---|
| a. | [<i>u</i> sing:-] <i>i</i> |
| b. | [<i>u</i> fem:+] <i>a</i> ₁ |
| c. | [<i>u</i> fem:-] <i>u</i> |
| d. | [<i>u</i> fem:] \emptyset |
| e. | [<i>u</i> auth:+] <i>a</i> ₂ |
| f. | [<i>u</i> auth:] <i>e</i> |
| g. | [<i>u</i> sing:+],[<i>u</i> part:+] <i>ti</i> |

The only SCl form that cannot be mapped onto a single feature specification is default *u*. This is because default SCl *u* does not realize an underlying form, but is simply the output of a vacuous Agree relation with a null locative element that is assigned a default

morphological form. Thus, the default SCl will no longer be considered in the comparison of the underlying forms of the SClS.

For the other SCl variants, the algorithm provides a feature specification (cf. (16)) that resembles the underlying forms proposed in the analysis of SCl variation (cf. (4)-(6)), though it simplifies them to include only minimal lexical items. I take the minimal specifications that resulted from running the algorithm to be the features (and feature values) that determine the realization of both Number and Person (i.e., the form of the SCl variant) when they occur on these categories, despite the fact that other phi-features may be present.

If two minimal features (cf. (16)) co-occur (e.g., number and person when gender is underspecified (cf. Chapter 4)), they alternate and the realization of one feature or the other is determined by phonological and morphosyntactic factors (see discussion in section 6.2.2).

Two of the syncretisms that could not be accounted with the sole analysis of SCl variation can now be accounted for with the feature specification provided by the algorithm, namely, *i/e* variation in 2nd and 3rd person contexts, and *e* in 1st person and all plural persons.

SCl variant *i* and *e* are used with 2nd and 3rd person referents because the former realizes the number feature [μ sing:-] (cf. (16.a)) which characterizes both subjects, and the latter has an unvalued author feature [μ auth:] (cf. (16.f)) that can occur with and be valued by both participant and nonparticipant referents.

Similarly, the occurrence of variant *e* with 1st person and all plural persons is due to the fact that *e* expresses the minimal feature [μ auth:] (cf. (16.f)). An author feature that is unvalued in the numeration can be assigned a positive or a negative value in the derivation. However, I have assumed that, despite being assigned different values, a feature that has no original value in the numeration retains this character by means of a phonological index,

which determines the form of the SCl variant. In the case of the feature [μ auth:], the realization of its phonological index [μ auth: \pm auth:] after valuation and checking will be a variant e for both author and nonauthor referents (i.e., participants and nonparticipants) (17).

- (17) a. Pers[μ auth:] ... subject[auth:+] \Rightarrow Agree \Rightarrow Pers[μ auth:+auth:] \Rightarrow SCl e
 b. Pers[μ auth:] ... subject[auth:-] \Rightarrow Agree \Rightarrow Pers[μ auth:-auth:] \Rightarrow SCl e

The Ligurian SCl paradigm in (18) shows the feature specification that each variant expresses and the syncretisms of the underlying forms, as from the results of the algorithm. Only variants with an underlying form are included. Hence, the lack of \emptyset in 1st person and 2nd plural contexts.

(18) Paradigm of Ligurian SClS and SCl variables, according to their underlying forms.

	<i>singular</i>	<i>plural</i>
<i>1st person</i>	[μ auth:+] a_2	[μ auth:] e
<i>2nd person</i>	[μ sing:+],[μ part:+] ti	
<i>3rd person</i>	<i>expl.</i> u	
	[μ fem:-] u [μ fem:+] a_1	
	[μ fem:] \emptyset	
	[μ sing:+],[μ part:-] u_{def}	

By showing feature-form combinations, the paradigm in (18) captures: SCl variation in a single grammatical person (i.e., e/a in 1st person, $u/a/\emptyset$ in 3rd person singular, and $i/e/\emptyset$ in 3rd person plural); syncretisms of SCl (underlying) form across grammatical persons (i.e., i/e alternation in 2nd and 3rd person plural, and use of variant e for 1st person singular and all plural persons); identity of surface form but different feature specification (i.e., the two variants a in 1st person and in 3rd singular feminine contexts); and finally, SClS

that do not alternate with another underlying variant (i.e., 2nd person *tʲ*, expletive *u*, 3rd person default *u*).⁵

In what follows, I illustrate how a system based on multiple agreement projections (cf. Poletto, 2000) can account for the syncretisms in the underlying SCl forms that have been identified for Ligurian, for the prenegative position of agreement SCl, and finally, for the presence or absence of SCl variation across grammatical persons.

6.2 The position of Ligurian (agreement) SCl

In the previous chapters, I have claimed that all Ligurian SCl realize an underlying form that has some phi-feature specification. The application of Adger's algorithm to the set of Ligurian SCl variants has provided us with their minimal feature-form combination, and has revealed that most variants showing the same surface form have underlying forms that share a minimal feature. I have also claimed that this minimal feature determines the form of the realization of Agreement (i.e., Number/Person)(cf. section 6.1.3).

The feature-form combinations for Ligurian SCl are repeated in (19).

- (19)
- a. [u_{sing}:-] *i*
 - b. [u_{fem}:+] *a*₁
 - c. [u_{fem}:-] *u*
 - d. [u_{fem}:] \emptyset
 - e. [u_{auth}:+] *a*₂
 - f. [u_{auth}:] *e*
 - g. [u_{sing}:+],[u_{part}:+] *tʲ*

⁵ In the paradigm in (18), the dotted line shows that the null underlying variant \emptyset alternates with *i/e* when these overt SCl variants occur with a 3rd person plural subject, but not when they appear in 2nd person plural contexts, as the latter lack (syntactic) gender specification. The dashed line, instead, indicates that variant *e* alternates with all variants on the left of the line (across persons), but viceversa these variants, namely *a*₂, *i* and \emptyset , do not vary among themselves (excluding *i* and \emptyset in 3rd person plural).

Moreover, as mentioned in the introduction (cf. Chapter 1), Ligurian SClS always occur before a strong negative element with 1st person (20) and 3rd person referents (21), both singular and plural.

- (20) a. *e nu vegnu* (Ligurian)
 SCl not come.1SG
 ‘I do not come’
- b. * *nu e vegnu*
 not SCl come.1SG
 ‘I do not come’
- (21) a. *a nu vegne*
 SCl not comes.3SG
 ‘She does not come’
- b. * *nu a vegne*
 not SCl comes.3SG
 ‘She does not come’

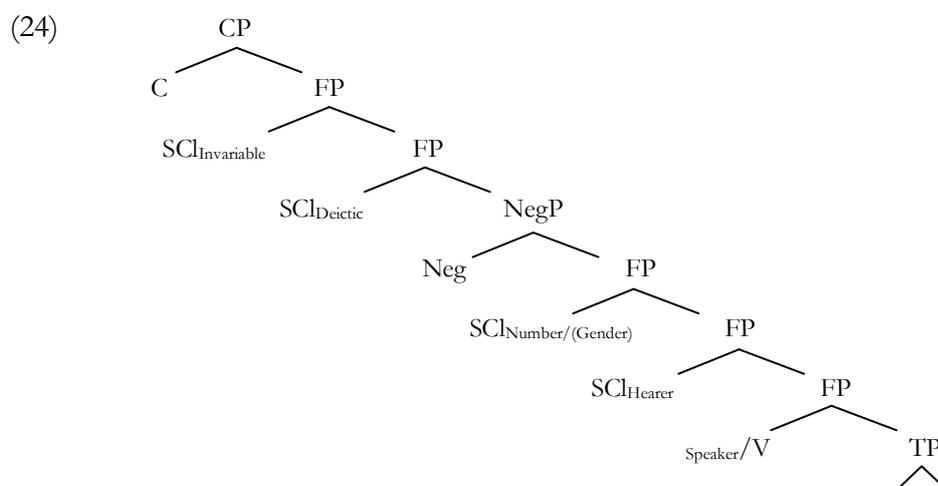
In 2nd person contexts, the position of the SCl shows variation depending on whether it occurs with singular or plural referents. Second person singular contexts allow the SCl to appear both pre and post negation (22), whereas, like the other grammatical persons, 2nd person plural shows the SCl only before negation (23).

- (22) a. *ti nu vegni* (Ligurian)
 SCl not come.2SG
 ‘you do not come’
- b. *nu ti vegni*
 not SCl come.2SG
 ‘you do not come’
- (23) a. *i nu vegni*
 SCl not come.2PL
 ‘You (pl.) do not come’
- b. * *nu i vegni*
 not SCl come.2PL
 ‘You (pl.) do not come’

These two aspects of Ligurian data, namely, the fact that SClS realize phi-features and that they mostly occur before negation, fail to be accounted for by the hypothesis of

multiple agreement projections proposed by Poletto (2000) (cf. Chapter 1, section 1.1.1).

Poletto's structure of SCl projections is repeated in (24) for convenience.



In the structure in (24), SCls that realize phi-features occur below negation (Number SCls and Hearer SCls), whereas the two positions above negation host SCls that do not express agreement features but determine the theme/rheme character of the sentence (Invariable SCls and Deictic SCls) (cf. also Benincà, 1983). In Poletto's (2000:38) subdivision of SCl types, only 2nd person singular and 3rd singular and plural persons have SCls that express agreement (phi-)features and occur below negation (and 1st person features are realized on the finite verb), whereas all grammatical persons occur with theme/rheme related SCls when these are present in a given variety. This categorization is given in (25), where the numbers (1-6) indicate the grammatical person.

(25)

	1	2	3	4	5	6
Invariable	+	+	+	+	+	+
Deictic	+	+	+	+	+	+
Number	-	-	+	-	-	+
Person	-	+	+	-	-	-

Ligurian data pose three main problems for the system proposed by Poletto, at least in its current form. First, although all persons occur with a SCl, there is no single form that occurs with all persons (i.e., no Invariable SCls), nor one that is shared by 1st and 2nd person but not by 3rd person (i.e., no Deictic SCls).

Second, Ligurian SCIs are shown to realize some agreement phi-features not only in 2nd singular and 3rd singular and plural person but in all grammatical persons, and this is supported by the fact that 3rd plural person shares one or more SCI forms with 2nd plural and 1st person (SCI syncretisms).

Third, despite the fact that there are no Invariable/Deictic SCIs and that all SCIs realize some agreement features, Ligurian SCIs always occur above negation, with the only exception of 2nd singular *ti* whose position may vary.

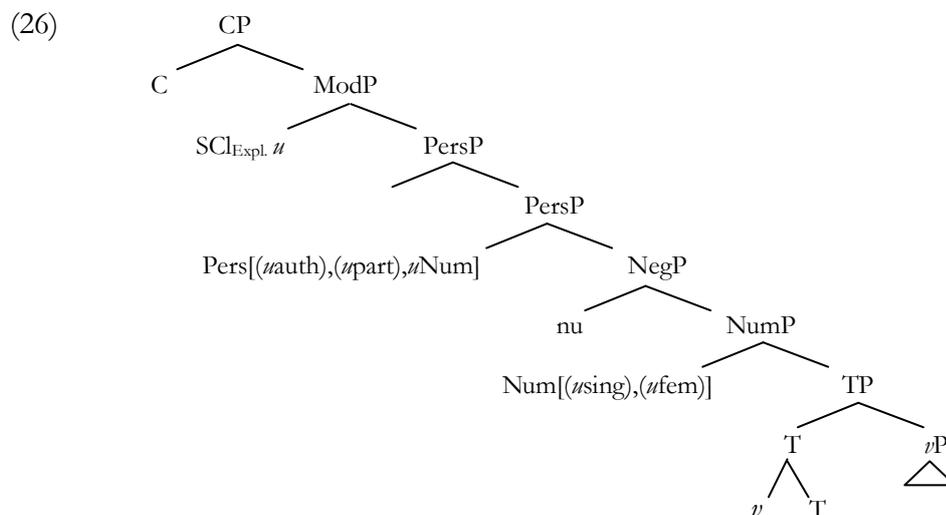
In the following sections, I illustrate how the system I have proposed for the three Ligurian SCI variables under investigation, which departs only in some minor but crucial points from that of Poletto (2000), is suitable to account also for: (i) the fact that all Ligurian SCIs appear before negation despite realizing agreement features, (ii) the underlying syncretisms that characterize the Ligurian SCI paradigm, and finally (iii) the lack of SCI variation with certain singular persons.

6.2.1 Two projections of Agreement: PersonP and NumberP

The structure of multiple Agreement projections hypothesized by Poletto (2000) (cf. (24)) to account for different types of SCI is essentially retained. However, I claim that, rather than expressing the feature(s) of a single distinct head (e.g., SCI_{Number} in (24)), agreement SCIs are in fact the realization of two functional categories of Agreement, namely, Person and Number, and of their phi-features. The category Person involves participant and author features, whereas the category Number is specified for number and gender.

Like Poletto (2000), I locate NumberP below negation (cf. SCI_{Number} in (24)), but differently from the structure she proposes, I assume that the other category of Agreement, namely Person, projects above negation. The complete structure I have hypothesized for Ligurian SCIs in the previous chapters is reproposed in (26). The higher positions for

invariable and deictic SCLs (cf. (24)) are not included in (26) because these SCL types do not occur in Ligurian. However, this system does not exclude their occurrence.



In (26), Person and Number show all the phi-features they potentially bear. However, their specification may lack the features that are shown in bracket. The lack of gender and number on Number is interpreted either as feature underspecification or absence of the syntactic feature (e.g., syntactic gender in 1st and 2nd person).

On the other hand, the nonoccurrence of author or participant on Person is due to the fact that given the value of one feature the specification of the other feature may be redundant (e.g., [participant:-] is implicitly [author:-]).

An agreement SCL expresses both Person and Number. However, one feature in particular is the minimal feature that determines the form of the SCL, and the position where the SCL is realized. I assume the minimal feature to be the feature that the SCL must realize because it may fail to be (or is structurally not) expressed by the other inflectional element, i.e., the finite verb morphology (see further section 6.2.3).

The minimal feature, whose form we have determined by using the algorithm (cf. section 6.1.3), is the feature that feeds the morpho-phonological component (by providing its phonological index). SCL variation arises (i) when more than one phi-feature can be the

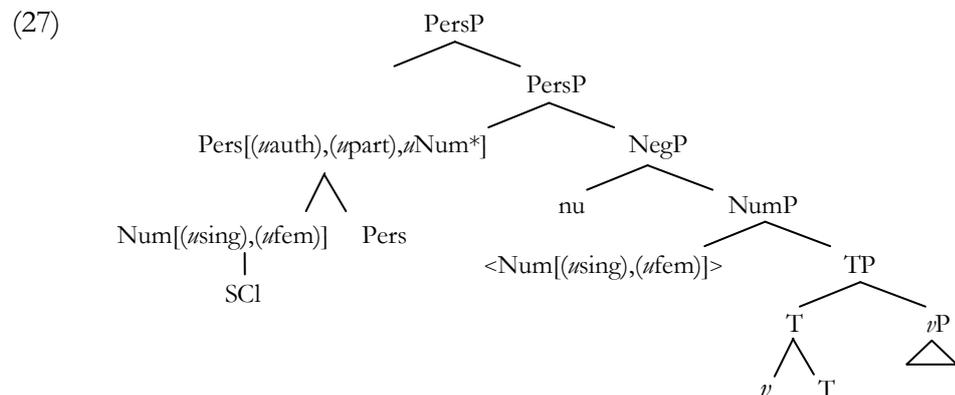
minimal feature for the realization of Person/Number; and/or (ii) when the same minimal feature occurs in the numeration with different values (including lack of value).

Gender is the only minimal feature that, if present, is categorically expressed by the SCl because gender is never realized on the finite verb. If Number is fully specified, that is, if it includes gender, the SCl realizes Number.

When there is no gender specified, the minimal feature that determines the form of the SCl can be one of the remaining phi-features of Number and Person, that is, number or participant/author. When Number lacks gender, Number is realized categorically by the SCl only if the number feature requires to be overtly expressed by an inflectional element other than the verb (see discussion in section 6.2.3). When the overt expression of number is not required, the SCl may realize either the number feature of Number or the participant/author feature of Person. Finally, if both number and gender are underspecified on Number, the SCl expressed the feature(s) of Person.

Person also includes an uninterpretable categorial feature, namely μ Num. The strength of this feature varies from dialect to dialect. In varieties which show agreement SClS occurring below Negation (e.g., the Veneto dialects), this feature is weak and it can be checked without the need for Number to move from its base position. In varieties where agreement SClS (expressing either Person or Number) occur before negation (e.g., Ligurian), this μ Num* feature is strong and causes Number to adjoin to Person.

The position where Ligurian SClS are realized is shown in (27).



Ligurian SCIs realize the head of PersP. If gender is specified on Num, the SCl form is determined by the gender feature. If gender is underspecified on Num, the minimal feature determining the form of the SCl may be the number feature of Num or the author/participant feature of Pers.

This system is able to account for two issues that arise from the multiple agreement structure proposed by Poletto (2000) but are left unexplained. First, the two agreement projections below negation (cf. (24)) cannot be both filled at the same time. According to the system I propose here, the two Agreement projections cannot be realized simultaneously because the SCl realizes both Person and Number and what differs is only the minimal feature that determines the form of the SCl.

Second, in certain varieties (e.g., Ligurian and Tuscan) SCIs are realized below negation but later move above negation for unclear reasons. In the system I have just outlined, movement of the category Number is triggered by the strong μ Num* feature of Person, and the SCl realizes both Number and Person directly on the head of Pers. Cross-linguistic variation is determined by the strength of the μ Num feature.

6.2.2. SCl syncretisms

At the beginning of this chapter, I posed the following questions regarding two formal syncretisms that are found in the Ligurian SCl paradigm:

- (i) why SCl variants *i/e* can alternate with both 2nd and 3rd plural referents (cf. (3.c)) if their specification involves being [μ participant:-] (cf. (5.a,b));
- (ii) whether in 3rd person plural, 2nd person plural, and 1st person (cf. (3.d)) the SCl has different feature compositions that surface with a unique form *e* (e.g., (5.b) and (6.b)), or whether, given the presence of variant *e* with 2nd plural referents, the identity of the surface form is to be re-interpreted as identity of the underlying form.

The results of the algorithm showed that, for both (i) and (ii), the variants that have identical surface form also have the same minimal underlying feature that determines the form of the realization of Agreement (Num/Pers).

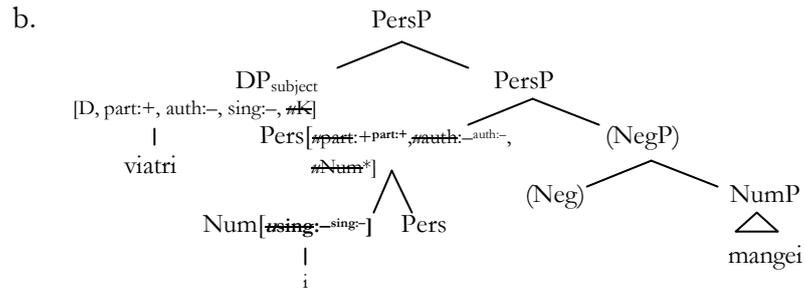
Variant *i* is used for both 2nd and 3rd person plural because the minimal feature it realizes, i.e., [*u*singular:-], is shared by these two contexts as Agreement (in particular, Number) lacks gender (2nd plural) or can be underspecified for gender (3rd plural).

Variant *e* is found in 1st singular and plural, 2nd plural and 3rd plural person because these contexts may have in the numeration an unvalued feature [*u*author:] which can receive either value, namely [*u*author:+^{auth:}] for 1st person and [*u*author:-^{auth:}] for 2nd and 3rd person, though still retaining the original lack of value in the phonological index that feeds the morpho-phonological component. When Number lacks (or is underspecified for) gender, the realization of Agreement can be determined by the phi-feature of Person (author/participant) or that of Number (number), as long as these are minimal features.

The system I developed in the previous chapters and summarized in the previous section, which operates by considering underspecification of features and feature values, allow us to account for SCl variation within the same grammatical person (e.g., *i/e* in 2nd plural and in 3rd plural) and SCl syncretisms across persons (e.g., *e* in all plural persons and in 1st person singular).

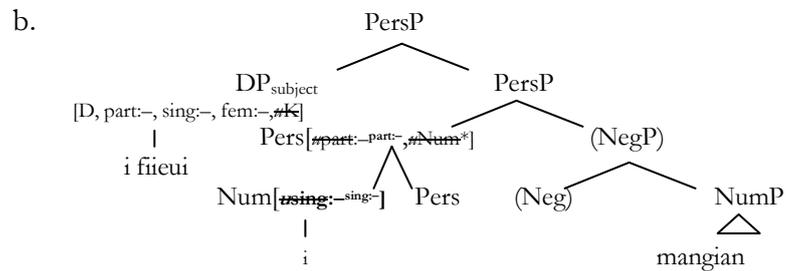
Syncretism of variant i (2nd and 3rd plural). Second plural and 3rd plural contexts lack gender agreement. The (syntactic) gender is feature is absent in 2nd person and can be underspecified in 3rd person plural (cf. Chapter 4). In these contexts, variant *i* realizes the number feature of Number as the minimal feature of the head Pers/Num, as shown in (28) for 2nd plural;

- (28) a. viatri i mangei
 you.SubjPr.2PL SCl eat.Pres.2PL
 ‘you(pl.) eat’



and (29) for 3rd plural person.

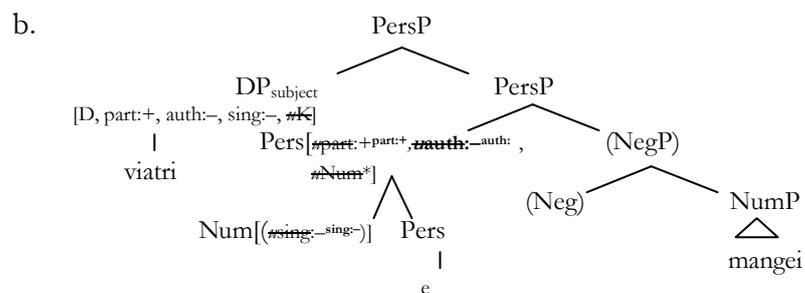
- (29) a. i fiieui i mangian
 the children.Subj.M.PL SCl eat.Pres.3PL
 ‘the children eat’



Syncretism of variant e (1st singular and all plural person). In the same contexts shown in (28) (2nd plural) and (29) (3rd plural), the category Person may occur with an unvalued author feature in the numeration, that is, a minimal feature. In this case, the SCl either realizes the minimal (number) feature of Number (as in (28) and (29)) or the minimal (author) feature of Person (thus giving *i/e* alternation).

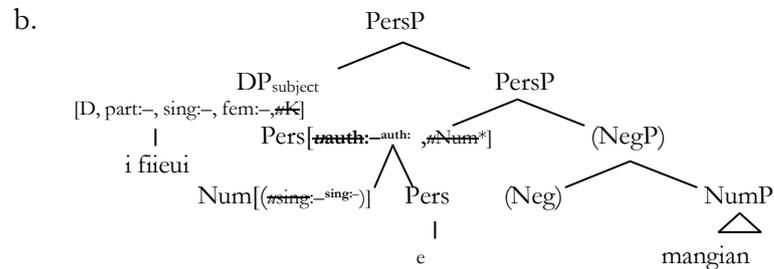
The structure of the latter is shown in (30) for 2nd plural person;

- (30) a. viatri e mangei
 you.SubjPr.2PL SCl eat.Pres.2PL
 ‘you(pl.) eat’



and (31) for 3rd plural.

- (31) a. i fiieui e mangian
 the children.Subj.M.PL SCI eat.Pres.3PL
 ‘the children eat’

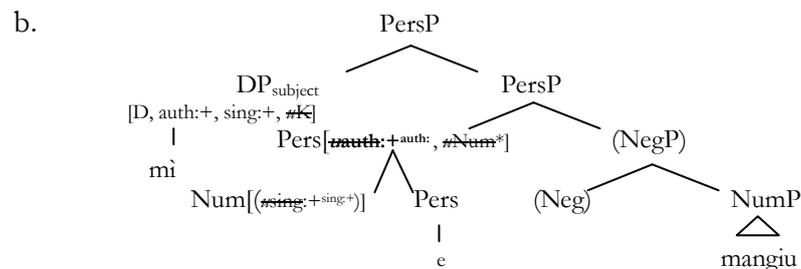


In (30) and (31), the number feature of Num is represented in brackets to indicate that when Number is underspecified for both number and gender features, and has only the categorial feature Num, the form of the SCI is determined by the only minimal feature, that is, the (unvalued) author feature of Pers.

It is worth mentioning that in 3rd plural contexts (cf. (31.b)), the minimal feature on the category Person is in fact an unvalued participant feature. When they lack a value, I take the underlying features [*#author:*] and [*#participant:*] to be the same (cf. also the results of the algorithm in (13.i) and (13.l), and fn.4).

As expected, variant *e* is also found in two other contexts that lack (syntactic) gender on Number, and whose Agreement is realized by the phi-feature of Person, i.e., 1st singular and plural. The structure of the realization of Agreement in 1st singular is given in (32).

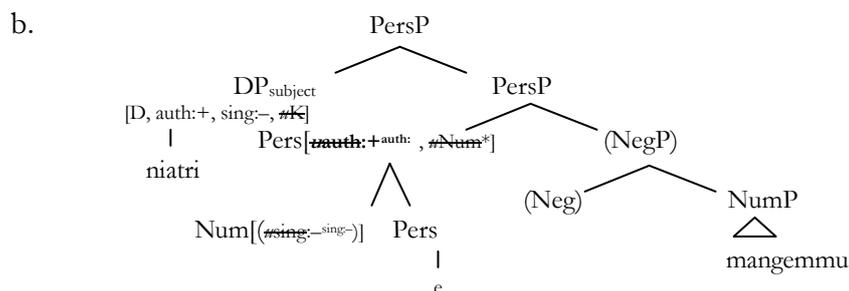
- (32) a. mi e mangiu
 I.SubjPr.1SG SCI eat.Pres.1SG
 ‘I eat’



In (32), the realization of Agreement can only be determined by the author feature of Pers because the number feature of Num, i.e., [*!singular:+*], if specified at all, is not a minimal feature.

Similarly, in 1st person plural the realization of Agreement as variant *e* is due to the minimal (unvalued) author feature of Pers, as in (33).

- (33) a. niatri e mangemmu
 we.SubjPr.1PL SCI eat.Pres.1PL
 ‘we eat’



Ligurian data pose two problems for the system I have outlined. As for 1st person plural contexts, according to the system if Number is specified for the number feature [*!singular:-*], as appears from the structure in (33), in 1st plural contexts Agreement should be realized either by the minimal feature [*!author:*] (as variant *e*) or by the minimal feature [*!singular:-*] (as variant *i*). Instead, the latter is never attested.

A second issue regards those grammatical persons in which variant *e* fail to occur, namely 2nd and 3rd person singular (cf. the Ligurian paradigm in (18)). For 3rd person singular, the lack of overt SCI alternation with variant *e* (*u/*e* and *a/*e*) is due to the fact that, although Person may occur with an unvalued author feature, Number has a syntactic gender feature that must be expressed and categorically determines the form of the SCI.

As regards 2nd person singular, Number lacks a syntactic gender feature, and the system predicts that the realization of the minimal feature of Number should be able to alternate with that of Person, giving *ti/e* variation. However, SCI *ti* never alternates with variant *e* in Ligurian.

In the next section, in order to account for the lack of *e*/**i* alternation in 1st plural contexts and the absence of *ti*/**e* variation in 2nd singular contexts in Ligurian, I provide a tentative explanation that involves the category Number and the finite verb.

6.2.3 NumberP and finite verb agreement

In this section, I provide a speculative account for the fact that, despite being predicted by the system of SCl variation that I have proposed, overgeneration of variant *e* and variant *i* is not allowed by the grammar in Ligurian. And I do this by considering the syncretisms that Ligurian finite verb forms show and the presence or absence of SCl variation with these syncretic verb forms.

Ligurian shows most syncretic forms in the imperfect indicative, in the conditional and in the subjunctive. However, for the sake of this investigation I only consider the paradigm of the imperfect indicative. In (34) is the paradigm of the imperfect tense of the regular verb *parlà* ‘to speak’.

(34) SCl variation in the paradigm the verb *parlà* ‘to speak’
(imperfect indicative)

	<i>First person</i>	<i>Second person</i>	<i>Third person</i>	
<i>Singular</i>	a parlav- u e parlav- u Ø parlav- u	ti parlav- i *e parlav- i *Ø parlav- i	u parlav- a /a parlav- a *e parlav- a Ø parlav- a	
<i>Plural</i>	a parlav- mu e parlav- mu Ø parlav- mu	i parlav- i e parlav- i Ø parlav- i	i parlav- a e parlav- a Ø parlav- a	i parlav- an e parlav- an Ø parlav- an

In (34), only the 1st person distinguishes between singular and plural number in the verb ending, with 1st singular ending *-u*, and 1st plural *-mu*. The other grammatical persons show the same ending for singular and plural number, as in the case of 2nd person *-i*, or

have two endings for the plural, one matching the one of the singular and the other restricted to the plural, as for 3rd person plural *-a* and *-an* respectively.⁶

The paradigm in (34) also shows whether a given verb form occurs with a single SCl form, or whether it allows SCl variation. While all plural verb forms allow for both overt SCl variation and a zero SCl form, singular verb forms differ in this respect. First person singular shows full SCl variation, whereas 2nd and 3rd person singular only allow one overt SCl form, and only for 3rd person also the zero form.

I claim that in Ligurian Tense can be underspecified for the number feature. In 2nd and 3rd person (cf. (34)), the form of the verb is syncretic for singular and plural persons because the verbal inflection (Tense) lacks number specification. When Tense is underspecified for number and the verb is syncretic, in order to distinguish between singular and plural number agreement, this variety requires singular number agreement to be overtly expressed by the SCl (that realizes the number feature of the category Number). In contrast, plural number is either realized by the SCl or not expressed at all.

In (35), this is illustrated for 2nd person.

(35)

<i>Second person</i>			
<i>Singular</i>		<i>Plural</i>	
ti	parlav- i [sing:+] 2	i	parlav- i [sing:-] 2
* e	parlav- i [auth:] 2	e	parlav- i [auth:] 2
* Ø	parlav- i 2	Ø	parlav- i 2

⁶ Two of the older speakers make also use of an ending *-a* for 1st person singular imperfect forms. The fact that younger speakers do not use this ending variant suggests that this is an old form of the dialect on which the discrete ending *-u* has prevailed in the grammar of younger generations. Interestingly, this ending *-a* is still used by speakers that also show use of SCl *a* for 1st person, particularly by speaker A (cf. Chapter 5). The fact that these older speakers have in their speech a unique verb form *e/a/Ø parlavmu* for plural number but co-occurrence of the forms *e/a/Ø parlava* and *e/a/Ø parlavu* for singular number suggests that, for 1st person, plural number is the first feature that has been absorbed by the verb inflection, while for singular number this change has begun at a later stage, and is still ongoing in some verbal paradigms (e.g., conditional and subjunctive).

Second person plural contexts allow number not to be overtly expressed on either the verb morphology or the SCl. Thus, in these contexts variant *i*, which realizes number, alternates with *e* and a zero form (nonpronunciation of the SCl position). On the contrary, in 2nd singular contexts variant *ti*, which realizes singular number, does not alternate with an overt variant *e* nor with a zero form as the number feature would remain unexpressed (for the occurrence of post-negative *ti* see section 6.2.4).

A similar account is proposed for the lack of *u/*e* and *a/*e* alternation in 3rd person singular contexts (36).

(36)

			<i>Third person</i>					
<i>Singular</i>			<i>Plural</i>					
u/a [fem:±]	parlav- a	3	i	parlav- a	3	i	parlav- an	3[sing:-]
*e [auth:]	parlav- a	3	e	parlav- a	3	e	parlav- an	3[sing:-]
∅ [fem:]	parlav- a	3	∅	parlav- a	3	∅	parlav- an	3[sing:-]

In 3rd singular contexts, the realization of the number feature on the SCl is compulsory because the category Number includes a syntactic gender feature, which must be expressed on Agreement as variants *u* and *a* or as a null variant \emptyset . Variant *e* fails to occur in 3rd singular contexts because it does not express number and it cannot be realized when syntactic gender is present.

In 3rd plural contexts, plural number is realized either on Agreement (variant *i*), or by the verb when Tense is not underspecified for number (ending *-an*), or else it is not realized on either of the inflectional elements (e.g., *e parlava*).

Of all grammatical persons, 1st person is the only one that expresses person and either values of number on the verb morphology (cf. (34)). Ligurian data support the claim made by Poletto (2000) that ‘speaker’ is the agreement feature that is always realized on the

verb (cf. (24)). The difference between her analysis and the one I have outlined is that, in my account, 1st person specification on the verb is the expression of the person feature of Tense (that is in fact realized for all persons as from the paradigm in (34)), and not of the person feature of Agreement (Person), which is still realized by a SCl.

In Ligurian, the lowest category of Agreement that is found to interact with the realization of the inflectional phi-features of Tense is not Person but Number. First person shows this interaction between the category Number of Agreement and Tense by always expressing a number feature on the finite verb morphology.

Second and third persons instead do not show complete interaction between Number and Tense. This is due to the fact that Number involves phi-features that are not included in the specification of Tense (i.e., gender), or that the realization of the number feature of Number on Agreement (i.e., by the SCl) is required in this variety to disambiguate synthetic verb forms.

Following Zanuttini (1997), I claim that the interaction between the category Number (of Agreement) and Tense that has been hypothesized to account for Ligurian data regarding SCl variation is to be considered as an ongoing downward movement of the Agreement projections towards Tense in this variety. And the closest Agreement category that is found to interact with Tense is Number.

The downward movement of Number and interaction with Tense is visible on verb morphology (for 1st person singular and plural) and on the use of the overt realization of Number only when verbal inflection requires it for disambiguation purposes (2nd and 3rd person). The fact that all agreement SCls occur before negation in Ligurian, including those expressing the phi-features of Number, is likely to be related to the need to realize these phi-features on a syntactic position that is independent from that of the verb, that is, on the head of PersP.

A further indication of this ongoing lowering process of Agreement in Ligurian is the fact that this variety is one of the few northern Italian dialects (together with some Lombard varieties) to have lost SCl-verb inversion in *wh*-questions and consequently V-to-C movement. The correlation between the prenegative position of agreement SCls in Ligurian, the lowering of the category Number and the loss of SCl-inversion is an issue that should be investigated further, and I leave this to future work.

In the next and final section, I speculate on the occurrence of 2nd person singular agreement SCl *ti* below negation.

6.2.4 *Post-negative ti*

At the beginning of this chapter (section 6.1.1) I mentioned a further issue regarding the lack of zero form with 2nd person singular:

- (iv) why 2nd person singular *ti* differs from 2nd person plural *i/e* by not allowing syntactic and phonological factors to trigger the zero form (cf. (3.f)).

In the light of what I have claimed with regard to syncretic verb form, we can account for this discrepancy by saying that in Ligurian singular number has to be expressed on the SCl in 2nd person, thus phonological truncation and phonological deletion do not apply when the inflectional features require overt realization.

However, one could object that 3rd person also requires singular number to be phonologically expressed, and nonetheless syntactic and phonological factors are found to affect the phonological realization of an overt variant in these contexts.

Interestingly, not only 2nd singular *ti* fails to be affected by phonological blocking or deletion, but it is the only agreement SCl in Ligurian that can appear below negation, as we saw in (22) repeated here as (37).

- (37) a. *ti nu vegni*
 SCl not come.2SG
 ‘you do not come’

- b. nu ti vegni
 not SCl come.2SG
 ‘you do not come’

So why is *ti* not phonologically blocked or deleted? And above all why can *ti* amongst all other SCls occur below negation in Ligurian?

I consider the occurrence of post-negative *ti* as a way in which this variety preserves the overt realization of the (singular) number feature of Number when phonological truncation and deletion take place.

In 2nd person singular, although the realization of Number and Person on the head of PersP (i.e., the overt SCl *ti*) is nonpronounced due to syntactic blocking or deleted in a given phonological context, singular number is conveyed by another clitic-like element *ti* that appears below negation.

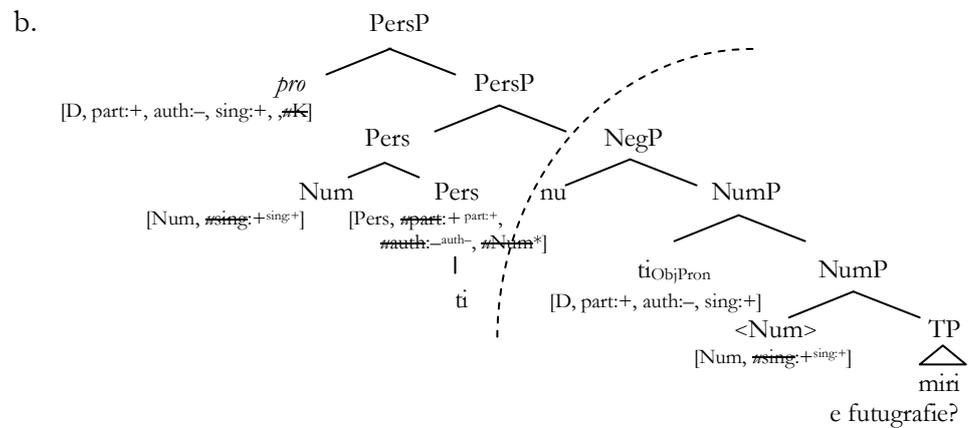
The fact that in Ligurian 2nd singular *ti* is the only subject clitic element to occur below negation, that is, the usual position of object clitics in this variety, resembles the use of the OCl *te* in some regional varieties of Italian *in lieu* of the subject pronoun *tu* (e.g., It. *te guardi le foto?* vs. *tu guardi le foto?* ‘do you look at the pictures?’) (R. D’Alessandro, p.c.).

The speculative account I provide of post-negative *ti* in Ligurian is based on this similarity with the use of OCl *te* in regional Italian 2nd singular contexts. However, I claim that post-negative *ti* is not an OCl nor occupies an OCl position, and this due to the fact that post-negative *ti* can co-occur with an OCl, as in (38).

- (38) nu ti me miri?
 not SCl me.OCl watch.2SG
 ‘don’t you look at me?’

Instead, I suggest that post-negative *ti* is in fact an object pronoun (cf. also the form of OCl *te* vs. ObjPron *ti*) that occupies the specifier position of NumP (below negation), the projection headed by the copy of Number. Although the copy of Number is phonologically null, overt expression of the singular number feature is provided by pronominal *ti*, as in (39).

- (39) a. nu ti miri e futugrafie?
 not (S)Cl watch.2SG the pictures.Obj
 ‘are you(sg) not looking at the pictures?’



The other person that similarly requires number (and gender) to be expressed on the SCl is 3rd singular. However, unlike for 2nd singular, 3rd singular does not make use of pronominal/clitic elements to express number (and gender) as 3rd singular object pronouns do not have a clitic-like form (*vellu/vella*) and if OClS *u/a* were merged in the specifier of NumP or indeed in an OCl position, this would generate potential ambiguity in the meaning.

In 3rd singular contexts, the copy of Num (including number and gender features) is simply spelled out as phonologically null, as suggested by the fact that in (40) the post-negative clitic *a* can only be interpreted as an OCl.

- (40) nu a beve
 neg OCLF.SG drink.3SG
 ‘he/she doesn’t drink it’ / *‘she doesn’t drinks’

In order to avoid further ambiguity in the meaning, in 3rd singular person the number (and gender) feature of Num is either expressed by an overt SCl above negation, or it remains unexpressed.

6.3 Conclusion

In this chapter, the formal analysis of SCl variation that was proposed in the previous chapters was fine-tuned and extended in order to account also for SCl and SCl variables that were not considered in the main data analyses, namely 2nd person. The form of SCl variants was refined or determined by means of an algorithm which showed that the use of the same SCl in singular and plural contexts of the same person, or across different grammatical persons, entails almost always mapping of a variant to a single underlying form.

Furthermore, the underlying specification of SCl variants and their positions in relation to negation were used to develop a system based on the realization of the functional categories of Agreement, namely Person and Number, that is suitable to account for pre-negative and post-negative agreement SCl across varieties. In Ligurian, the realization of Number was found to interact with the morphological expression of phi-features on the finite verb.

CHAPTER 7

CONCLUSION

This thesis investigated the behaviour of three variables in the Ligurian subject clitic paradigm, namely 3rd singular variable *u*, *a/Ø*, 3rd plural variable *i/e/Ø*, and 1st person variable *e/a/Ø*. The analysis of these variables considered overt/zero SCl alternation, and overt SCl variation, and determined that the variability of the SCl form is affected by language-internal, processing, and external factors.

SCl variation was accounted for by adopting a feature-based approach that involves principles and operations of minimalist theory, including underspecification of features and feature values (cf. Adger & Smith, 2005, to appear; Adger, 2006, 2007). In a given variable, each SCl variant differs from other variants because it overtly expresses either (i) a different phi-feature combination, which involves underspecification of features; or (ii) the same feature(s) with a different value; or (iii) the same feature(s) without value.

On the basis of an existing structure of multiple agreement projections for agreement SCls in northern Italian varieties (Poletto, 2000), this thesis proposed a system that, unlike the former, is able to account for SCl variation within the same language by considering the underlying feature specification of the variants, and for the pre- and post-negative position of agreement SCls by reconsidering the syntactic position of the categories of Agreement, i.e., Person and Number, and their role as inflectional elements in relation to Tense.

Furthermore, it was argued that the I-grammar of Ligurian speakers allows four different ways of generating the zero SCl form. First, as a null SCl variant that realizes gender and number features, which are underspecified for value. Second, as phonological nonrealization of the SCl position due to the blocking effect of intervening clitics on independent functional positions. Third, as absence of morpho-syntactic features in the SCl

position, due to the semantic expression of such features by another element in the sentence. Fourth, as phonological deletion of an overt SCl variant that occurs in a given phonological context.

Contrary to what has been found in other northern Italian varieties (cf. Moretti, 1999), the occurrence of a zero SCl in Ligurian is not found to be affected by the age of the speaker in either of its forms, as the use of zero form with each SCl variable remains constant across age groups. However, given the limited age gap between the two groups of speakers, the results of the present analysis for the impact of age on SCl variation are only indicative, and no firm conclusion can be drawn regarding the impact that the use of Italian, a non-SCl language, has on the use of the zero form across generations. Overall, the nonsignificance of speaker's age on SCl variation is an unexpected result that deserves further investigation.

According to Adger (2007) and Adger & Smith (to appear), variants are generated by an individual's I-grammar, and constitute a 'Pool of Variants' from which they are selected by intervening linguistic, processing, and extralinguistic factors in order to be used in an utterance.

Variability of the Ligurian SCl variants was influenced by internal linguistic factors, such as syntactic and morpho-syntactic elements, and phonological context, by the processing effect involving recency of the same variant and, in one instance of overt SCl alternation, by the external variable age of the speaker. The impact of these factors on SCl variability was explained by assuming that each factor triggers the choice of one variant from the 'Pool of Variants'. If more than one factor select the same variant, or variants that have the same phonological form, the probability of occurrence of this form increases (cf. Adger, 2007).

At the level of the variety, it was found that there is multiple choice for SCl variability in the grammar, and that there are multiple factors that influence the variability. However,

the choice and the factors that affect SCl variability are not homogenous across all speakers, as was evident from cases of inter-speaker variation.

At the level of the individual, the different individual I-grammars make different use of the multiple choice that the grammar of the variety offers. The grammar of some individual speakers uses only of some of the multiple options that generate SCl variability in the language of other members of the community. Thus, inter-speaker variation arises. Nonetheless, individuals' I-grammars recognize the existence of the other instances of multiple choice which are available to, though not necessarily used by, all speakers of the same community. Hence, mutual intelligibility is always achieved.

In the analysis of inter-speaker variation in Ligurian, the distinction between availability and use of multiple choice for SCl variability was supported by the fact that a same speaker would show use of one way of triggering the zero form (e.g., phonological deletion) with one SCl variable but not with another, and vice versa.

Furthermore, for each SCl variable the internal hierarchies of factors varied from speaker to speaker (contra Labov, 1994). This finding suggests that, although SCl variability is subject to factors that operate at the level of the variety, changes in the effect of these factors on variability may already be effective at the level of the speaker, namely, in the individual I-grammars.

To conclude, this thesis showed that SCl variation and SCl variability in Ligurian may be accommodated within a single underlying grammar, which generates the choice of multiple ways of triggering variability for individual speakers (in their individual I-grammars). Further research on microvariation and microvariability both at the level of the community and at the level of individual speakers will allow us to broaden our understanding of the mechanisms that regulate the common underlying grammar of a variety and its individual use.

REFERENCES

- Adger, D. (2003). *Core Syntax. A Minimalist Approach*. Oxford: OUP.
- Adger, D. (2006). Combinatorial Variability. *Journal of Linguistics* 42, 503-530.
- Adger, D. (2007). Variability and modularity: A response to Hudson. *Journal of Linguistics* 43, 695-700.
- Adger, D. (2008). A minimalist theory of feature structure. (ms.) Queen Mary, University of London.
- Adger, D. & Smith, J. (2005). Variation in the Minimalist Program. In L. Cornips & K. Corrigan (eds.), *Syntax and Variation: reconciling the biological and the social*. Amsterdam: John Benjamins, 149-178.
- Adger, D. & Smith, J. (to appear). Variation in Agreement: a lexical feature-based approach. To appear in *Lingua*.
- Alexiadou, A. & Anagnostopoulou, E. (1998). Parametrizing AGR: Word order, V-movement and EPP Checking. *Natural Language and Linguistic Theory* 16: 491-539.
- Anttila, A. (2002). Variation and Phonological Theory. In J. K. Chambers, P. Trudgill & N. Schilling-Estes (eds.), *The Handbook of Language Variation and Change*. Malden, MA: Blackwell Publishers, 206-243.
- Baker, M. (2008). *The Syntax of Agreement and Concord*. Cambridge: CUP.
- Barbiers, S., Koenenman, O., Lekakou, M. & van der Ham, M. (2008). *Microvariation in Syntactic Doubling. Syntax and Semantics Volume 36*. Bingley: Emerald.
- Barbosa, P. (1994). Towards a new look at the Null Subject Parameter. Paper presented at Console, Venice, November 1994.
- Barras, C. (1998). Transcriber. Computer program. <http://www.etca.fr/CTA/gip/Projets/Transcriber/>
- Belletti, A. (1988). The Case of Unaccusatives. *Linguistic Inquiry* 19, 1-34.
- Belletti, A. (1990). *Generalized Verb Movement*. Turin: Rosenberg and Sellier.
- Belletti, A. (2006). Agreement projections. In M. Baltin & C. Collins (eds.), *Contemporary Syntactic Theory*. Oxford: Blackwell, 483-510.
- Benincà, P. (1983). Il clitico “a” nel dialetto padovano. In *Scritti linguistici in onore di Giovan Battista Pellegrini*. Pisa: Pacini, 25-32.
- Benincà, P. & Cinque, G. (1985). Lexical subjects in Italian and the pro-drop parameter. Paper presented at the Comparative Generative Grammar Fiesta, Salzburg, August 1985.

- Benincà, P. & Poletto, C. (2005). The third dimension of personal features. In L. Cornips & K. Corrigan (eds.), *Syntax and Variation: Reconciling the Biological and the Social*. Amsterdam: John Benjamins, 265-299.
- Benveniste, E. (1966). Structure des Relations dans le Verbe. In *Problèmes de Linguistique Générale*. Paris: Gallimard, 195-204.
- Berruto, G. (1987). *Sociolinguistica dell'italiano contemporaneo*. Roma: La Nuova Italia Scientifica.
- Berruto, G. (1989). On the typology of linguistic repertoires. In U. Ammon (ed.), *Status and functions of languages and language varieties*. Berlin/New York: De Gruyter, 552-569.
- Blake, R. (1997). Defining the envelope of linguistic variation: The case of “don’t count” forms in the copula analysis of African American Vernacular English. *Language Variation and Change* 9, 57-79.
- Blom, J.-P. & Gumperz, J. J. (1972). Social meaning in linguistic structure: Code-Switching in Norway. In J. J. Gumperz & D. Hymes (eds.), *Directions in sociolinguistics*. New York: Holt, Rinehart and Winston, 407-434.
- Bobaljik, J.D. & Jonas, D. (1996). Subject Positions and the Roles of TP. *Linguistic Inquiry* 27, 195-236.
- Brandi, L. & Cordin, P. (1989). Two Italian dialects and the Null Subject Parameter. In O. Jaeggli & K. Safir (eds.), *The Null Subject Parameter*. Dordrecht: Kluwer Academic Publishers, 111-142.
- Branigan, H. (1995). *Language Processing and the Mental Representation of Syntactic Structure*. Ph.D. dissertation, University of Edinburgh.
- Browne, W. & Vattuone, B. (1975). Theme-Rheme Structure and Zenéyze Clitics. *Linguistic Inquiry* 6, 136-140.
- Buescher, S. (2006). An analysis of the use of cognitive verbs in American English conversation. Paper presented at the 32nd Annual Meeting of the Berkeley Linguistics Society, Berkeley, CA, February 2006.
- Burzio, L. (1986). *Italian Syntax. A Government-Binding Approach*. Dordrecht: Reidel Publishing Company.
- Cardinaletti, A. (1997). Subjects and clause structure. In L. Haegeman (ed.), *The New Comparative Syntax*. New York: Longman, 33-63.
- Cardinaletti, A. (2008). On different types of clitic cluster. In C. De Cat & K. Demuth (eds.), *The Bantu-Romance Connection. A comparative investigation of verbal agreement DPs and information structure*. Amsterdam: John Benjamins, 41-82.
- Cardinaletti, A. & Repetti, L. (2004). Subject Clitics and Functional Vowels in Northern Italian Dialects. (ms). Cà Foscari, University of Venice.

- Cardinaletti, A. & Repetti, L. (2005). Preverbal and Postverbal Subject Clitics in Northern Italian Dialects: Phonology, Syntax and Cross-Linguistic Variation. (ms). Cà Foscari, University of Venice.
- Cedergren, H. J. & Sankoff, D. (1974). Variable Rules: Performance as a Statistical Reflection of Competence. *Language* 50, 333-355.
- Chomsky, N. (1977). *Essays on form and interpretation*. Amsterdam: Elsevier North-Holland.
- Chomsky, N. (1981). *Lectures on Government and Binding*. Dordrecht: Foris.
- Chomsky, N. (1993). A minimalist program for linguistic theory. In K. Hale & S. Keyser (eds.), *The View from Building 20*. Cambridge, MA: MIT Press, 1-52.
- Chomsky, N. (1995). *The Minimalist Program*. Cambridge, MA: MIT Press.
- Chomsky, N. (2000). Minimalist Inquiries: The Framework. In R. Martin, D. Michaels, & J. Uriagereka (eds.), *Steps by Steps: Essays on Minimalist Syntax in Honor of Howard Lasnik*. Cambridge, MA: MIT Press.
- Chomsky, N. (2001). Derivation by phase. In M. Kenstowicz (ed.), *Ken Hale: A Life in Language*. Cambridge, MA: MIT Press, 1-52.
- Chomsky, N. (2005). On phases. (ms). MIT.
- Ciarlo, C. (2007). On the nature of *l'* in Ligurian: clitic or phonological element? Paper presented at XXXV Romance Linguistics Seminar, Cambridge, January 2007.
- Cinque, G. (1988). On *si* constructions and the theory of *arb*. *Linguistic Inquiry* 19, 521-581.
- Clements, G. N. (1999). The Geometry of Phonological Features. In J. A. Goldsmith (ed.), *Phonological Theory: The Essential Readings*. Malden, MA: Blackwell Publishers, 201-223.
- Cornips, L. & Poletto, C. (2005). On standardizing syntactic elicitation techniques (part 1). *Lingua* 115, 939-957.
- D'Alessandro, R. (2004) *Impersonal si constructions. Agreement and Interpretation*. Ph.D. dissertation, University of Stuttgart.
- D'Alessandro, R. & Roberts, I. (2008). Movement and agreement in Italian past participles and defective phases. *Linguistic Inquiry* 39,477-491.
- D'Alessandro, R. & Roberts, I. (2010). Past participle agreement in Abruzzese: split auxiliary selection and the null-subject parameter. *Natural Language and Linguistic Theory* 28, 41-72.
- De Cat, C. (2005). French subject clitics are not agreement markers. *Lingua* 115, 1195-1219.
- De Mauro, T. (1993). *Storia linguistica dell'Italia unita*. Bari: Edizioni Laterza.

- Di Sciullo, A. M. & Isac, D. (2003). Ways of agreeing, phases and interfaces. Lisbon Workshop on Agreement. Universidade Nova di Lisboa.
- Egerland, V. (2003). Impersonal pronouns in Scandinavian and Romance. *Working Papers in Scandinavian Syntax* 71, 75-102. Department of Scandinavian Languages, Lund University.
- Embick, D. (2008). Variation and Morphosyntactic Theory: Competition Fractionated. *Language and Linguistics Compass* 2, 59-78.
- Enç, M. (1991). The Semantics of Specificity. *Linguistic Inquiry* 22, 1-25.
- Ferguson, C. A. (1959). Diglossia. *Word* 15, 325-340.
- Forner, W. (1997). Liguria. In M. Maiden & M. M. Parry (eds.), *The Dialects of Italy*. Routledge: London, 245-252.
- Frascarelli, M. (2007). Subjects, topics and the interpretation of referential *pro*. *Natural Language and Linguistic Theory* 25, 691-734.
- Goria, C. (2004). *Subject Clitics in the Northern Italian Dialects. A Comparative Study Based on the Minimalist Program and Optimality Theory*. Dordrecht: Kluwer.
- Greenberg, J. H. (1963). Some universals of grammar with particular reference to the order of meaningful elements. In J. H. Greenberg (ed.), *Universals of Language*. Cambridge, MA: MIT Press, 73-113.
- Halle, M. (1997). Distributed Morphology: impoverishment and fission. *MIT Working Papers in Linguistics* 30, 425-449.
- Halle, M. & Marantz, A. (1993). Distributed Morphology and the Pieces of Inflection. In K. Hale & S. J. Keyser (eds.), *The View from Building 20*. Cambridge, MA: MIT Press, 111-176.
- Harbour, D. (2009). Valence and Atomic Number. To appear in *Linguistic Inquiry*.
- Harley, H. & Noyer, R. (1999). Distributed Morphology. *Glott International* 4, 3-9.
- Harley, H. & Ritter, E. (2002). Person and number in pronouns: a feature-geometric analysis. *Language* 78, 482-526.
- Heap, D. (2002). Split Subject Pronoun Paradigms. Feature geometry and underspecification. In T. Satterfield, C. Tortora & D. Cresti (eds.), *Current Issues in Romance Languages*. Amsterdam: John Benjamins, 129-144.
- Heim, I. (1982). *The Semantics of Definite and Indefinite Noun Phrases*. Ph.D. dissertation, University of Massachusetts, Amherst.
- Henry, A. (1995). *Belfast English and Standard English. Dialect Variation and Parameter Setting*. Oxford: OUP.

- Henry, A. (2002). Variation and Syntactic Theory. In J. K. Chambers, P. Trudgill & N. Schilling-Estes (eds.), *The Handbook of Language Variation and Change*. Oxford: Blackwell, 267-282.
- Henry, A. (2005). Idiolectal variation and syntactic theory. In L. Cornips & K. Corrigan (eds.), *Syntax and Variation: reconciling the biological and the social*. Amsterdam: John Benjamins, 109-122.
- Holmberg, A. (2005). Is There a Little Pro? Evidence from Finnish. *Linguistic Inquiry* 36, 533-564.
- Hornstein, N., Nunes, J., & Grohmann, K. K. (2005). *Understanding Minimalism*. New York: CUP.
- Kayne, R. S. (1975). *French Syntax*. Cambridge, MA: MIT Press.
- Kayne, R. S. (1983). Chains, Categories External to S, and French Complex Inversion. *Natural Language and Linguistic Theory* 1, 107-139.
- Kayne, R. S. (1989). Facets of Romance past participle agreement. In P. Benincà (ed.), *Dialect Variation and the Theory of Grammar*. Proceedings of the GLOW Workshop in Venice, 1987. Dordrecht: Foris, 85-103.
- Kayne, R. S. (1994). *The Antisymmetry of Syntax*. Cambridge, MA: MIT Press.
- Kayne, R. S. (2000). *Parameters and Universals*. New York: OUP.
- Kayne, R. S. (2006). Silent Clitics. Talk given at CAMLING, Cambridge, 17 March, 2006.
- Kroch, A. (1994). Morphosyntactic Variation. In K. Beals, R. Knippen, L. Melnar, H. Suzuki & E. Zeinfeld (eds.), *Papers from the 30th Regional Meeting of the Chicago Linguistic Society: Parasession on Variation and Linguistic Theory*. Chicago, IL: Chicago Linguistic Society, 180-201.
- Labov, W. (1969). Contraction, deletion, and inherent variability of the English copula. *Language* 45, 715-762.
- Labov, W. (1972). *Sociolinguistic Patterns*. Philadelphia: University of Pennsylvania Press.
- Labov, W. (1984). Field methods of the project on linguistic change and variation. In J. Baugh & J. Sherzer (eds.), *Language in Use*. Englewood Cliffs, NJ: Prentice-Hall, 28-53.
- Labov, W. (1994). *Principles of Linguistic Change. Volume I: Internal Factors*. Cambridge, MA: Blackwell Publishers.
- Labov, W. (2008). Defining the Site of Linguistic Variation. Talk given at Workshop on Locating Variability: Formal Approaches, Amherst, April 2008.

- Manzini, M. R. (2008). Doubling of clitics and doubling by clitics: The case of negation. In S. Barbiers, O. Koenenman, M. Lekakou & M. van der Ham (eds), *Microvariation in Syntactic Doubling. Syntax and Semantics Volume 36*. Bingley: Emerald, 69-101.
- Manzini, M. R. & Savoia, L. M. (2001). The syntax of object clitics: *si* in Italian dialects. In G. Cinque & G. Salvi (eds.), *Current Studies in Italian Syntax. Essays offered to Lorenzo Renzi*. Oxford: Elsevier, 233-264.
- Manzini, M. R. & Savoia, L. M. (2002). Parameters of Subject Inflection in Italian Dialects. In P. Svenonius (ed.), *Subjects, Expletives and the EPP*. New York: OUP.
- Manzini, M. R. & Savoia, L. M. (2004). Clitics. Cooccurrence and Mutual Exclusion Patterns. In L. Rizzi (ed.), *The Structure of CP and IP*. Oxford: OUP, 211-250.
- Manzini, M. R. & Savoia, L. M. (2005). *I dialetti italiani e romanci. Morfosintassi generativa*. Alessandria: Edizioni dell'Orso.
- Manzini, M. R. & Savoia, L. M. (2010). Lexicalization of 3rd person object clitics: clitic enclisis and clitic drop. In R. D'Alessandro, A. Ledgeway, I. Roberts (eds.), *Syntactic variation. The dialects of Italy*. Cambridge: CUP, 102-118.
- Marcato, C. (2002). *Dialetto, dialetti e italiano*. Bologna: Il Mulino.
- Milsark, G. (1974). *Existential Sentences in English*. Ph.D. dissertation, MIT, Cambridge, MA.
- Moretti, B. (1999). *Ai margini del dialetto*. Locarno: Armando Dadò editore.
- Nevins, A. (2007). The representation of third person and its consequences for person-case effects. *Natural Language and Linguistic Theory* 25, 273-313.
- Nunes, J. (2004). *Linearization of Chains and Sideward Movement*. Cambridge, MA: MIT Press.
- Parry, M. M. (1991). Innovazione e conservazione nell'entroterra savonese: Appunti di morfosintassi valbormidese. In L. Massobrio & G. Petracco Sicari (eds.), *Studi linguistici sull'anfizionia ligure-padana*.
- Parry, M. M. (1995). Some Observations on the Syntax of Clitic Pronouns in Piedmontese. In J. C. Smith & M. Maiden (eds.), *Linguistic Theory and the Romance Languages, Current Issues in Linguistic Theory*, 122. Amsterdam: John Benjamins, 133-160.
- Parry, M. M. (2002). The Challenges to Multilingualism Today. In A. L. Lepschy & A. Tosi (eds.), *Multilingualism in Italy Past and Present*. Oxford: Legenda, 47-59.
- Parry, M. M. (2005). *Sociolinguistica e grammatica del dialetto di Cairo Montenotte. Parluma 'd Còiri*. Savona: Società Savonese di Storia Patria.
- Pesetsky, D. & Torrego, E. (2001). T to C movement: causes and consequences. In M. Kenstowicz (ed.), *Ken Hale: A Life in Language*. Cambridge, MA: MIT Press, 355-426.

- Pinto, M. (1997). *Licensing and Interpretation of Inverted Subjects in Italian*. Ph.D dissertation, University of Utrecht.
- Poletto, C. (1993). *La sintassi del soggetto nei dialetti italiani settentrionali*. Padova: Unipress.
- Poletto, C. (2000). *The Higher Functional Field*. New York: Oxford University Press.
- Pollock, J.-Y. (1989). Verb Movement, Universal Grammar and the Structure of IP. *Linguistic Inquiry* 20, 365-424.
- Poplack, S. (1980). The notion of plural in Puerto Rico Spanish: Competing constraints on /s/ deletion. In W. Labov (ed.), *Locating language in time and space*. New York: Academic, 55-67.
- Prince, E. F. (1981). Toward a taxonomy of given-new information. In P. Cole (ed.), *Radical pragmatics*. San Diego, CA: Academic Press, 223-255.
- Prince, E. F. (1988). The ZPG Letter: Subjects, Definiteness, and Information-status. (ms) University of Pennsylvania.
- Prince, A. & Smolensky, P. (1993). Optimality Theory. (ms) Rutgers University and University of Colorado.
- Renzi, L. & Vanelli, L. (1983). I pronomi soggetto in alcune varietà romanze. In *Scritti linguistici in onore di Giovan Battista Pellegrini*. Pisa: Pacini, 121-145.
- Rizzi, L. (1982). *Issues in Italian Syntax*. Dordrecht: Foris Publications.
- Rizzi, L. (1986a). Null objects in Italian and the Theory of *pro*. *Linguistic Inquiry* 17, 501-557.
- Rizzi, L. (1986b). On the status of Subject Clitics in Romance. In O. Jaeggli & C. Silva-Corlavan (eds.), *Studies in Romance Linguistics*. Dordrecht: Foris, 391-419.
- Roberts, I. (2007). *Diachronic Syntax*. Oxford: Oxford University Press.
- Roberts, I. (forthcoming). *Agreement and Head Movement. Clitics, Incorporation and Defective Goals*. Cambridge, Mass.: MIT Press.
- Saccon, G. (1993). *Postverbal Subjects: A Study Based on Italian and Its Dialects*. Ph.D. dissertation, Harvard University.
- Samek-Lodovici, V. (1994). Structural focusing and subject inversion in Italian. Paper presented at the XXIV Symposium on Romance Languages, Los Angeles, March 1994; (ms) Rutgers University.
- Sankoff, D., Tagliamonte, S. & Smith, E. (2005). Goldvarb X. Computer program. Department of Linguistics, University of Toronto, Canada. http://individual.utoronto.ca/tagliamonte/Goldvarb/GV_index.htm
- Sauerland, U. (2003). Agreement: the role of Semantics. Paper presented at the Graduiertenkolleg Lecture Series in Stuttgart.

- Scherre, Maria M. & Naro, Anthony J. (1991). Marking in discourse: "Birds of a feather". *Language, Variation and Change* 3, 23-32.
- Scherre, Maria M. & Naro, Anthony J. (1992). The serial effect on internal and external variables. *Language, Variation and Change* 4, 1-13.
- Sharma, D. (2005). Language Transfer and Discourse Universals in Indian English Article Use. *SSLA* 27, 535-566.
- Sportiche, D. (1996). Clitic Constructions. In L.Zaring & J.Rooryck (eds.), *Phrase Structure and the Lexicon*. Dordrecht: Kluwer, 213-276.
- Suñer, M. (1992). Subject Clitics in the Northern Italian Vernaculars and the Matching Hypothesis. *Natural Language and Linguistic Theory* 10, 641-672.
- Tagliamonte, S. (2006). *Analysing Sociolinguistic Variation*. Cambridge: CUP.
- Tortora, C. (2001). Evidence for a Null Locative in Italian. In G. Cinque & G. Salvi (eds.) *Current Studies in Italian Syntax: Studies Offered to Lorenzo Renzi*. Elsevier, London, 313-326.
- Toso, F. (1997). *Grammatica del genovese*. Genoa: Le Mani.
- Trudgill, P. (1986). *Dialects in Contact*. Oxford: Basil Blackwell.
- van Craenenbroeck, J. & van Koppen, M. (2008). Pronominal doubling in Dutch dialects: big DPs and coordinations. In S. Barbiers, O. Koenenman, M. Lekakou & M. van der Ham (eds.), *Microvariation in Syntactic Doubling, Syntax and Semantics Volume 36*. Bingley: Emerald, 207-249.
- Wechsler, S. & Zlatić, L. (2001). A theory of agreement and its application to Serbo-Croatian. *Language* 76, 799-832.
- Wilson, J. & Henry, A. (1998). Parameter setting within a socially realistic linguistics. *Language in Society* 27, 1-21.
- Zanuttini, R. (1997). *Negation and Clausal Structure. A Comparative Study of Romance Languages*. New York: OUP.

APPENDIX

A. Elicitation task (variable *i/ e/ Ø* and past participle agreement)

Translate the following sentences from Italian into the dialect

Past participle feminine plural (subject) agreement with unaccusative verbs

1. Anna e Carla sono già arrivate.
'Anna and Carla arrived already'
2. Le figlie di Marta sono diventate grandi.
'Marta's daughters have grown up'
3. Queste suore sono venute dal Piemonte.
'These nuns have come from Piedmont'
4. Sono rimaste a Genova, loro due.
'The two of them (all females) remained in Genova'
5. Sara e Michela sono andate al mare.
'Sara and Michela have gone to the seaside'
6. Loro sono state a casa.
'The two of them (all females) stayed at home'
7. Delle pietre sono cadute dalla montagna.
'Some rocks fell off the mountain'
8. Sono arrivate quelle lettere?
'Did those letters arrive?'
9. Sì, sono arrivate.
'Yes, they did'
10. Sono partite le zie?
'Did the aunts leave?'
11. Sì, sono partite alle sette.
'Yes, they left at seven'
12. Le belle giornate sono finite.
'The nice sunny days are over'
13. Anna e Rina sono uscite da lavorare.
'Anna and Rina finished working'
14. Sono arrivate le tue amiche?
'Your (female) friends, did they arrive?'
15. Sì, ma sono già andate via.
'Yes, but they have gone already'

16. Sono rimaste solo le pesche gialle.
'Only the yellow peaches are left'
17. Le sue sorelle sono già venute.
'Her sisters came already'
18. Sono rimaste in casa tutta la sera.
'They (all females) stayed in all night'

Past participle feminine plural (subject) agreement with reflexive/ impersonal verbs

19. Le bambine si sono già lavate le mani.
'The little girls washed their hands already'
20. Si sono divertite tanto in vacanza, loro due.
'The two of them (all females) enjoyed themselves a lot on holiday'
21. Le bambine si sono addormentate.
'The little girls fell asleep'
22. Le porte si sono chiuse davanti a noi.
'The doors closed in front of us'
23. Si sono alzate.
'They (all females) got up'
24. Le mamme si sono arrabbiate.
'Mothers got angry'
25. Col vento si sono asciugate le tovaglie.
'With this wind, the tablecloths have dried'
26. Si erano sentite l'altro ieri.
'They (all females) spoke to each other the day before yesterday'
27. Le sue cugine si sono fatte sentire.
'Her (female) cousins got in contact'
28. Si sono lavate la faccia.
'They (all females) washed their faces'
29. Le ragazze si sono riviste.
'The girls met again'
30. Si sono presentate due signore.
'Two ladies turned up'

Past participle feminine plural (subject) agreement with passive verbs

31. Chiara e Martina sono rimaste promosse tutte e due.
'Both Chiara and Martina have passed the exam'
32. Queste lettere sono state scritte nel 1945.
'These letters have been written in 1945'

33. Durante l'alluvione sono state chiuse tutte le scuole.
'During the floods, all schools have been closed'
34. Che fine hanno fatto le palme che erano nei giardini? Sono state tagliate.
'What happened to the palm trees which were in the gardens? They have been cut'
35. Nelle zone del terremoto le case sono state abbandonate.
'In the area of the earthquake the houses have been abandoned'
36. Loro sono state mandate a lavorare in Trentino.
'They have been sent to work in Trentino'
37. A mezzogiorno sono suonate le campane.
'At midday, the bells of the church have struck'
38. Tutte le famiglie sono state avvertite.
'All the famiglie have been warned'
39. Le gonne sono già state stirate.
'The skirts have already been ironed'
40. Queste case sono state vendute.
'These houses have been sold'

B. Algorithm for Ligurian SCI forms (full version)

1. Generating n-feature:(value) LIs, where n=1 and (value)=± or lack of value.

* [using:+] <i>ti/a₁/u/u_{def}</i>	⇒	Reject Optionality
[using:-] <i>i</i>		
* [using:] <i>e/a₂</i>	⇒	Reject Optionality
[ufem:+] <i>a₁</i>		
[ufem:-] <i>u</i>		
[ufem:] <i>∅</i>		
[uauth:+] <i>a₂</i>		
* [uauth:-] <i>i/ti/u/a₁/∅/u_{def}</i>	⇒	Reject Optionality
[uauth:] <i>e</i>		
* [upart:+] <i>ti/a₂</i>	⇒	Reject Optionality
* [upart:-] <i>u_{def}/∅</i>	⇒	Reject Optionality
* [upart:] <i>e</i>	⇒	Reject Synonymy

2. Generating n-feature:(value) LIs, where n=2 and (value)=± or lack of value.

[using:+],[ufem:+] <i>a₁</i>	⇒	Minimize Lexicon
[using:+],[ufem:-] <i>u</i>	⇒	Minimize Lexicon
* [using:+],[ufem:]		
* [using:-],[ufem:+]		
* [using:-],[ufem:-]		
[using:-],[ufem:] <i>i/e</i>	⇒	Reject Optionality
* [using:],[ufem:+]		
* [using:],[ufem:-]		
[using:],[ufem:] <i>∅</i>	⇒	Minimize Lexicon
* [using:+],[uauth:+]		
[using:+],[uauth:-] <i>ti/u/a₁/u_{def}</i>	⇒	Reject Optionality
* [using:+],[uauth:]		
* [using:-],[uauth:+]		
[using:-],[uauth:-] <i>i/e</i>	⇒	Reject Optionality
* [using:-],[uauth:]		
[using:],[uauth:+] <i>a₂</i>	⇒	Minimize Lexicon

$[u_{\text{sing}}:], [u_{\text{auth}}:-] \emptyset$	\Rightarrow	Minimize Lexicon
$[u_{\text{sing}}:], [u_{\text{auth}}:] e$	\Rightarrow	Minimize Lexicon
$[u_{\text{sing}}:+], [u_{\text{part}}:+] ti$		
$[u_{\text{sing}}:+], [u_{\text{part}}:-] u/a_1/u_{\text{def}}$	\Rightarrow	Reject Optionality
* $[u_{\text{sing}}:+], [u_{\text{part}}:]$		
* $[u_{\text{sing}}:-], [u_{\text{part}}:+]$		
* $[u_{\text{sing}}:-], [u_{\text{part}}:-]$		
* $[u_{\text{sing}}:-], [u_{\text{part}}:]$		
* $[u_{\text{sing}}:], [u_{\text{part}}:+]$		
* $[u_{\text{sing}}:], [u_{\text{part}}:-] \emptyset$	\Rightarrow	Minimize Lexicon
* $[u_{\text{sing}}:], [u_{\text{part}}:]$		