

# Approaches to Language and Discourse

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**APPROACHES TO  
LANGUAGE AND DISCOURSE**

**CARMELA PERTA**



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## INTRODUCTION

This collection of papers is based on the assumption that the speaker plays a central role in the interface between language and the external reality, where this system is realised in concrete linguistic acts, being the main actor of linguistic activity. This is the reason why two perspectives are used in the volume: from one side the external perspective aiming at observing and describing the language structure, and the internal one, according to which speakers' language uses, along with the variation associated to their discourse, are described and explained.

The first two papers, *Unaccusativity in Italian and English* and *Italian si*, focus on the description of some linguistic traits, mainly with a formal approach. The contrastive analysis presented in *Unaccusativity in Italian and English*, focusing on a subclass of intransitives covers by unaccusative verbs, offer a general overview of this aspect of grammar, looking at the possible analogies between the two languages with respect to this class of verbs.

*Italian si* provides a syntactic analysis of the Italian clitic *si*. The latter is employed in different ways: it is the third person reflexive clitic, and it is used to form impersonal sentences. Given the phonetic identity of the clitic employed for these types of constructions, linguists have often questioned whether the two *si*'s are best analysed as identical or distinct, but my view is that impersonal *si* differs radically from the other *si*.

The bridge between the papers related to the description of language structure and those related to speakers' linguistic activity is *Variability in acceptability judgements*. From a formal perspective, these judgements are supposed to be the reflection of speakers' grammatical competence, the norms actually governing their internalised grammar. However, several extralinguistic variables, related to speakers' social dimension, may cause variation in their judgements, even though these factors are, to a certain extent, controlled and/or isolated.

The following papers have speakers as the central point of investigation. *Variation and indeterminacy in native and non-native speakers' intuitions* is a study of the systematic variation in native and non-native grammars of Italian, in relation to the auxiliary selection with the class of unaccusative verbs and *si* constructions.

In the last paper, *Speakers' discourse in multilingual settings*, speakers' language uses are analysed in contexts of complex social repertoires, showing that languages in speakers' minds are not static rather dynamic resources, and their use is determined both by linguistic and extralinguistic factors.

Following this theoretical path hidden behind the papers, language loses its predominance without associating it along with the speaker and his/her linguistic behaviour. On the basis of this view, language variability is assumed to be an inner part of language itself, as it is the potentiality of language to vary, and in reality the language varies as to produce variation in speakers' discourse.

Notwithstanding the different nature of the papers, this collection aims at showing that a dialogue among different perspectives of language analysis is possible; in other words, it would be advisable an analysis which combines the external and the internal perspective that is the language structures the speaker's discourse.



## UNACCUSATIVITY IN ITALIAN AND ENGLISH

### Introduction

The aim of this paper is to conduct a contrastive analysis between Italian and English with respect to a subclass of intransitives: unaccusative verbs. In the first section this class of verbs and its reflexes on the auxiliary selection in Italian are presented from a syntactic point of view, considering Burzio's account into Government-Binding theory (Burzio 1986); then, the analysis is conducted from a semantic perspective, particularly considering the Role and Reference Grammar framework (Centineo 1986; Van Valin 1990). After stressing the importance of an approach that accounts for the interaction between syntactic and semantic aspects of unaccusativity and auxiliary choice, the development of auxiliaries from Latin to Modern Italian is mentioned. Indeed, one of the keys to an understanding of the complex interaction between semantic and syntactic factors involved in the auxiliary choice is an appraisal of the diachronic perspective.

In this light it is possible to understand Sorace's unaccusative hierarchy (1993a, 1993b). The main claim of her approach is that the different morphosyntactic behaviour of unaccusative verbs reflects the different syntactic status of the surface subject at some level of representation, but it is determined by semantic factors.

In comparison to Italian, English can be said to have roughly the same class of unaccusative verbs, but it has only a few syntactic reflexes - *there* insertion, and the participial small clauses. Although a class of English verbs which in some respects behave like Italian unaccusatives can be recognised, the precise characterisations of English unaccusatives, whether syntactic or semantic, is a matter of debate in literature. Therefore, it is worth mentioning on the one hand Keyser' and Roeper's debate (1984), and on the other Napoli's one (1988).

Even though in Modern English the use of auxiliaries is restricted to *have*, in the older stages of this language there was the selection of both *have* and *be* as auxiliary to express the perfectivity with verbs of movement and change of state. This is another piece of evidence that the syntactic reflexes of this class of verbs are present not only in Italian, but in English too.

## Unaccusativity in Italian

### Unaccusative Hypothesis

As Perlmutter (1978) suggested, in Italian intransitive verbs do not constitute a homogeneous class, there are two types of intransitive verbs differing between them in purely syntactic terms:

- (1) a. Gianni arriva  
b. Gianni telefona

In (1)a. the surface subject is the underlying direct object, while in (1)b. the surface subject is the underlying subject. Perlmutter (1978) called verbs such as in (1)a. *unaccusative* and verbs such as (1)b. *unergative*.

This difference is at the basis of the Unaccusative Hypothesis of which we have the mentioned version by Perlmutter, into the Relational Grammar framework (1978, 1989), which was then adapted into Government-Binding Theory in Burzio's work on Italian (1986). The syntactic difference between the class of unaccusative verbs and unergative verbs is expressed differently in the two theories. In Relational Grammar framework unaccusative verbs are analysed as having an initial 2 (direct object) but not 1 (subject) as opposed to unergative verbs which have an initial 1 but not 2, as illustrated below:

- (2) a. Unaccusative: Initial: V2 a'. [S [NP e] [VP V NP]]  
b. Unergative: Initial: V1 b'. [S [ NP [VP V]]]

In Government and Binding, on the other hand, unaccusative verbs, ergative in Burzio's terminology, occur in the deep structure in (2)a. while other intransitive verbs appear in that in (2)b., the configurational equivalents of the Relational Grammar initial strata.

Among these two approaches, Burzio's version will be focused, because it reveals a connection between unaccusativity and auxiliary choice in Italian. Considering:

- (3) a. Deep Structure [ e ] migliorare la situazione  
b. Surface structure: la situazione<sub>i</sub> migliora t<sub>i</sub>

It emerges that in the deep structure the NP is semantically related to the direct object in the same way that passive sentences do and, if assigning a theta role, it is the patient of the action expressed by the verb. The direct internal argument of unaccusative verbs receives a theta role from the predicate but, according to the case filter, either the verb or a preposition cannot assign case, and so the argument must move into the subject position to get case. This concept is summed up in the so called Burzio's generalization.

(4) *Burzio's Generalization* (Burzio 1986: 178)

If a verb does not assign a  $\theta$ -role to its subject it does not assign case to its object.

The verbs that belong to the class of unaccusatives are the following:

1. unaccusative verbs which have a transitive alternant. They can be divided in verbs in active form (1.1.) and verbs in reflexive form (1.2.):
  - 1.1. *affondare* 'to sink', *migliorare* 'to improve', *aumentare* 'to increase', *diminuire* 'to diminish', *ingrassare* 'to fatten', *peggiore* 'to worsen', *finire* 'to finish', *cambiare* 'to change', *cominciare* 'to start', *continuare* 'to continue';
  - 1.2. *rompersi* 'to break', *svegliarsi* 'to wake up', *bruciarsi* 'to burn', *capovolgarsi* 'to turn over', *allargarsi* 'to widen', *concentrarsi* 'to concentrate', *lavarsi* 'to wash oneself', *riposarsi* 'to rest', *dividersi* 'to divide';
2. unaccusative verbs with no transitive alternant. We can divide this class into two subclasses: verbs without unergative counterpart (2.1.) and verbs with an unergative counterpart (2.2.):
  - 2.1. *andare* 'to go', *venire* 'to come', *entrare* 'to enter', *cadere* 'to fall', *diventare* 'to become', *partire* 'to leave', *nascere* 'to be born', *morire* 'to die', *sembrare* 'to seem', *durare* 'to last';
  - 2.2. *correre* 'to run', *volare* 'to fly', *rotolare* 'to roll over';
3. inherently reflexive verbs: *pentirsi* 'to repent', *risentirsi* 'to resent', *arrampicarsi* 'to climb', *accorgersi* 'to realize', *arrabbiarsi* 'to get angry', *arrendersi* 'to surrender', *fidarsi* 'to trust', *vergognarsi* 'to be ashamed';
4. all verbs used in passive forms;
5. all verbs used with the passive *si*, that is the use of impersonal *si* with the direct object of transitive verbs.

Perlmutter (1978) called unaccusative verbs with transitive or unergative alternant paired unaccusatives, and verbs with no counterpart unpaired unaccusatives.

### Characteristics of unaccusative verbs

As discussed before, unaccusatives behave in some ways transitively, rather than intransitively closely resembling passive verbs which are often analysed as involving movement of an underlying direct object NP into surface subject position. For this reason, the unaccusatives share different properties with the transitive verbs, rather than with the intransitive ones. We can sum up these properties as following:

- the possibility of *ne-* cliticization, that is the pronominalization of a quantifier post-verbal subject in the form of the clitic pronoun *ne* meaning ‘of it’, ‘of them’. This type of cliticization is systematically possible with the direct object of transitive verbs and systematically impossible with unergative verbs;

- (5)
- |    |               |   |
|----|---------------|---|
| a. | transitive:   | Ne ho mangiate molte                          |
|    |               | Of-them have <sub>IP, SING.</sub> eaten a lot |
| b. | unaccusative: | Ne sono arrivati molti                        |
|    |               | Of-them are arrived many                      |
| c. | unergative:   | *Ne hanno parlato tre                         |
|    |               | Of-them have spoken three                     |

- the use of adjectival participles is possible only with transitive and unaccusative verbs and impossible with unergatives;

- (6)
- |    |               |   |
|----|---------------|---|
| a. | transitive:   | Il caso esaminato è interessante        |
|    |               | The case investigated is interesting    |
| b. | unaccusative: | Il ragazzo arrivato stamani è italiano  |
|    |               | The boy arrived this-morning is Italian |
| c. | unergative:   | *Il ragazzo telefonato ieri è italiano  |
|    |               | The boy telephoned yesterday is Italian |

- the use of participial absolutes is possible only with transitive and unaccusative verbs and impossible with unergative verbs;

- (7) a. transitive: Letto l' articolo ho scritto il saggio  
 Read the article have written the essay
- b. unaccusative: Arrivato Gianni potemmo partire  
 Arrived Gianni could<sub>I P. PLUR.</sub> leave
- c. unergative: \*Telefonato Maria uscii  
 Telephoned Maria went out<sub>I P. SING.</sub>

### Auxiliary selection in Italian

In Italian the difference between unergatives and unaccusatives is reflected in the auxiliary they select: unergatives like transitive verbs select *avere* 'have' and all unaccusatives select *essere* 'be'.

- (8) 1. transitive:  
 Gianni ha mangiato le mele  
 Gianni has eaten the apples
2. unergative:  
 Gianni ha telefonato a Mario  
 Gianni has phoned to Mario
3. unaccusative:  
 Il bambino è andato a scuola  
 The child is gone to school
4. paired unaccusative with transitive alternant:  
 a. La nave è affondata  
 The ship is sunk  
 b. Gli Inglesi hanno affondato la nave  
 The English have sunk the ship
5. paired unaccusative with transitive alternant:  
 a. La nave è affondata  
 The ship is sunk  
 b. Gli Inglesi hanno affondato la nave  
 The English have sunk the ship
6. paired unaccusative with unergative alternant:  
 a. Gianni è corso alla stazione  
 Gianni is ran to-the station  
 b. Gianni ha corso velocemente  
 Gianni has ran fast
7. paired unaccusative with reflexive alternant:  
 a. Il vaso si è rotto  
 The vase *si* is broken  
 b. Ho rotto il vaso  
 Have<sub>I P. SING.</sub> broken the vase

8. unpaired unaccusative, inherent reflexive<sup>1</sup>:  
 Maria non si è accorta di nulla  
 Maria not *si* is realised of anything
9. passive form:  
 Le mele sono mangiate da Gianni  
 The apples are eaten by Gianni
10. impersonal *si*:  
 Si è mangiato molto<sup>2</sup>  
*Si* is eaten a-lot
11. passive *si*:  
 Si sono mangiate molte mele  
*Si* are eaten many apples

Besides, it can be observed that the auxiliary *essere* and the past participle agreement take place together with unaccusative verbs, passives and reflexive verbs. Only in two cases does not this symmetrical system between *essere* and past participle agreement take place:

- in case of non-reflexive direct object clitic there is no *essere* but only past participle agreement.

(9) *avere* + pp agreement

Gianni la ha perdonata  
 Gianni her has forgiven

- in impersonal *si* construction the auxiliary is *essere* but there is not past participle agreement.

(10) *essere* + no pp agreement:

Si è telefonato a Gianni  
*Si* is phoned to Gianni

However replacing the unergative verb *telefonare* with an accusative verb, we find this correlation:

---

<sup>1</sup> In the examples of paired unaccusative with reflexive alternant and of unpaired unaccusatives, the clitic *si* remains *si* in the translations in English.

<sup>2</sup> Impersonal *si* constructions do not belong to the class of unaccusative verbs, but they take *essere* as auxiliary, like all the unaccusative verbs. *Si* means 'we/people', but in the translations in English of the examples it remains *si*.

(11) *essere* + pp agreement:

Si è appena arrivati  
*Si* is just arrived<sub>PLUR.</sub>

At this point Burzio proposed two rules:

1. *essere assignment*: «the auxiliary will be realized with *essere* whenever a binding relation exists between the subject and a nominal contiguous to the verb» (Burzio 1986: 55);
2. *past participle agreement*: «a past participle will agree (in gender and number) with an element holding a binding relation with its direct object» (Burzio 1986: 55-56).

In other words, «in all the cases requiring *essere* the subject enters into a certain relation with another element (that can be either a clitic or a direct object) while in all cases requiring pp. agreement it is the direct object that enters into certain type of relation (either with a clitic or a subject)» (Burzio 1986: 55).

*Essere assignment*

- (12) i. NP cl-V...
- 
- ii. NP V NP
- 

*Past participle agreement*

- (13) i. ... cl-V NP
- 
- ii. NP V NP
- 

He argued that the syntactic configurations in (12) represent a hierarchy where both the positions are considered core in the Italian system, that is regular and systematic. Moreover, the cases in (12) are ordered with respect to the degree of proximity of the relevant element to the verb. The clitic is closer to the verb than the direct object, in fact the clitic forms one morphological unit with the verb. Therefore, the rule of *essere* assignment is parameterised with respect to the degree of continuity it requires.

## **Lexical-semantic approach**

### ***General remarks***

While Perlmutter (1978) initially suggested that there is a semantic basis for the unaccusative/unergative distinction, subsequent discussions concluded that there is no consistent, universally characterisable semantic basis for it. Moreover, all advocates of the Unaccusative Hypothesis have argued that the phenomena which the Unaccusative Hypothesis seeks to account for cannot be adequately dealt with in terms of semantic roles/thematic relations. However, a purely syntactic approach to unaccusativity does not explain the phenomenon according to which verbs such as *correre* 'to run' can select both *essere* and *avere*. Burzio (1986) simply affirmed that they can also appear with auxiliary *avere* in non unaccusative frames. This represents a substantial problem for his theory, since the lexical specification of unaccusative verbs would not do the work of relating the two uses of the verb. This clearly shows the fact that a syntactic approach does not explain all the aspects of unaccusative verbs.

On the other hand, there are various theoretical accounts that have dealt with the question of auxiliary selection in Italian from a semantic point of view. Modern Italian has preserved from Latin the semantic distinction between *avere* and *essere* auxiliary, in the sense that verbs with an agentive or affecting subject select *avere* and verbs with a patient or affected subject select *essere* as auxiliary. In literature the concept of theme with respect to the selection of *essere* was clearly explained:

- theme in both the literal and the metaphoric sense of object which moves (Keenan 1987);
- undergoer (Van Valin 1990);
- affected actor (Centineo 1986);
- argument of a state or of a change of state (Parisi 1976; Grimshaw 1990).

### ***The Role and Reference grammar***

Among these approaches, it is worth mentioning the Role and Reference Grammar framework, which aims to reconcile the levels of thematic and aspectual analysis. The main components of this theory are a system of verb classification and predicate semantics (Vendler 1967; Dowty 1979) and a theory of semantic roles. Foley and Van Valin (1984) adopt the system of verb



classification and semantic decomposition of the verbs into activities, accomplishments, achievements and status in a system as the following:

**Table 1 Foley and Van Valin's classification (1984)**

Verb class	Logical structure
State	Predicate' (x)
Achievement	BECOME predicate' (x)
Activity	DO (x, [predicate' (x)])
Accomplishment	[DO (x), [predicate' (x)]]CAUSE [BECOME predicate' (y)]

Besides they assign semantic roles to the arguments of the predicates that are: *agent*, the wilful performer of an action; *effector*, the non-volitional performer of an action; *locative*, the argument which describes a location; *theme*, the entity whose location is at issue; *patient*, the argument of a predicate describing a state or condition of being. The interaction between logical structures and semantic relations of the various verb classes is summarised in the following table.

**Table 2 Interaction between logical structures and semantic relations**

I. State verbs		
a. Locative	Be-at' (x, y)	x = theme y = locative
b. Non-locative		
1. State or condition	Predicate' (x)	x = patient
2. Perception	see' (x, y)	x = locative y = theme
3. Cognition	believe' (x, y)	x = locative y = theme
4. Possession	have' (x, y)	x = locative y = theme
II. Activity verbs		
a. Potentially controllable		
1. Controlled	DO(x, {predicate' (x)})	x = agent
2. Uncontrolled	Predicate' (y)	y = effect
b. Motional	fall' (x)	x = theme

These thematic relations are subsumed under the two semantic notions of:

1. *actor*, «the argument of a predicate which express the participant which performs, effects, instigates, or controls the situation denoted

by the predicate» (Foley and Van Valin 1984: 29). This macrorole includes the semantic relation of agent, effector and experiencer;

2. *undergoer*, «the argument which expresses the participant which does not perform, initiate or control any situation but rather is affected by it» (Foley and Van Valin 1984: 29). This macrorole subsumes the semantic relations of patient, theme and locative with some predicates.

The interpretation of a relation as actor or undergoer is regulated by two hierarchies:

**Table 3 Actor and undergoer**

Actor	Agent > effector > experiencer
Undergoer	Patient > theme > locative

It is possible to combine these two hierarchies in this way:

**Table 4 Actor/ undergoer**

Actor					Undergoer
Agent	Effector	Experiencer	Locative	Theme	Patient

The direction of the arrows indicates the increasing markedness of an argument with a particular semantic role functioning as actor or undergoer. In case of a transitive sentence, there is only one actor and one undergoer, while in case of an intransitive sentence, the argument of the verb is either an actor, if the verb expresses activity, or an undergoer if the verb expresses state or achievement.

As far as the notion of subject and direct object are concerned, this semantic approach replaced them with the concept of pivot of syntactic construction. Pivots are not necessarily syntactic, however in languages such as Italian and English, the pivot corresponds to the syntactic subject and in passives the actor is the unmarked pivot choice, while the undergoer is the marked pivot choice.

This semantic approach is applied to the auxiliary assignment in Italian (Van Valin 1990). In this framework, intransitive verbs that select *avere* as auxiliary in the perfectivity are considered activity verbs, while intransitive verbs that select *essere* are members of the classes of state, achievement or accomplishment. The state class includes predicates that describe conditions of being, such as *esistere* ‘to exist’, locative predicates, such as *stare* ‘to stay’,

*rimanere* ‘to remain’, predicates of possession or perception, such as *piacere* ‘to like’, *appartenere* ‘to belong’, *bastare* ‘to be enough’, *mancare* ‘to lack’. The achievement class includes inchoative predicates such as *migliorare* ‘to improve’, *ringiovanire* ‘to rejuvenate’, *morire* ‘to die’, *nascere* ‘to be born’, *arrabbiarsi* ‘to get angry’, aspectuals such as *cominciare* (to begin), *finire* (to end) and verbs of happening such as *accadere* ‘to occur’, *succedere* ‘to happen’, *diventare* ‘to become’. The verbs of motion belong to the class of achievements such as *arrivare* ‘to arrive’ and accomplishments such as *andare* ‘to go’. Some Italian motion verbs are activity or accomplishment, they are accomplishment verbs if they are accompanied by the specification of a source and/or goal of location (telic situation in Rappaport’s terminology, 1989) and they take the auxiliary *essere*.

- (14) a. Gianni è corso alla stazione  
Gianni is ran to-the station

while they are activities if the source and/or goal of location is not specified (atelic situation in Rappaport’s terminology, 1989) and they take the auxiliary *avere*:

- b. Gianni ha corso velocemente  
Gianni has ran fast

Other verbs of motion cannot be turned into accomplishments even adding a prepositional phrase with a source of the motion like in *camminare* ‘to walk’ and *nuotare* ‘to swim’.

- (15) a. \*Gianni ha camminato a casa  
Gianni has walked to home

This is due to the fact that it is not implied that the given location represents the actor’s point of arrival, what would result adding *fino... a* ‘from...to’.

- b. Gianni ha camminato fino a casa  
Gianni has walked as far as home

Paired unaccusative verbs with a transitive alternant such as *migliorare* ‘to improve’ are classified as achievements when they are used intransitively and accomplishments when they are used transitively.

Predicates which express weather conditions can occur with either auxiliaries, it depends whether the predicate is interpreted as an activity (16)a. or an accomplishment (16)b:

- (16) a. Activity: Ieri ha/è nevicato per due ore  
 Yesterday has/is snowed for two hours  
 b. Accomplishment: Mi è piovuto sulla testa  
 To-me is rained on-the head

According to this theory, *ne-* cliticization and auxiliary selection require a verb that has a state in its logical structure, therefore in Italian *essere* is selected if the logical structure of the verb contains a state predicate; *ne* realises the lowest ranking argument on the Actor-Undergoer hierarchy in the state predicate of the logical structure.

The generalisation that *avere* is selected by activity verbs and *essere* by state, achievement, or accomplishment verbs can be explained by the analysis of the thematic roles as macroroles. In this light, activity verbs have an actor which can be agent, effector, or locative as pivot, while state, achievements and accomplishment verbs have an undergoer or a patient or a theme as pivot. In conclusion, all verbs which are considered to be unaccusative according to Burzio's criteria, have an undergoer argument. However, as discussed before, there are verbs, such as *correre* 'to run', which have a pivot which can be both actor and undergoer. In this case, the pivot can be called affected actor, and it is highly marked choice for the role of actor. It is the same for passives and benefactive reflexives.

Hence, *essere* is selected by those verbs that have a marked choice as pivot, for example an undergoer, or by those verbs with a non prototypical pivot, for example an affected actor, while *avere* is selected if the pivot is unmarked, for example an actor, and prototypical, that is affecting and not affected. The effect of markedness on pivot choice and auxiliary assignment is schematised in the following table:

**Table 5 Markedness on pivot choice and auxiliary assignment**

	ACTOR	Transitive	Accomplishments	least MARKED	A
P	(- affected)	Transitive	Activities		V
		Transitive	Achievements		E
I		Transitive	States		R
		Intransitive	Activities		E
V	(+affected)	Transitive	Reflexives		E
O		Benefactive	Reflexives		S
		Intransitive	Accomplishments		S
T		Intransitives	Achievements		E
		Intransitive	States		R
	UNDERGOER	Passives		most Marked	E

Van Valin's conclusion is that a semantic approach to the auxiliary selection is superior to the Government and Binding syntactic account.

### **The interaction of syntactic and semantic aspects of unaccusativity**

As Sorace (1993a, 1993b) demonstrated, purely semantic accounts for auxiliary selection are as inadequate as purely syntactic accounts, although for different reasons. Her main claim is that the semantics of a verb determines the syntactic character of its arguments, which in turn affects the syntactic behaviour related to unaccusativity and auxiliary selection (Grimshaw 1987, 1991; Rappaport 1989; Zaenen 1988; Levin and Rappaport 1989, 1995; Sorace 1993a, 1993b).

Before considering this approach, it is worth mentioning the historical evolution of the auxiliaries from Latin to modern Italian, because this diachronic development combines the semantic and the syntactic levels of this phenomenon.

#### ***Historical evolution of auxiliaries***

Classical Latin did not have periphrastic forms for the expression of anteriority, it would use an inflectional form. However, we know the Latin ancestor of the Romance periphrasis, and for this reason we are able to explain how the possession verb enters constructions which express anteriority.

The Latin ancestor of the Romance periphrasis with *habere* 'have' is to be found in constructions such as:

- (17) Habeo epistulam scriptam  
 Have 1 P. SING. letter<sub>ACC.</sub> written<sub>ACC.</sub>

Originally the verb *habere* was a two place verb taking locative as subject and neutral as object. So the subject of *habere* that is in this case the first person singular is locative and *epistulam* is neutral. This makes us understand that the translation of (17) is different from ‘I have written a letter’ because the subject of *habeo* can be different from the logical subject of *scriptam*: the one owing the letter can be different from the one that wrote it. *Habeo* is followed by two complements: *epistulam* which is the direct object, and *scriptam* which is the object complement, and not an attribute. Moreover, the participle *scriptam* has an adjectival value, as shown in the following example from Cicero where the participle has the comparative form, property of the adjectives only.

- (18) Comitorum dilationes occupatiorem me habebant  
 Of meetings delays very occupied me<sub>ACC.</sub> had<sub>IMP. 3 P. PLUR.</sub>

Therefore, only the participles which acted as adjectives could occur in this type of construction, and they are the participles of the imperfective verbs and the participles of those perfective verbs that have a resultant meaning.

The structure of the sentence (17) is:

- (19) NP [habeo [epistulam scriptam]]

where *epistulam scriptam* is a small clause with an adjectival head *scriptam*. Between the NP and the small clause there is a predication relation in the same way as between the subject and a VP in a sentence structure. The fact that the participle behaves like the direct object of the verb *habeo* can be explained considering that the boundary of the small clause does not prevent the governing verb from assigning the accusative case to the subject of the small clause. Finally, *habeo* assigns the thematic role of dative to its subject, of object to the small clause it governs, and of accusative case to the subject of the small clause.

As Salvi showed (1987), the change from this type of Latin constructions to the Romance periphrasis to express perfectivity began at the semantic level. This semantic change was due first of all to the semantic emptying of *habeo* which was initially a synonym of *teneo* ‘to keep’, but later it signified possession and finally it assumed the meaning of a generic relation as we can observe in this example from Brutus (161).

- (20) Quattuor et triginta tum habebat annos  
 Four and thirty than had<sub>3 P. SING.</sub> years<sub>ACC.</sub>

The meaning of generic relation extended until when this verb became the reverse of *esse* ‘to be’, which expressed the semantic relation between two arguments X and Y. *Habeo* expressed the same relation but between Y and X.

- (21) a. Domus est Petro  
 House is Petrus<sub>DAT.</sub>  
 b. Petrus habet domum  
 Petrus has house<sub>ACC.</sub>

This relation is also present in sentences similar to (17).

- (22) a. Nectum omnia edita facinora habent  
 Not-yet all<sub>ACC.</sub> revealed<sub>ACC. PLUR.</sub> crimes<sub>ACC.</sub> have<sub>3 P. PLUR.</sub>  
 b. Nectum omnia eorum facinora edita sunt  
 Not yet all<sub>NOM.</sub> their<sub>GEN.</sub> crimes<sub>NOM.</sub> revealed<sub>NOM.</sub> are<sub>3P. PLUR.</sub>

The second semantic factor that determined the semantic change was the frequent coincidence between the subject of *habeo* and the subject of participle.

- (23) Habere a Furnio tua consilia cognita  
 Had<sub>1 P. SING.</sub> from Furnius<sub>ABL.</sub> your<sub>ACC.</sub> intentions<sub>ACC.</sub> known<sub>ACC. PLUR.</sub>

where the logical subject of the participle is the same as that of *habeo*. Hence, the participle lose its adjectival value and assumed a verbal one and the semantic role of locative gradually disappeared. So from the previous meaning that is the possession of the result of an action, this type of sentence expressed the past action itself.

From a syntactic point of view, the result of this last change was first of all that the restrictions concerning the participles of perfective verbs with non-resultative meaning disappeared and the structure changes from (19) to (24)-(25):

- (24) NP [habeo [epistulam scriptam]]  
 (25) NP [<sub>VP</sub> habeo [<sub>V</sub> [<sub>NP</sub> e] [<sub>V</sub> Vpart NP...]]]

where the small clause *epistulam scriptam* has the verb *scriptam* as head. That is exactly the same structure of the passive sentences apart from the presence of the copula *est* instead of *habeo*. It is worth noticing that the past participle cannot assign a thematic role to an argument that is external to the VP, differently from all other verbal forms. Therefore it cannot assign a thematic role to the subject of the sentence but only to its direct object.

Since the other verbal form *habeo* is the auxiliary, it cannot assign thematic roles, but it can help the participle to assign the thematic role to the subject.

A further evolution is made later with a structure as the following:

(26) NP [<sub>VP</sub> habeo [<sub>VP</sub> V NP...]]

where the accusative case is assigned by *habeo* + participle or by the participle governed by *habere*. Moreover, the subject of the small clause was eliminated because it cannot be filled.

The periphrasis with *habere* + past participle was used with all transitive verbs where the subject expresses an affecting role. On the other hand, in case of some intransitive verbs, the subject does not express the role of affecting, but it expresses the role of patient, one who was affected. For this reason, the periphrasis *esse* was developed, and it requires a patient subject, a construction already common in classical Latin for the passive constructions where the subject is neutral. Later this periphrasis was used also with deponent verbs, expressing movement or change of state where the subject is considered neutral. Later the periphrastic form *esse* + past participle was used for other non deponent verbs, that had a similar meaning of change of state or movement, and also for medio passives or semi deponent verbs.

### ***Unaccusative hierarchy***

The interaction between syntactic and semantic aspects of unaccusativity is the base of Sorace's work (1993a, 1993b). Her main idea was that a fine-grained analysis of verbs reveals important differences in the class of unaccusative verbs. Hence, she posited certain distinctions within the range of unaccusative verbs, which differentiate among the types of process undergone by the subject of the verb. The result is a hierarchy which, intersecting Burzio's configurational hierarchy, makes clear the integration between syntactic and semantic components of unaccusativity.



**Table 6 Unaccusativity hierarchy**

Verb type	Semantic dimension	Diachronic dimension	Italian Auxiliary
1) change of location - <i>andare</i> - <i>venire...</i>	Concrete movement	- Open to <i>habere</i> - reflexes	<i>Essere</i>
2) change of condition - <i>diventare</i> - <i>sparire...</i>			<i>Essere</i>
3) existence of a condition - <i>esistere</i> - <i>sembrare...</i> + transitive alternant - <i>aumentare</i> - <i>migliorare...</i>	Abstract staticity		<i>Essere</i>
+ unergative alternant - <i>correre</i> - <i>rotolare...</i>		+ Open to <i>habere</i> - reflexes	<i>Essere</i>

The hierarchy distinguishes paired and unpaired unaccusative verbs and orders unpaired unaccusatives according to their semantic status with respect to the semantic dimension movement *vs.* staticity. The hierarchy embodies the hypothesis that the notion of dynamic change, whose most concrete manifestation is change of location, is at the root of unaccusativity and identifies verbs of directed motion as core cases for *essere* selection. The unpaired verbs are also ordered with respect to their dimension concreteness *vs.* abstractness: core verb types denote concrete change of location, while the further a verb type is from the core, the more abstract its meaning is.

The existence of the unaccusative hierarchy is supported by 1. diachronic evidence and 2. synchronic evidence:

1. the provides a key to an overall interpretation of the diachronic evolution of unaccusative change of location verbs, which have been more impervious to the extension of *habere* forms than change of condition verbs. These are followed by paired verbs that in addition to the unaccusative version have either a transitive or an ergative alternant, and which are therefore also vulnerable to analogic levelling because of the auxiliary selected by their lexical counterparts. Hence, the process of change has been spreading from the periphery towards the core of a hierarchy of unpaired unaccusative verbs;
2. the differences within the class of unaccusative verbs effect both the way in which verb categories are perceived by native and non-native

speakers of Italian, and the way they are acquired by speakers of other languages (Sorace 1993a, 1993b).

## Unaccusativity in English

### General observations

Considering the two crucial aspects of Italian unaccusative verbs, *ne-*cliticization and *essere* as auxiliary, it is evident that in English there is no equivalent to *ne-*cliticization and in modern English there is only the selection of *have* as auxiliary in the present perfect. However, as discussed before, in the older stages of English there was the selection of both *have* and *be* as auxiliary in the perfectivity in cases of verbs of movement and change of state.

Another argument is offered by the use of the expletive *there*. This existential pattern cannot be used with every verb in English, but only with verbs that express motion and change of state.

### Presentational *there*

Burzio's analysis (1986) of *there* constructions threw light on the controversial hypothesis regarding the existence of the class of unaccusative verbs in English. According to him, *there* constructions are possible only with unaccusative verbs, though not with all of them. The class of verbs that can occur in *there* constructions is:

(27) *arise, emerge, develop, ensure, begin, exist, occur, arrive, follow.*

The Italian equivalence of these verbs are unaccusative verbs: *sorgere, emergere, svilupparsi, succedere, cominciare, esistere, accadere, arrivare, seguire*. Therefore, he claimed that English has roughly the same class of unaccusative verbs as Italian. Following this hypothesis, Burzio was able to give an account for the verbs: *followed, begin* and *start* noted by Milsarck (1974). Consider this pair of sentences (Burzio 1986: 160):

- (28) a. A rainstorm followed  
b. There followed a rainstorm
- (29) a. A taxicab followed  
b. \*There followed a taxicab

The unacceptability of (29)a is due to two different meanings of the verb *follow* pointed out by Milsarck (1974). It means either ‘occur after’ or ‘move in the same direction as’, but behind.

These two different meanings of *follow* are present in Italian too. Considering this pair of sentences which take respectively *essere* and *avere* as auxiliary (*ibidem*):

- (30) a. Alla bella giornata era seguito un temporale  
To-the lovely day was followed a rainstorm  
b. L’ auto si era mossa e il taxi aveva seguito  
The car *si* was moved and the taxi had followed

This suggests that the verb in (30)a. is unaccusative, whereas the verb in (30)b. is not. Moreover, Milsarck noted a similar opposition between *start* and *begin*.

- (31) a. The riot began  
b. There began a riot  
(32) a. The riot started  
b. \*There started a riot

In Italian there is one verb corresponding to this pair, *cominciare* (*ibidem*).

- (33) a. Gli operai avevano appena cominciato i lavori  
The workers had just started the works  
b. I lavori erano appena cominciati  
The works were just began

The fact that the unaccusative verb *cominciare* has a transitive counterpart which select *avere* as auxiliary (33)a. makes clear that only *begin*, like *cominciare* in (33)b. is unaccusative.

Therefore *there* insertion seems to be grammatical only with a semantically identifiable subset of unaccusative verbs, which includes change of state or presentational verbs, even though it excludes verbs with a transitive alternant such as *sink*.

- (34) \*There sunk two ships

On the other hand, there is a class of verbs that are non unaccusative which allow *there* construction, as can be seen in this example by Burzio (1986: 162):

- (35) There walked into the bedroom a unicorn

This problem already put down by Milsark can be resolved looking at the difference between (35) and (36)

(36) There arose a wonderful sun yesterday

while in (35) the inverted subject occurs in VP final position, in (36) it occurs internally the VP, adjacent to the verb. Hence, in cases like (35) there is NP movement, while in cases like (36) there is not. The position on surface structure of the NP permits us to differentiate the base-generated *there* sentences (with non unaccusative verbs) from the transformationally generated *there* sentences (with unaccusative verbs). Burzio himself admitted that the occurrence of *there* with some non unaccusative verbs seems to falsify the view that *there* occurs only with unaccusative verbs, but he suggested «a way to avoid the paradox is to assume that instances of there with non-ergative verbs<sup>3</sup> fall on a lower scale of grammaticality» (Burzio 1986: 163).

Contrary to Burzio's assumption, there are examples of *there* sentences in which the NP immediately follows the verb, as Napoli (1988: 135) pointed out:

(37) There reigned a wise queen in the earlier times

So, according to him, the presence of unaccusative verbs in *there* sentences can be explained by analysing them as intransitive verbs. When *there* sentences are not possible with other intransitive verbs (for example *telephone*) is due to the fact there is a semantic class of verbs as crucial to the appropriateness of *there* (as the traditionally analysis recognises).

### **Past Participial small clauses**

Burzio (1986) pointed out that it is possible to find past participial small clauses as small clauses relatives and as complements of 'be' in passives.

(38) a. A student arrived yesterday is Italian

A similar construction is not allowed by other types of intransitive verbs

b. \*A student telephoned yesterday is Italian

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<sup>3</sup> Unaccusatives in my terminology.

At the some time, past participles of some unaccusative verbs can be used as adjective modifying an NP.

- (39) a. The newly arrived guests are nice  
b. \*The telephoned friend is Italian

In this case too such a construction seems to be possible only with unaccusative verbs, even though in (39)a., it is better to add the adverbial *newly* used as modifier in the adjectival phrase (AP) *the newly arrived*, otherwise the sentence may result odd.

Another piece of evidence is given by the use of participial absolutes with unaccusative verbs:

- (40) a. Arrived John, we could go  
b. \*Telephoned John, we could go

These uses of past participles allowed by certain intransitive verbs considered unaccusatives is another piece of evidence of the existence of this class in English.

### **Characterization of English unaccusatives**

Keyser and Roeper (1984) argued that English unaccusatives are syntactically intransitive, but they are generated from transitive verbs through a movement rule in the lexicon to produce an intransitive. They give five arguments to support this hypothesis:

- the putative ergative rule (the rule of unaccusative formation) is productive;
- the suffix *-er* cannot attach to an unaccusative verb to yield the sense of a theme argument, but only of an agent argument. Therefore, *-er* attachment must apply in the lexicon before the ergative rule;
- the trace of lexical movement in an unaccusative structure presents lexical insertion of a cognate object;
- *there* insertion can apply with unaccusatives, but not with other intransitives, because the NP following the unaccusative verb in a *there* sentence appears where it is generated in the lexicon;

- the prefix *-re* can occur with unaccusative verbs, not with other intransitives, because it requires linking with an object NP<sup>4</sup>.

On the other hand, Napoli (1988) claimed that English unaccusatives are intransitive lexically and syntactically, and they form a semantic class and not a syntactic one. She analysed the five arguments provided by Keyser and Roeper and demonstrated that these points can be best explained from a semantic point of view.

As far as the rule of unaccusative formation or ergative rule, according to Keyser and Roeper it is productive, and for them the demonstration of its productivity is enough to demonstrate its existence. In fact English forms new verbs which exhibit the unaccusative/transitive pair (Keyser and Roeper 1984: 390).

- (41) a. The Republicans want to Reaganize the country  
 b. The country refuses to Reaganise

However, they pointed out that many verbs do not exhibit ergative pairs:

- (42) a. John visualized the town  
 b. \*The town visualized

So, according to them the intransitive member of an unaccusative pair must be generated by rule for each new lexical entry. However, this denies the productivity of the lexical ergative rule, because it applies only to some lexical entries. Napoli argued that «the meaning of a lexical entry is quite simply the determining factor as to whether the speaker will use it in an ergative alternation» (Napoli 1988: 132).

As far as the second argument is concerned, Keyser and Roeper noted that *-er* is generally attached to subject of transitive verbs, but not to subjects of derived intransitive verbs. Napoli (*ibidem*) considered the verb *stick* which has an accusative pair:

- (43) a. I stuck the note on the refrigerator  
 b. The note stuck fast to the refrigerator

It is considered an unaccusative verb, but it can take *-er* attachment both in the theme and in the agent sense:

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<sup>4</sup> This requirement is satisfied by the trace of a lexical movement.

- (44) a. What good little stickers these notes of yours are!  
 b. Ok, lets divide up the jobs. I write the notes, you stick them up. So I am the writer and you are the sticker

In (44)a. *sticker* yields to a theme sense, while in (44)b. it yields to an agent sense, so *sticker* can have a theme meaning.

It is a matter of fact that the majority of unaccusative verbs do not allow *-er* attachment in the theme sense and, according to Napoli, this is because there is a semantic constraint that limits the above attachment to subject that are participators in an event. For this reason, the subject of *stick* has an active role in the event, so the *-er* attachment can take place with either member of the unaccusative pair. Hence «we cannot conclude that *-er* attachment must follow the putative ergative rule» (Napoli 1988: 132-133). It is not possible for the subject of the verb *break* to have a sense corresponding of an intransitive, for example:

- (45) \*This pot is a breaker

the subject is not an active participant. In the case of unpaired unaccusative, *-er* is not easily attached to them, but in the case of *arrive*:

- (46) Who is the new arriver?

the only sense we have corresponds to the person who arrives, not to someone who causes the arrival so, this semantic constraint seems to operate also for unpaired unaccusatives.

Keyser and Roeper's third argument consists in the possibility of a lexical insertion of an object at deep structure. Unaccusative verbs cannot have the so called cognate object as:

- (47) I sing a song

because of the trace resulting from the putative lexical movement rule:

- (48) \*The ship sank a sinking

Napoli pointed out that if *sink* is intransitive in its lexical structure with a theme in the subject position it cannot have an object. In fact, as Keyser and Roeper themselves admitted *sing* has an NP object which can be optionally

filled with a cognate object. Cognate objects do not occur with strictly intransitive verbs but only with verbs that can take a non cognate object:

- (49) The man sang a song/the National Anthem

Besides, unlike Keyser and Roeper's prediction, Napoli claimed that in some pairs of unaccusative verbs the unaccusative member can take an object, as shown in Napoli's example (1988: 134):

- (50) a. The man rang/sounded the bell  
b. The bell rang/sounded  
c. The bell/rang/sounded the hour of the Mass

According to Burzio (1986), this example is an anomaly, because it is completely incompatible with an analysis which derives the unaccusative member of an unaccusative pair via movement, whether in the syntax or in the lexicon. In conclusion, examples such as (50) offer no evidence for a trace in the object position.

The focus of Keyser and Roeper's fourth argument is on *there* sentences. They claimed that only unaccusative verbs can occur in *there* sentences and not other intransitive verbs, because the NP following the unaccusative verb is located in the surface, where it originates in the lexicon. So in *there* sentences the NP followed the unaccusative verb gets case from the grammatical function subject position, because, as Burzio claimed, the intransitive member of an unaccusative pair cannot assign case. On the other hand, Napoli (1988: 135) noticed that some non unaccusative verbs, according to Keyser and Roeper's criteria, can form *there* sentences:

- (51) a. There rose a star  
b. There rose a thin spiral of black smoke into the innocent air

Keyser and Roeper's fifth argument is that non unaccusative intransitive verbs do not allow *re-* prefixation, because it requires linking to an object, while unaccusative verbs must have a trace in object position in the lexicon where *re-* prefixation occurs. Napoli noticed that not all the unaccusative verbs allow *re-* prefixation:

- (52) a. There arrived a wizard at the door  
b. The guests are arriving away  
c) \*Rearrive



At the same time not all the transitive verbs can take *re-* prefixation:

(53) None really knows anything

Hence, according to Napoli, more investigation about *re-* prefixation is needed to account for the fact that not all unaccusative verbs cannot take *re-* prefixation.

Napoli's conclusion is that unaccusative verbs are intransitive at all points of the grammar in English, that is both in the lexicon and in the syntax. Therefore, in opposition with Burzio's analysis, the movement in unaccusative verbs is not found in English, in contrast to Italian: they form a semantic class rather than a syntactic one as in Italian.

### **The be/have paradigm**

#### ***The be/have variation***

A syntactic paradigm that underwent drastic modifications in the course of the period 1700-1900 is the *be/have* paradigm used as auxiliary with a subclass of intransitives, unaccusative verbs. In this period there was a gradual decline and finally the fall of this paradigm from a clearly dominated *be* paradigm around 1700 to an almost entirely *have* dominated paradigm around 1900.

#### ***Diachronic evolution up to 19<sup>th</sup> century***

Rydén and Brorström (1987) carried out a study about the frequency of the *be/have* paradigm in the history of English language. Focusing on the period between the 18<sup>th</sup> and the 19<sup>th</sup> century, they analysed two types of texts which respectively consist of twenty five collections of letters and fifty plays.

As they pointed out, ever since the *be/have* paradigm came into existence, *have* has been a possible alternative with mutative verbs<sup>5</sup> for expressing perfectivity. Although found in the earliest Old English texts, it was however, except for certain syntactic-semantic contexts, in a clear minority throughout Middle English and early Modern English times, though exhibiting a slow but steady rise in frequency, with allowances made for individual deviance, at least for the

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<sup>5</sup> Unaccusative verbs in my terminology.

14<sup>th</sup> century onwards. However, still at the beginning of the 18<sup>th</sup> century *be* was, in most contexts, the distinctly favoured marker.

The main criterion of differentiation between the two auxiliaries lays on an aspectual distinction between State *vs.* Action/Process linked respectively to the selection of *be* and *have* in the perfectivity, even though originally *have* denoted also State. Another criteria of distinction is that of Unreality, in fact conditional clauses have a constrained effect on the use of *be* as a perfective marker also with mutative verbs. Copula, perfective auxiliary, passive marker are the constructions in which *be* occurred in the period that were examined by the two authors.

The first two functions were a potential source of ambiguity As shown in the following examples (Rydén and Brorström 1987: 24)

- |      |  |                      |
|------|--|----------------------|
| (54) | He is changed<br>'He is different'         | Copula               |
| (55) | He is changed<br>'He has become different' | Perfective auxiliary |

The result was a gradually elimination of *be* as a perfective auxiliary.

In middle English there was a further evolution: besides the two variants *be* + *PP* and *have* + *PP* a new variant *have been* + *PP* appeared (even though it was already attested in the 14<sup>th</sup> century until the early 20<sup>th</sup> century and with *go* it is still used). On the basis of the texts analysed by Rydén and Brorström, the verbs which may take this variant are: *advance, arrive, come, expire, freeze, go, grove, improve, increase, land, melt, miscarry, pass, recover, return and subside*. Gradually up to 19<sup>th</sup> century things changed in favour of *have*.

The results of the analysis carried out by Rydén and Brorström can be summarised as follows.

**Table 7 The be/have variation (Rydén and Brorström 1987)<sup>6</sup>**

Verb	18 <sup>th</sup>	Century	19 <sup>th</sup>	Century
	Be	Have	Be	Have
Arrive	5	2	2	28
Become	3	3	7	34
Come	40	3	15	138
Fall	4	9		34
Get	18	8	2	46
Grow	5		3	13
Land	3			2
Return	6	2	3	21
Sail	1	2		2
Set	5	2		3
Total	90	31	32	321
%	74.4	25.6	9.1	90.9

The diachronic variation between *be* and *have* in the perfect paradigm can be schematised as follows:

**Table 8 Diachronic variation between *be* and *have***

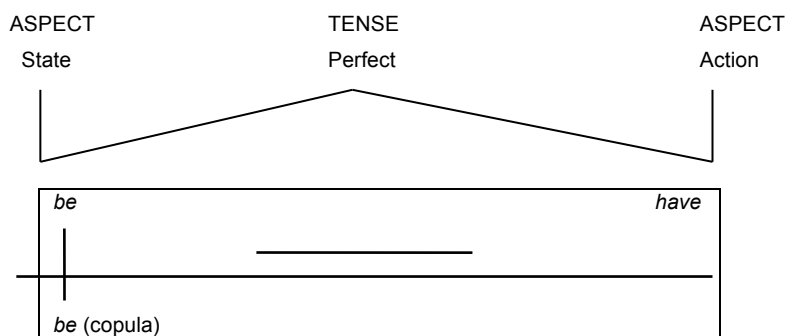
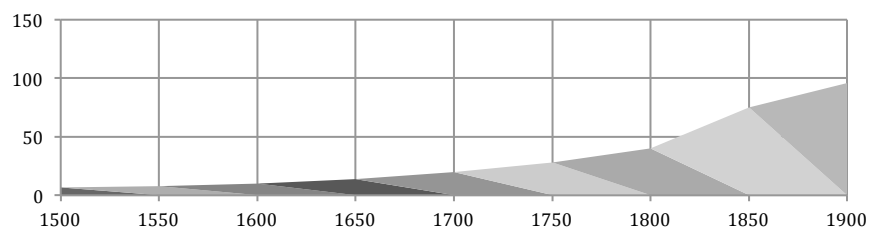


Figure 1 shows *have* progression between 1500-1900.

<sup>6</sup> The verb *go* is not included in the table because the preponderance of *be* with this verb would distort the overall ratios.

**Figure 1 *Have* progression**



The generalisation of *have* as perfect marker with unaccusative verbs was more or less completed at the end of 19<sup>th</sup> century, even though some verbs have been more resistant than others to *have* construction, only when they were accompanied by a complement there was present the option of *have*, such as *go*, *change*, *recover*, *turn*, *set* and *flew*. Besides, there are dialectal uses of *be* as reflexes of old pattern.

## **Conclusion**

This study aimed at investigate an area of Italian and English grammar which is covered by unaccusative verbs. In Italian the syntactic reflexes of this class of verbs - auxiliary selection, past participle agreement and the possibility of *ne-* cliticization - were analysed from different points of views: syntactically, semantically and on the basis of the interaction between these two aspects. It is clear that the best approach is one that looks at how the semantics of a verb determines the syntactic behaviour of its argument, since it is consistent with the historical evolution of the auxiliaries from Latin to Modern Italian.

In comparison to Italian, English can be said to have roughly the some class of unaccusative verbs but the precise characterization of them, whether a syntactic or a semantic class, is a matter of debate in the literature. In English this class of verbs has only a few syntactic reflexes - *there* insertion, participial small clauses and the old use of *be/have* as auxiliaries - seem to be exceptions to this assumption.

## ITALIAN *SI*

### General remarks

The clitic *si* is employed in Italian in different ways: it is the third person reflexive clitic, and it is used to form impersonal sentences. Given the phonetic identity of the clitic employed for these types of constructions, linguists have often questioned whether the two *si*'s are best analysed as identical or distinct, but, in line with Napoli (1973, 1976), it will be shown that impersonal *si* differs radically from the other *si*.

As far as impersonal *si* constructions are concerned, in literature there was a large debate whether *si* must be analysed as the subject of the impersonal sentences or not. The traditional approach was to analyse impersonal sentences as subjectless sentences. Now there is a common consensus to consider it as the subject with arbitrary reference, roughly equivalent in interpretation to the arbitrary PRO. In this case *si* may appear with either an intransitive or a transitive verb. There is no overt full NP subject and the verb is marked in the neutral third person singular form, as (1)a. and (1)b. illustrate:

- (1) a. Nei fine settimana *si* va spesso al mare  
During-the week-ends *si* goes often to-the beach  
b. In questa pasticceria *si* mangia i dolci al cioccolato  
In this pastry shop *si* eats the cookies of chocolate

There is another impersonal construction where *si* seems to function as a passivising element and the sentence receives a passive or middle interpretation. This construction appears only with transitive verbs; the direct object functions as the logical subject, that is either pre-verbal or post-verbal, triggering agreement on the verb. This passive or middle construction is fully productive: any transitive verb which selects a human subject may undergo the rule as it is shown in the following examples:

- (2) a. I dolci al cioccolato *si* mangiano in questa pasticceria  
The cookies of chocolate *si* eat<sub>3 P. PLUR.</sub> in this pastry shop  
b. *Si* mangiano i dolci al cioccolato in questa pasticceria  
*Si* eat<sub>3 P. PLUR.</sub> the cookies of chocolate in this pastry shop

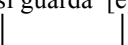
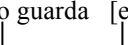
While the description of impersonal *si* is relatively uncontroversial in literature, the status of the passive or middle *si* is less clear. Debate concerning the passive *si* centres around its case requirement: whether *si* of the passive constructions bears accusative case (Belletti 1982) or whether it is associated with nominative case (Burzio 1986).

### Reflexive verbs

Burzio (1986: 37) considered such sentences:

- (3)
- a. Gianni *si* guarda  
Gianni *si* watches
  - b. Il vetro *si* rompe  
The glass *si* breaks
  - c. Gianni *si* sbaglia  
Gianni *si* mistakes

It can be observed that all these constructions involve the same clitic *si* which agrees with the subject, but they do differ between them in certain respects. Considering (3)a. he argued that this *si* is an object clitic that is base-generated<sup>7</sup> in clitic position and forms a chain with an empty category in the same way as non reflexive clitic does:

- (4)
- a. Gianni *si* guarda [e]  

  - b. Gianni lo guarda [e]  


In (4)a. and b. the verb assigns a  $\theta$ -role to the object position and this  $\theta$ -role is transmitted to the clitic at all levels and therefore the Projection Principle is satisfied. The clitic spells-out the case marking features of the verb. Hence, in both cases the chain has case and  $\theta$ -role, but the difference between them is that in (4)a. the clitic *si* has an antecedent *Gianni* that is coreferential to *si*

- (5) Gianni<sub>i</sub> *si*<sub>i</sub> guarda

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<sup>7</sup> In Burzio's terminology base-generated refers to structures which are not distinct from deep structure.

while in (4)b. *lo* has no antecedent.

(6) Gianni<sub>i</sub> lo<sub>j</sub> guarda

The fact that the case and the  $\theta$ -role are assigned in both chains can explain the alternation of the clitic with lexical NP's:

(7) Gianni guarda {se stesso/Maria}  
Gianni watches {himself/ Maria}

Burzio (*ivi*: 38) called the *si* of (1)a. reflexive *si*.

The *si* of (3)b. does not have a reflexive meaning and does not alternate with an object but it can alternate with a subject:

(8) a. Il vetro *si* rompe  
The glass *si* breaks  
b. Gianni rompe il vetro  
Gianni breaks the glass

According to Burzio pairs like in (8) are AVB/BV pairs where A and B are the arguments and V is the verb. Verbs like *rompersi* are unaccusative verbs where the *si* is only a morphological reflex of the loss of subject  $\theta$ -role, which marks the derivation of unaccusative verbs from transitive ones through a lexical process. Therefore, according to Burzio (*ivi*: 38) this type of *si* called ergative *si* is simply an affix that does not have any syntactic role.

In (3)c. the *si* does not alternate with an overt direct object either,

(9) \*Gianni sbaglia Piero  
Gianni mistakes Piero

nor can it alternate with a subject as in (8). This proves that it cannot be a transitive, and the fact that *ne*-cliticization is possible accounts for the fact that it is an ergative.

(10) Se ne sbagliano molti  
Themselves of-them mistake many

Therefore, the *si* in (3)c. is like the ergative *si* in (3)b. in that it is an affix which is a morphological reflex of the lack of  $\theta$ -role assignment to the subject

position. To sum up Burzio’s idea, in (3)a. the construction *si* spells out the accusative features and receives the object  $\theta$ -role through a chain with an empty category in object position as follows:

(13) NP    *si* -V [e]  
           □    □

In (3)b. and c. the construction *si*, while spelling out accusative case, also absorbs the subject  $\theta$ -role, so that a chain must form with the object and the subject position as in (12):

(12) [e]    *si* -V NP  
           □    □

As Burzio noticed, there are examples that indicate that reflexive *si* can occur as an object clitic but it can also occur as an affix absorbing subject  $\theta$ -role like the other two *si* constructions.

Let us consider the validity of an object clitic analysis by examining Burzio’s examples:

- (13)  
 a. L’ auto capovoltasi    nell’ incidente era la Ferrari  
    The car (which had) rolled over in-the accident was the Ferrari  
 b. Un pilota accortosi    dell’ incidente diede l’ allarme  
    A driver (who had) become aware of-the accident gave the warning

This confirms Burzio’s ergative analysis of these sentences, for the small clauses relativization is possible and the occurrence of ergative and reflexive *si* at the end of the past participle is derived respectively from:

- (14)  
 a. L’auto si è capolta  
 b. Il pilota si è accorto dell’incidente

Forming the same constructions with a reflexive sentence:

- (15)  
 a. Un individuo si accusò di aver ucciso il presidente  
    An individual *si* accused to have killed the president



- b. Un individuo *accuatosi* di aver ucciso il presidente fu creduto pazzo  
 An individual (who had) accused-*si* to have killed the president was deemed insane

If *si* were object clitic the small relative counterpart should be possible:

(16)

- a. Un individuo lo accusò di avere ucciso il presidente  
 An individual him accused to have killed the president  
 b. \*Un individuo accusatolo di avere ucciso il presidente fu creduto pazzo  
 An individual (who had) accused him to have killed the president was deemed insane

and the alternation with *se stesso* (himself) should also be possible.

(17)

- a. Un individuo accusò se stesso di aver ucciso il presidente  
 b. \*Un individuo accusato se stesso di aver ucciso il presidente fu giudicato pazzo

(16)b. and (17)b. are unacceptable because they involve subject relativization. They show that we cannot consider the *si* of (15)b. as having object  $\theta$ -role and so it must have the structure of (12). This is because reflexive *si* is related to the subject and the object position, as for ergative *si* and inherent reflexive *si*, which means that subject, *si* and object are coindexed. This relation exists not only at Surface structure but also at deep structure as illustrated in (12) and (13). We do not have to assume that the *si* in (12) is a subject clitic but only that it is a lexical affix like the ergative and inherent reflexive *si*. This lexical affix absorbs subject  $\theta$ -role at a lexical level. At the same time Burzio suggested that there are cases in which the lexical affix analysis is not possible. This is the case for sentences with an indirect object where the NP movement cannot occur, because the subject is base generated in subject position and, so the clitic *si* is an object clitic. This yields to unacceptable sentences:

- (18) a. Gianni *si* è scritto  
 Gianni *si* is written  
 b. \*Gianni [<sub>sc</sub> PRO<sub>i</sub> *scrittosi* t<sub>i</sub> parecchie volte]  
 Gianni written-*si* several times

### ***Constraints of the reflexives***

There are some descriptive problems in the use of reflexives that should receive an explanation. Starting from the constraints dictated by the Projection Principle, it is possible to introduce an essential condition for the reflexives,

namely the requirement of *si* to have a proper antecedent, that is non base-generated, at deep structure. This is a reflex of a condition that all the relations involving base-generated clitics be established at deep structure, not only those required by the Projection Principle. In fact, Burzio (1982) proposed that reflexive-reciprocal clitics, base-generated in clitic position, are attributed the special property of requiring a “local” antecedent in subject position at all syntactic levels, including deep structure. For this reason, *si* cannot occur with derived subjects, as we can see in the following sentence with an ergative verbs.

- (19) \*Gianni e Maria *si* venivano in mente  
 Gianni and Maria *si* came <sub>3P. PLUR.</sub> in mind

(19) is unacceptable since the *si* cannot be an object clitic, because in the deep structure it does not have an antecedent. At the same time it cannot be an affix, because it does not absorb the subject  $\theta$ -role, because there is not this  $\theta$ -role with ergative verbs. Moreover, the indirect object  $\theta$ -role is transmitted to the *si* because there is no other argument. In other words, all the ergative verbs that have a derived subject cannot have a reflexive clitic, for they already have the trace of the surface subject that was the direct object at deep structure:

- (20) a.            NP V [e]  
                       └───┘
- b. I due amici<sub>i</sub> spesso vengono e<sub>i</sub> in mente l'uno all' altro  
 The two friends often come in mind the-one to each other

For this reason the cliticization of the anaphor is impossible. Rizzi (1986) gave an answer to this problem as well, starting analysing the nature of the clitics integrating them within  $\theta$ -Theory, by assuming that they are arguments and their traces are non arguments. In this way the chain formed by the clitic and its trace corresponds to a chain formed by an NP and its trace.

- (21) a. Gianni *la*<sub>i</sub> guarda e<sub>i</sub>  
           Gianni her sees  
       b. Gianni *si*<sub>i</sub> guarda e<sub>i</sub>  
           Gianni *si* sees

In (21) the object  $\theta$ -role is assigned to the chains (*la*, e) and (*si*, e) respectively.

Considering the deep structure of (3)a:

(22) Gianni [<sub>VP</sub>si<sub>i</sub> è stato affidato e'<sub>i</sub> e''<sub>i</sub>]

where e' is the trace of the NP Gianni and e'' is the trace of the dative reflexive clitic. At surface structure (22) is ruled out by the  $\theta$ -criterion: the only chains that would fulfil the requirements of  $\theta$ -Theory would be (Gianni, e'), (si, e''), in correspondence to the two  $\theta$ -roles assigned to the direct and indirect objects in this structure. At this point Rizzi explained the notion of "local binder" as follow: «Chain formation cannot skip intervening binders» (Rizzi 1986: 71). According to this, the chain (Gianni, e') is not possible because it would skip the intervening binder si and e''. So, the subject Gianni and its trace cannot form a chain and the  $\theta$ -Criterion is violated.

As showed before, this incompatibility is also present between anaphoric cliticization and derived subject, as it is clear from the following deep structure.

(23) NP<sub>i</sub>...[si...e<sub>i</sub>...]

where the formation of the chain (NP, e) will be blocked by the intervening binder si and by its trace.

The same problem that arose in (22) is present here. Reflexive and reciprocal si will differ in this respect from non clitic reflexive and reciprocals which are not subject to such constraint.

(24) Gianni gli è stato affidato  
Gianni to-him is been entrusted

The picture is not completed by saying that the reflexive clitics must have a proper antecedent. A reflexive clitic must have as antecedent a subject, and it is not possible to have for example an object, even if the direct object can be the antecedent of an anaphoric prepositional object:

(25) a. Affiderò Gianni<sub>i</sub> a se stesso<sub>i</sub>  
will-entrust 1 P. SING. Gianni to himself  
b. \* Si<sub>i</sub> affiderò Gianni<sub>i</sub>  
Si entrust Gianni

The fact that (25)b. is ill formed cannot be attributed to ordinary c-command requirements on antecedent-anaphor relations, because the c-domain of the direct object extends to the whole VP, and includes both the post-verbal indirect object position and the pre-verbal clitic position. Rizzi (1979) proposed that in (25)a. the direct object asymmetrically c-commands the anaphor, while in (25)b. the c-command is symmetric. The asymmetry requirement seems to be an immediate consequence of the interplay of the three principles of the Binding Principle. In (25)a. the principles are fulfilled: the anaphor is bound and the lexical antecedents are free. On the other hand, in (25)b. the anaphor is bound, but the lexical antecedent is bound by the c-commanding anaphoric clitic. Hence, anaphors should be bound and their antecedents should be free, in other words from the interplay of the three principles follows the asymmetric c-command requirement.

## Impersonal and Passive SI

### *The traditional analysis*

Traditionally the impersonal *si* sentences were analysed as subjectless sentences.

- (26)    *Si parte*  
          *Si* leaves

Parisi (1976) suggested that in a sentence like (26) the nature of the only argument which is mapped by *si*, should be such as to not allow this argument to become the subject. If this analysis is correct, the *-e* ending of the third person singular of the verb, is not because of its agreement with the only argument of *parte*, but it is rather a fixed form. A piece of evidence of the theory of the subjectless sentence is the grammaticality of (27)a. in comparison to the ungrammaticality of (27)b.:

- (27)    a.        *Si è partiti*  
                  *Si* is left PLUR.  
           b.        \**Si è partito*  
                  “*Si* is left SING.”

Therefore, the PP should have the masculine plural ending which depends on the agreement of the PP with the only argument of the verb *partire*, which

appears to be plural and masculine. In other verbs, which do not express a state or a chance of place or condition, the PP does not agree, keeping the fixed -o ending.

- (28) a. Si è dormito  
*Si* is slept <sub>SING.</sub>  
 b. \*Si è dormiti  
*Si* is slept <sub>PLUR.</sub>

The only argument in these sentences is plural as shown by the PP with plural ending, and the conclusion is that these sentences have no subject, that is no argument which the verbal element is made to agree to, in fact while the only argument of these sentences is plural, the verbal element, the copula *essere* is in third person singular, that is the fixed form.

When the impersonal *si* sentences are made up of a transitive and its direct object, the result is as follows:

- (29) a. Si legge il libro  
*Si* reads the book  
 b. Si leggono i libri  
*Si* read the books  
 c. Si legge i libri  
*Si* reads the books

In cases like (29)a. and b., given that the first argument cannot be the subject, the second argument may be selected as the subject, that is *i libri* as it is shown by the passive:

- (30) I libri furono letti dagli studenti  
 The books were read by-the students

In (29)a. the subject is singular and the ending of the verb is singular, while in (29)b. the subject is plural and the ending of the verb is plural. But there is still a problem for (29)c. where, according to this analysis this sentence is subjectless as (26) even if there is a second argument as in (29)b. and c. At the same time (29)b. is preferable to (29)c. because it is better to have a subject where this is possible.

Evidence in support to the analysis of sentences like (29)a and b. is presented by the cliticization of the second argument:

- (31) a. Lo si legge (il libro)  
 It *si* reads (the book)
- b. \*Li si leggono (i libri)  
 Them *si* read (the books)  
 Li si legge (i libri)  
 Them *si* reads (the books)

In these cases the opposite situation arises: the agreement of the verb with the subject plural is ungrammatical (31)b. and the correct form is again the fixed form of the third person singular. In fact the clitic pronouns *lo* and *li* can represent an argument only if it is a direct object, and not a subject, so the second argument of *leggere* is not a subject but a direct object. In other words, sentences like (31)a. and c. are considered subjectless and the verbal element goes back to its fixed form of the third person singular.

The conclusion is that sentences like (29)a. and b. are not either active or passive, but belong to a form called middle that is intermediate between active and passive. In fact, like the passive sentences the verb agrees with the argument that in the corresponding active sentence would be selected as a direct object. Unlike passives, however, the PP of *leggere* is not expressed.

### ***Approaches to clitic si***

In this section I will consider Belletti and Burzio's analysis of clitic *si*. Italian has a kind of passive that contain the clitic *si*, rather than involving the combination of copula + past participle as in English. Belletti (1982) called this kind of passive morphological passive. She considered sentences like:

- (32) a. I dolci al cioccolato si mangiano in questa pasticceria  
 The cookies of chocolate *si* eat<sub>PLUR.</sub> in this pastry shop
- b. Le materie letterarie si studiano in questa università  
 The humanities *si* study<sub>PLUR.</sub> in this university

It is important to notice that clitics, being pronominal lexical element, fall under the requirements of both Case Theory and  $\theta$ -Theory, they are Case marked and they bear a  $\theta$ -role.

Belletti's assumption is that *si* is base generated under the node INFL, together with the other features located under such a node: the agreement features and the feature tense. The representation is:

- (33) INFL  
 .  
 Tense  
 .  
 Features  
 .  
*si*

Therefore, the deep structure for (32)a. is:

- (34) [S [NP e] [INFL tense ... features ... *si*] [VP mangiare [NP *i dolci al cioccolato*]]]

At a first glance, INFL cannot assign either Case or  $\theta$ -role because this assignment is limited to the subject position [NP, S]<sup>8</sup> and the object position [NP, VP]<sup>9</sup>, [NP, PP]<sup>10</sup> that are usually called argument positions. But assuming that INFL is pronominal, it must satisfy both Case Theory and  $\theta$ -Theory. In this case the VP assigns a  $\theta$ -role externally and it goes to INFL that keeps this  $\theta$ -role because it is a pronominal, otherwise the  $\theta$ -role would be transmitted to [NP, S] positions. The result is that the clitic pronoun *si*, that is found under the node INFL has these properties:

- *si* is assigned the  $\theta$ -role otherwise assigned by VP to the subject NP;
- *si* absorbs objective Case otherwise assigned by V to its direct object NP.

At this point Move  $\alpha$  has to apply in (34) moving the object NP *i dolci al cioccolato* into the subject position in order for it to get Case, yielding to this representation:

- (35) [S [NP<sub>nom</sub> *I dolci al cioccolato*] <sub>i</sub> [INFL tense ... features ... *si* <sub>obj</sub>] [VP mangiare [e]<sub>i</sub>]]

After this, the process subject/verb agreement takes place yielding to sentences like (32)a. In the light of this analysis, the sentences in (32) are analysed as cases of passives. A variant of the sentences in (32) is:

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<sup>8</sup> [NP, S] is the NP subject of S.

<sup>9</sup> [NP, VP] is the NP object of V for some V.

<sup>10</sup> [NP, PP] is the NP complement of a PP.

- (36) a. I dolci al cioccolato si mangiano in questa pasticceria  
 b. Si mangiano i dolci al cioccolato in questa pasticceria  
*Si eat the cookies of chocolate in this pastry shop*

It is easy to notice that in (36)b. subject inversion has taken place in the same way as in the following:

- (37) a. Gianni dorme  
 Gianni sleeps  
 b. Dorme Gianni  
 Sleeps Gianni

The fact that an object cliticization is not possible shows that in (36)b. there is no direct object, because the objective Case was absorbed by *si* and the original [NP,VP] moved in the subject position:

- (38) Li si mangiano in questa pasticceria  
 Them *si eat* PLUR. in this pastry shop

For this reason (36)b. is analysed in the same way as (32). Belletti's analysis is different for sentences like (39):

- (39) a. In questa pasticceria si mangia soltanto i dolci al cioccolato  
 In this pastry shop *si eat* only the cookies of chocolate  
 b. In questa Università si studia le materie letterarie  
 In this University *si studies* the Humanities  
 c. Si telefona spesso  
*Si telephones often*  
 d. Non si telefona più  
 Not *si telephones any-more*

Applying to (39)a. and b. the same analysis used for (32) the deep structure is:

- (40) [S [NP e] [INFL tense ... features ... *si*] [VP mangiare [NP i dolci al cioccolato]]]

This deep structure yields to a surface structure that is different from (32), because here *si* is assigned nominative Case and the object *i dolci al cioccolato* is assigned objective Case by the verb that is transitive. For the  $\theta$ -roles, *si* is assigned the thematic role that would be assigned to the subject NP if INFL were not pronominal as in (32). Saying that *si* takes the nominative Case the sentences in (39) are an instance of the Pro-drop parameter. Once the Case and



$\theta$ -role are assigned, nominative clitic *si* governs and it is coindexed with the empty subject position as illustrated in (41):

(41) [S [NP e]<sub>i</sub> [INFL tense ... features ... *si*<sub>i nom</sub>] [VP mangiare [NP obj i dolci]]]

As far as (39)c. and d. are concerned, the deep structure presented in (42) can account for them even if the verb is intransitive.

(42) [S [NP e]<sub>i</sub> [INFL tense ... features ... *si*<sub>i nom</sub>] [VP telefonare più ]]

The last process is due to the verb that is put in the third person singular, arguing that this person is required here by *si* that is the unmarked choice<sup>11</sup>.

The analysis given by Belletti can be summarised as follows:

- *si* is a clitic base generated under the node INFL;
- *si*, like all clitic pronouns, is subject to the requirement of Case Theory and  $\theta$ -Theory;
- *si* is assigned a  $\theta$ -role by VP, the  $\theta$ -role that VP assigns “externally” to [NP,S], if INFL is not pronominal, and to INFL if:
  - a. *si* absorbs objective Case, in case of morphological passive;
  - b. *si* is marked with nominative Case, in case of Pro-drop.

Burzio’s basic idea (1986) is that *si* is the subject clitic of the impersonal sentences. The main arguments to support this idea are:

- it is understood as a subject, meaning ‘people, one, we’;
- it is incompatible with an overt subject (\*La gente *si* legge libri ‘People *si* read the books’);
- it is a clitic because it can occur between other clitics and the verb (Gli *si* telefona spesso ‘To him *si* phone often’);
- it will follow the negation, whereas a non clitic subject will precede it (Non *si* leggerà il libro ‘Not *si* will read the books’);
- like the clitics it will resist co-ordination with an NP subject (\*Gianni e *si* legge il libro ‘Gianni and *si* read the book’<sup>12</sup>).

Considering *si* as subject clitic, the structure that follows is:

<sup>11</sup> Belletti specified that *si* is not third person singular in fact in examples like: *Si è spesso felici* ‘One (*si*) is often happy’ the adjectives referring to *si* is plural but the verb is singular suggests that the verbal agreement is not a real agreement but the unmarked choice.

<sup>12</sup> The same arguments to demonstrate that *si* is a subject clitic are provided by Rizzi 1982.

- (43) a. Si leggerà molti libri  
*Si* will-read<sub>PLUR.</sub> many books  
 b. [ e ] si leggerà molti libri

The chain (e, *si*) has a subject  $\theta$ -role, so *si* is in complementary distribution with other subjects. Burzio's second assumption (*ivi*: 45-46) is that the chain (e, *si*) arises via movement, that is the cliticization of *si* by movement and it is not base-generated. To demonstrate this, he started by assuming that *si* as a subject can be a derived subject. Consider these examples:

- (44) a. [ e ] si è stati invitati t  
  
 b. [Gianni] è stato invitato t

In (44)a. the chain (e, *si*) is base-generated violating the Projection Principle, because *si* would not receive a  $\theta$ -role in the deep structure.


- (45) [ e ] si è stati invitati [ e ]

This is due to the fact that in case of passives at deep structure there is no relation between subject and object positions and this relation is the same in (44)a. and b., in that it arises by application of Move  $\alpha$ . It is not possible to consider *si* in the object position in order to assign the  $\theta$ -role, because *si* is never assigned object  $\theta$ -role when there is no NP movement, that is *si* is never an object clitic. To demonstrate the impossibility of *si* as an object clitic, he gave an example:

- (46) \*Gianni si prende in giro  
 Gianni *si* takes for a ride

This demonstrates that *si* must always be related to the subject position. Hence, cases like (44)a. excluded an analysis of *si* as base-generated in clitic

position. In conclusion, a movement should be involved. In this case the deep and the intermediate structure will be:

- (47) a. [ e ] è stati invitati [ si ]  
 b. si è stati invitati t
- 

The two structures are correct according both the  $\theta$ -Criterion and the Projection Principle, because in (3)a the object  $\theta$ -role is borne by *si* and in (41)b. by the chain (*si*, t). In conclusion, «*si* can be inserted under any NP-node as long as it cliticizes from subject position» (Burzio 1986: 45), because *si* can interact with Movement rules as shown by the following example with an ergative verb.

- (48) [e<sub>i</sub>] si<sub>i</sub> è arrivati t<sub>i</sub> stamattina  
*si* is arrived this-morning

Three variants of the *si* impersonal sentences are:

- (49) a. Si leggerà volentieri [molti libri]  
*Si* will-read SING. willingly [many books]  
 b. Molti libri si leggeranno volentieri  
 Many books *si* will-read PLUR. willingly  
 c. Si leggeranno volentieri molti libri  
*Si* will-read PLUR. willingly many books

The three variants can be considered synonymous: the relation between (49)a. and b. is roughly the relation that exists between an active and its passive sentence; the relation between (49)b. and c. is the relation that exists between a sentence with pre-verbal subject and the corresponding sentence with post-verbal subject. The analysis for sentences like (49)a. is the one presented above, and so let us see the analysis for (49)b. and c. It is clear that in (49)b. *molti libri* is in subject position, in fact it triggers the verb agreement, and it can be replaced by a Null subject. Burzio observed that it is clear that *molti libri* has been moved from object position, indeed there is a gap in direct object position and so he suggested that NP-movement has been involved in the derivation of (46)b. Then, the subject position is associated with subject  $\theta$ -role, because of *si* cliticization and with object  $\theta$ -role *molti libri*. According to the  $\theta$ -Criterion, it is not possible to have two subjects for one verb. Hence, *molti libri*

cannot be the subject, because the subject position is already filled by *si*. We can consider *molti libri* as a left disjunction in non argument position, like:

(50) My brother, he is very kind

In other words, the analysis for (49)b. seems to be identical to the one for (49)a., the only difference is that the former is derived from the latter by NP-movement.

In conclusion, in both variants *si* must be cliticized by movement, since in some cases it seems to undergo NP-movement in the course of the derivation, and in both cases *si* is associated with nominative case.

### ***Si* with infinitival clauses**

According to Belletti's analysis (1982), it is possible to find *si* within an infinitival clause only when it absorbs objective Case, that is only when the verb of a given infinitival sentence is a Case assigner, and *si* can absorb objective Case. On the other hand, if the verb of a particular infinitival sentence is not Case assigner, *si* cannot appear within it, because no nominative Case is available in infinitivals, and therefore *si* cannot be marked with nominative Case. Let us start seeing the different behaviour of *si* within infinitival clauses embedded in Raising constructions in the following examples noticed by Belletti:

- (51) a. Azioni del genere sembrano criticarsi senza ragione  
 Actions of this-kind seem<sub>PLUR</sub> criticize-*si* without reason  
 b. \*In questo periodo sembra partirsi troppo spesso  
 In this period seems to leave-*si* too often

In (51)a. the verb *criticare* is Case assigner, hence *si* can absorb the objective Case. Instead in (51)b. the verb *partire* is not a Case assigner, therefore *si* cannot receive any case and it follows the ungrammaticality of the sentence due to the violation of the Case Filter.

The picture is different when we have a control infinitival:

- (52) a. \*I ragazzi sostengono [di PRO punirsi senza ragione]  
 The boys pretend to punish(*si*) without reason  
 b. \*I ragazzi sostengono [di PRO partirsi domani]  
 The boys pretend to leave(*si*) tomorrow

Both (52)a. and b. are ungrammatical with no respect to the fact that in (52)a. the verb *punire* is Case assigner, like the verb in (51)a. while in (52)b. the verb *partire* is not. Belletti suggested that this is not due to the fact that the analysis of the two kinds of *si* is incorrect (in fact in the paradigm (52) we do not have the reverse situation of (51), but it is due to the fact that the subject of control infinitival clauses is PRO, while in the case of raising infinitival clauses we do not have PRO in the subject position. Hence, it seems to be an incompatibility between *si* and control PRO.

As Belletti noticed, a counterpart examples of the analysis according to the possibility to have *si* within infinitival clauses, are the sentences that involve complex adjectival constructions, where *si* is present in the infinitival clause:

- (53) Certe idee sono difficili da sostenersi in circostanze del genere  
 Similar ideas are difficult to sustain-*si* in circumstances of this-kind

The only way to give an account to these type of sentences is to analyse them in the light of Chomsky's proposal about the structure of this type of sentence<sup>13</sup>. On the basis of this proposal, the surface structure of a sentence of this kind is:

- (54) Certe idee<sub>i</sub> sono [<sub>AP</sub>[<sub>A</sub>difficili [<sub>S</sub>da [<sub>S</sub>NP sostenersi]]] t<sub>i</sub>] in circostanze del genere

In (54) *si* can absorb the Case assigned by the verb *sostenere* and the NP is an empty NP that does not produce a violation of the Principle of the Empty Category, because clitic *si* is the proper governor of it, so that the structure is:

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<sup>13</sup> The properties of sentences of this kind called the "easy to please" constructions were considered by Chomsky (1981). He noticed that the subject position of the matrix sentence in these constructions is a position of  $\theta$ -role assignment, but in a sentence as *it is easy to please John*, the subject position of the same matrix sentence is not a thematic position, because the dummy pronoun *it* fills it. So, there is a paradox of  $\theta$ -Theory. Chomsky proposed to analyse the sentence "easy to please" as a complex adjective and the representation at surface structure is:

(1) John is [<sub>AP</sub> [<sub>A</sub> easy to please] t<sub>i</sub> ]

t is assigned no case, because it is outside the complex adjective. But it is in a  $\theta$ -position and transmits this  $\theta$ -role to the subject of the matrix clause *John*.

- (55) Certe idee<sub>i</sub> sono [AP[Adifficili [sda[S [NP e]<sub>j</sub> sostenersi<sub>j</sub> obj]]] t<sub>i</sub>] in circostanze del genere

In this way there is not the violation of any principle, however in (56)

- (56) \*È difficile sostenersi certe idee in circostanze del genere  
Is difficult sustain-*si* similar ideas in circumstances of this-kind

there is a violation of the Case Filter, because either *si* or the object *certe idee* can be assigned objective Case.

The picture concerning the use of *si* within infinitival clauses is different according to Burzio: given that there is a complementary distribution of  $\theta$ -roles and Case assignment, because the impersonal *si* constructions and their object preposing variants are associated only with nominative Case and so both variants are limited to finite clauses. In fact the chain (e, *si*) will not occur in presence of the infinitival verbs where the chain cannot assign case and the Case Filter will be violated as it is shown in (52)<sup>14</sup>:

- (57) a. Si è comperato quel libro senza {pensare/\*pensarsi}  
Si is bought that book without {thinking/*si*-thinking}”  
b. \*Sarebbe bello [PRO<sub>i</sub> invitarsi t<sub>i</sub> a quella festa]  
Would-be nice to invite-*si* to that party  
c. Sarebbe bello [PRO<sub>i</sub> essere invitati t<sub>i</sub> a quella festa]  
Would-be nice to be invited to that party

---

<sup>14</sup> Burzio himself (1986) admitted that there are some cases noted by Belletti (1982) in which *si* can appear in infinitival constructions, namely though Movements and infinitival relative constructions, such as:

- (1) a. Questo libro è difficile da leggersi  
This book is difficult to read-*si*  
b. Sono cose da farsi al più presto  
Are things *si*-to do as soon as possible

Although he could not explain these sentences, he noticed that they represent the only exceptions in which *si* alternates with lack of *si* ('difficile da leggere'). Beside, they do not seem to be productive:

- (2) a. Si comincia a leggere questo libro  
Si begins to read this book  
b. Questo libro è difficile da cominciarsi a leggere  
This book is difficult to begin-*si* to read

(2)b. could be grammatical if *si* does not appear. According to Burzio, this demonstrates the fact that in (1) the forms are lexicalized and *si* does not play any syntactic role.

As we can see the passive sentences of the object preposing variant is grammatical in comparison to its counterpart with *si*, because in the case of a *si* receives already Case from the subject position. An exception exists with embedded infinitival clauses with Raising predicates:

- (58)    Questi libri risultano    t'    essersi già    letti    t
- 
- These books turn out            to be-*si* already read

The grammaticality of this sentence is due to the fact that Case requirements for *si* are satisfied, because *si* is in a chain with a position that is assigned Case. The presence of *si* in infinitival clauses is not possible with Control verbs as it is shown in the following example produced by Burzio (*ivi*: 52)

- (59)    a.    Quei prigionieri<sub>i</sub> risultavano t<sub>i</sub> essersi già    liberati t<sub>i</sub>  
           Those prisoners    turned out    to be-*si* already freed  
           b.    \*Quei prigionieri<sub>i</sub> vorrebbero PRO<sub>i</sub> essersi già    liberati t<sub>i</sub>  
           Those prisoners    would want            to be-*si* already freed

The ungrammaticality of (59)b. ensues from the fact that *quei prigionieri* and PRO does not constitute a chain, because they have different  $\theta$ -roles and so *si* is not associated with nominative case.

## VARIABILITY IN ACCEPTABILITY JUDGEMENTS

### **Introspection as a source of data**

One source of information about linguistic competence are judgements of both native and non-native speakers. In the first case, the object of investigation is the steady state of knowledge of native speakers, and in the second case it is the evolving interlanguage knowledge of non-native speakers. These judgements have a logical status as empirical data, that is why linguists and second language acquisition researchers rely on grammaticality judgements in order to support their theories. However, judgements are different from intuitions. The latter are the results of a computational process which takes place in the speakers' internalised grammar and are reported by them in the form of judgements, which «are linguistic descriptions and may therefore be inaccurate» (Sorace 1996: 379).

Moreover, it is worth distinguishing between grammaticality and acceptability. The former is not appropriate to describe the feelings which informants have about the well-formedness of sentences. They can express the acceptability of sentences on the basis of speakers' grammatical competence, metalinguistic knowledge, and other variables.

### **The question of validity and reliability of native speakers' judgements**

As Sorace (1988, 1990, 1996) pointed out the questions which should be addressed in order to analyse and understand linguistic intuitions are the following:

- validity of judgements, that is the relation between judgements and grammatical competence;
- reliability of judgements, that is «the degree of consistency among the judgements produced by different informants (intersubject consistency), or by the same informant (intrasubject consistency) in different replications of the test» (Sorace 1996: 376).

As far as the first point is concerned, even though there is evidence which allows us to claim that linguistic intuitions reflect grammatical competence (Greenbaum and Quirk 1970; Quirk and Svartvik 1966), they are affected by



extralinguistic factors which can, to a certain extent, be controlled and/or isolated by selecting the informants, the test design and the sentences used in the test carefully. Nevertheless, when native speakers produce acceptability judgements «may unconsciously shift towards the norm they believe they should follow, and away from the norm actually governing their internalised grammar» (Sorace 1996: 379). In fact, several interacting factors might contribute to the production of grammaticality judgements. Greenbaug and Quirk (1970) distinguished three types of factors:

- ❑ beliefs about the forms they habitually use,
- ❑ beliefs about the forms that ought to be used,
- ❑ willingness to tolerate usage in others that corresponds neither to their own habitual forms, nor to prescriptive forms.

Moreover, speakers may produce judgements based on adaptive rules which come from their conscious beliefs about language. They can be regarded as social or cultural, and for this reason they are more accessible to introspection than internalised rules.

Correctness is another problem affecting the validity of acceptability judgements. The correctness of acceptability judgements should be possible to be verified, given that they are empirical facts. However, this issue represents a paradox: on the one hand, they derive from grammatical knowledge but, on the other they are not objective states of grammatical competence, because competence cannot be measured.

The question of reliability of judgements concerns the problem according to which informants produce inconsistent judgements. This can be explained by assuming that there are situations where the explanation for the variable acceptability of grammatical form lies in the individual making the judgement, and not in the form of the sentences. In other words, judgements are affected by idiolectal or dialectal differences. Another way to explain the intersubject inconsistency is to assume that the disagreement arises from conflicting intuitions about the grammaticality of a sentence. However, the most reasonable solution to this problem is to assume that native language grammars are characterised by indeterminacy: in general terms this may be defined as «the absence of a clear grammaticality status for a given language construction in the speaker's linguistic competence, and which manifests itself either in the speaker's lack of intuitions or in variability at the intuition level» (Sorace 1990: 127). Therefore, according to Sorace the internalised grammatical knowledge of native speakers consists of an indefinite number of *acceptability hierarchies*,

which go from a determinate core to an indeterminate periphery. In conclusion, it seems more reasonable to think about linguistic acceptability as a continuum rather than a binary choice, that is grammatical or ungrammatical, as to give to grammatical structures different degrees of acceptability. In the past the concept of grammaticality as a relative property of the sentences and of acceptability hierarchies ranging from a core to a periphery was admitted outside the generativist framework (Lakoff 1973; Mohan 1977; Ross 1979) and only recently it was found to be compatible with theoretical arguments within a Principles and Parameters approach in order to account for language indeterminacy. The generativist assumption was in favour of continuity between UG-specified core and UG-underspecified periphery, as Chomsky himself claimed (Chomsky 1981, 1986). In fact, while some parameters are fixed in a variety of ways, others are not fixed at all. Therefore, some areas of grammar may be characterised by permanent parametric variation, which leads to variability and inconsistencies in natives' intuitions (Liceras 1983). In this light, variability is compatible with UG, because it may be stronger near the core of an acceptability hierarchy, while the periphery, being UG unspecified, is more likely to be suitable for variability, which expresses itself in the form of cultural norms, individual beliefs and conscious rationalisations about language (Pateman 1985).

### **Non-native speakers' judgements**

The notion of Interlanguage is at the basis of second language research. The central idea is that the learner gives a powerful cognitive contribution to the acquisition process: adult learners are cognitively pre-programmed to learn a foreign language. In other words, much of the child's predisposition when acquiring a mother tongue is present in second language acquisition. On the basis of these mental cognitive mechanisms and on the basis of the child's ability to process foreign language data, he/she constructs mental representations. From this point of view, interlanguage is distinct from both L1 and L2: it represents feature by its own, peculiarities which do not resemble either the L1 and the target language. It is an incomplete system, which is in constant evolution, evolving as the learner gets more input, changing in the direction of the target language. This means that at any stage of the acquisition process the learner has a grammar which can be described in terms of rules like the grammar of any fully developed language. Therefore, learners' linguistic

intuitions represents the means to investigate interlanguage competence. The questions of validity and reliability are present in the case of non-native speakers' judgements too. As far as the first point is concerned, interlanguage judgements reflect more the interlanguage knowledge when the extralinguistic variables are controlled. Besides, as Sorace (1988, 1990, 1996) pointed out, «it is difficult to tell whether subjects reveal what they think or what they think they should think» (Sorace 1996: 385). An important difference between natives and non-natives' judgements is the question of correctness. In second language research, non-natives' judgements are compared with those of native speakers which form the control group, in other words the standard. However, as was demonstrated, natives' judgements may be characterised by indeterminacy, causing/leading to an incorrect point of reference to decide the hypothetical distance between natives and non-natives' knowledge and establish non-natives' level of proficiency.

The most important feature which characterises interlanguage grammars is the existence of indeterminacy to a much greater extent than in native speakers' grammars, because of their inherent instability. One of the main factors which contributes to the existence of indeterminacy is the characteristic of interlanguages to be open to other linguistic systems. This means that the permeability of the interlanguage would generate indeterminacy because of the coexistence of more than one rule for the same area of grammar, and the result is greater intersubject variability and greater intrasubject variation.

One might expect that the more the learner knows a foreign language, the less determinate his/her judgements are. This means that the acquisition process of a non-primary language would be complete and non-native speakers would acquire native-like mental representations of grammatical knowledge for core aspects of the target language. Assuming a direct access to UG, L2 learners, using the principles and the appropriate parameter setting made available by UG, are uninfluenced by L1. Therefore the final state which adult learners of a L2 achieve would be very similar or the same of that achieved in L1. In other words, learning a L2 would be potentially the same as learning the first (Flynn 1984; Otsu and Naoi 1986). However, if the learner attains acceptability hierarchies similar to those acquired by native speakers, their intuitions and consequently their judgements on peripheral constructions will be indeterminate and, therefore they will be variable.

On the other hand, experimental evidence shows that it is impossible to reach native like competence with respect to the whole of L2 grammars<sup>15</sup>. It follows that interlanguage indeterminacy does not necessarily decrease or disappear at higher level of proficiency: near native speakers' competence may present incompleteness regarding certain aspects of grammar, and the result is the production of inconsistent and variable acceptability judgements.

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<sup>15</sup> For a general overview see White 1989.

## VARIATION AND INDETERMINACY IN NATIVE AND NON-NATIVE SPEAKERS' INTUITIONS

### Introduction

This study is an experimental approach to the systematic variation in native and non-native intuitions, aiming to investigate the development of linguistic intuitions in non-native grammars and to compare non-native variation and indeterminacy with that found out in native intuitions. For this reason, acceptability judgements from Italian native speakers and English speakers learning Italian were collected. Their object was an area of Italian grammar which presents indeterminacy: the auxiliary selection in the perfectivity with unaccusative verbs and *SI* constructions.

The starting point of the experiment hypothesis is Sorace's unaccusative hierarchy<sup>16</sup> (1992, 1993a, 1993b), which accounts for the interaction between syntactic and semantic aspects of the active unaccusative verbs and their syntactic reflexes in the auxiliary choice. Her main claim is that the different morphosyntactic behaviour of active unaccusative verbs reflects the different syntactic status of the surface subject at some level of representation, but is determined by semantic factors. She, therefore, posited certain distinctions within the range of unaccusative verbs, which differentiate among the types of process undergone by the subject of the verb. The result is a hierarchy that distinguishes paired and unpaired unaccusative verbs and orders unpaired unaccusatives according to their semantic status with respect to the semantic dimension movement *vs.* staticity. The hierarchy embodies the hypothesis that the notion of dynamic change, whose most concrete manifestation is change of location, is at the root of unaccusativity and identifies verbs of directed motion as core cases for *essere* selection. The unpaired verbs seem to be also ordered with respect to their dimension concreteness *vs.* abstractness: core verb types denote concrete change of location, while the further a verb type is from the core, the more abstract its meaning is.

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<sup>16</sup> Sorace's unaccusative is closely analysed in *Unaccusativity in Italian and English* in this volume.

**Table 1 Unaccusative hierarchy**

Verb type	Semantic dimension	Diachronic dimension	Italian Auxiliary
1) change of location - <i>andare</i> - <i>venire...</i>	Concrete movement	- Open to <i>habere</i> - reflexes	<i>Essere</i>
2) change of condition - <i>diventare</i> - <i>sparire...</i>			<i>Essere</i>
3) existence of a condition - <i>esistere</i> - <i>sembrare...</i> + transitive alternant - <i>aumentare</i> - <i>migliorare...</i>	Abstract staticity		<i>Essere</i>
+ unergative alternant - <i>correre</i> - <i>rotolare...</i>		+ Open to <i>habere</i> - reflexes	<i>Essere</i>

However, the hierarchy which was employed for the experiment presents some changes. Firstly, five semantic classes of unaccusative verbs are present instead of six as in Sorace's one, secondly it includes the reflexive forms of the classes of existence of condition unaccusatives, change of condition unaccusatives, and unaccusatives with transitive alternant. It is worth noticing that the verbs in reflexive form are inherent reflexive verbs, in the sense that they do not have a transitive counterpart.

Moreover, the auxiliary selection with impersonal and passive *si* constructions was investigated too.

### The hypothesis

The hypothesis can be articulated as follows.

#### 1. Active unaccusative verbs

- 1.1. aspects of auxiliary selection which have a semantic basis would elicit variable responses at the level of non-native acceptability judgements. The hierarchy of active unaccusative verbs should affect the order of acquisition in regard to the use of the auxiliary. Therefore, the order of the acquisition should be related to the position of a given verb category along its hierarchy: core categories should be learned easier than peripheral categories;
- 1.2. native speakers of Italian will not judge all types of verbs within the unaccusative hierarchy in the same way. The degree of consistency of their judgements should be a function of the position of a verb

category on the hierarchy it belongs to: judgements on the core categories will be more determinate and consistent than judgements on peripheral categories. In other words, native speakers' grammars should be sensitive to the lexical-semantic characterisations of unaccusative verbs.

2. Reflexive unaccusative verbs
  - 2.1. native and non-native grammars of Italian should not be sensitive to the lexical-semantic distinction of reflexive verbs.
3. *Si* constructions
  - 3.1. non-native speakers' choice of the appropriate auxiliary with syntactically based phenomena, such as *si* constructions, would be less determinate than judgements on semantic aspects;
  - 3.2. phenomena like *si* constructions which have a purely syntactic origin should be judged in a uniform way, that is categorical acceptances or categorical rejections.

### **Subjects**

Four groups of informants participated in the experiment, for a total of 20 subjects:

- I. 5 beginner students of Italian,
- II. 5 intermediate students of Italian,
- III. 5 advanced students of Italian,
- IV. 5 native speakers of Italian.

Learners were students either of Italian as L2 at academic level or at various language schools. All of them had English as their native language, with at least three months of exposure to Italian and none were of Italian origin.

All the native speakers were receiving higher education: three of them were post-graduate students and the other two were University students.

### **Tasks**

The experiment was based on two tasks:

- acceptability judgements of Italian sentences,
- metalinguistic explanation of their responses.

Acceptability judgements were elicited by means of the magnitude estimation, which consists in judging isolated sentences in sequence, one at a time, and attributing numbers to each of them in a proportional way. The usefulness of

this technique is also due to the fact that it requires immediate judgements, leaving no time for metalinguistic reflection or second thoughts.

After the acceptability judgements the subjects were asked to comment their answers, and this was recorded on a tape.

### **Materials**

Subjects were asked to judge 94 sentences, 70 of them exemplifying five categories of unaccusative verbs, impersonal *si* constructions - both with transitive verbs used intransitively and with unaccusative verbs - and passive *si* constructions, plus 21 other sentence types that will not be considered here. Each category of unaccusative verbs was represented by three verbs, impersonal *si* sentences were constructed with seven verbs - three transitive and four unaccusative, that is one verb for each class of unaccusative verbs, and passive *si* sentences were constructed with three verbs. The verbs used are the following:

1. change of location unaccusatives: *andare* 'to go', *venire* 'to come', *entrare* 'to enter';
2. change of condition unaccusatives
  - a) active form: *diventare* 'to become', *cadere* 'to fall', *arrossire* 'to blush';
  - b) reflexive form: *accorgersi* 'to realise', *suicidarsi* 'to commit suicide', *arrendersi* 'to surrender';
3. existence of condition unaccusatives
  - a) active form: *sembrare* 'to seem', *rimanere* 'to stay', *durare* 'to last';
  - b) reflexive form: *fidarsi* 'to trust', *arrabbiarsi* 'to get angry', *vergognarsi* 'to be ashamed';
4. unaccusatives with transitive alternant
  - a) active form: *affondare* 'to sink', *aumentare* 'to go up', *peggiorare* 'to get worse';
  - b) reflexive form: *bruciarsi* 'to burn', *rompersi* 'to break', *svegliarsi* 'to wake up';
5. unaccusatives with unergative alternant: *correre* 'to run', *rotolare* 'to roll over', *volare* 'to fly';
6. impersonal *si* constructions: *mangiare* 'to eat', *bere* 'to drink', *leggere* 'to read', *andare* 'to go', *diventare* 'to become', *rimanere* 'to stay', *affondare* 'to sink', *correre* 'to run';



7. passive *si* constructions: *mangiare* ‘to eat’, *bere* ‘to drink’, *leggere* ‘to read’.

There were two versions of each sentence type - the correct version with the auxiliary *essere*, and the incorrect version with the auxiliary *avere*. The sentences, in basic word order, were constructed to contain only relatively high frequency words, and were approximately equal in length.

All the sentences with unaccusative verbs were decontextualised, while the sentences with the clitic *si* had a minimum amount of context. This is due to the fact that constructions including clitics need a minimum amount of context in order to make sense, for this reason they were slightly longer than the others. During the interview 30 sentences, 15 exemplifying the grammatical version of the categories of unaccusative verbs and *si* constructions and the other 15 the ungrammatical version of them, were used in order to ask the informants about the reasons for their choice of the auxiliary.

## **The results**

### ***Statistical analysis of the results***

The experiment was divided into four sub-experiments

1. experiment 1: the five classes of active unaccusative verbs were investigated;
2. experiment 2: the three classes of reflexive unaccusative verbs were investigated;
3. experiment 3: the impersonal *si* constructions were investigated;
4. experiment 4: the passive *si* constructions were investigated.

For each experiment the following steps were taken in the analysis of variance of the data:

- the mean acceptability judgement for each cell of the four experiments design were calculated;
- the marginal means, obtained by collapsing across the levels of the various factors of the experiments, were calculated;
- the SPSS statistical package was used for estimating the statistical significance of the various effects and the results are reported in the ANOVA tables;
- graphical representation of the means through bar-charts;
- the Tukey test was used in order to understand which of the pairwise differences among the means are statistically significant.

### ***Experiment one***

The design of the experiment 1 is composed as follows.

1. two within-subjects factors:
  - 1.1. verb type,
  - 1.2. auxiliary;
2. one between-groups factor:
  - 2.1. level of development;
3. three levels for each factor:
  - 3.1. five levels of the verb type factor: change of location, change of condition, existence of condition, transitive alternant, and unergative alternant,
  - 3.2. two levels of the auxiliary factor: *essere* and *avere*,
  - 3.3. levels of the level development factor: beginner, intermediate, advanced students, and native speakers (respectively “low”, “mid”, “high” and “ns”).

Table 2 represents the mean acceptability judgement for each cell of the design.

**Table 2 Experiment 1 (Unaccusative, active): level x verb-type x auxiliary**

Mean	low	mid	high	ns	All
V1A1	2.0986	2.0986	2.6612	2.2880	2.2866
V1A2	1.3222	1.2950	1.6394	0.3234	1.1450
V2A1	1.9904	1.9280	2.5290	2.3030	2.1876
V2A2	1.6402	1.6652	2.1162	0.5264	1.4870
V3A1	1.9750	1.9654	2.5212	2.3030	2.1911
V3A2	1.6018	1.6314	2.0544	0.8474	1.5338
V4A1	1.7810	1.7340	2.5360	2.2880	2.0848
V4A2	1.8548	1.9170	2.4398	0.8840	1.7739
V5A1	1.6942	1.7880	2.5108	2.3030	2.0740
V5A2	1.9410	1.8702	2.4122	1.2598	1.8708
V1	1.7104	1.6968	2.1503	1.3057	1.7158
V2	1.8153	1.7966	2.3226	1.4147	1.8373
V3	1.7884	1.7984	2.2878	1.5752	1.8624
V4	1.8179	1.8255	2.4879	1.5860	1.9293
V5	1.8176	1.8291	2.4615	1.7814	1.9724
A1	1.9078	1.9028	2.5516	2.2970	2.1648
A2	1.6720	1.6758	2.1324	0.7682	1.5621
All	1.7899	1.7893	2.3420	1.5326	1.8635

V1=Change of location unaccusatives; V2=Change of condition unaccusatives; V3=Existence of condition unaccusatives; V4=Transitive alternant unaccusatives; V5=Unergative alternant unaccusatives; A1= Auxiliary *essere*; A2=Auxiliary *avere*; low=beginner students; mid=intermediate students; high=advanced students; ns=Native speakers.

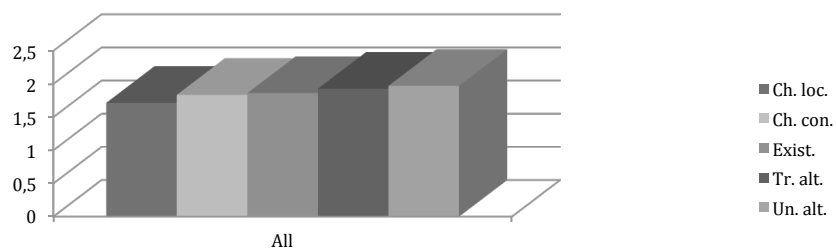
The statistical significance of the various effects is reported in the following ANOVA table.

**Table 3 ANOVA table Experiment 1 (Unaccusative, active): level x verb type x auxiliary**

Source of Variation	SS	DF	MS	F	Sig of F
LEVEL	17.47	3	5.82	2.01	.154
WITHIN+RESIDUAL	46.45	16	2.90		
VERBTYPE	1.55	4	.39	14.15	.000
LEVEL BY VERBTYPE	.73	12	.06	2.22	.021
WITHIN+RESIDUAL	1.75	64	.03		
AUXILIARY	18.16	1	18.16	87.85	.000
LEVEL BY AUXILIARY	14.59	3	4.86	23.52	.000
WITHIN+RESIDUAL	3.31	16	.21		
VERBTYPE BY AUXILIARY	5.48	4	1.37	40.46	.000
LEVEL BY VERBTYPE BY AUXILIARY	.38	12	.03	.93	.521
WITHIN CELLS					

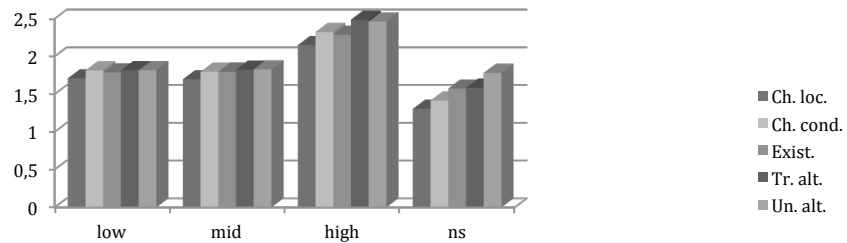
As shown in the ANOVA table, the effect of ‘level’ is not significant, while the effects of ‘verb type’ ( $F_{(4,64)}=14.15$ ,  $p<0.001$ ) and ‘auxiliary’ ( $F_{(1,16)}=87.85$ ,  $p<0.001$ ) are significant; the first order interaction effect ‘level by verb type’ ( $F_{(12,64)}=2.22$ ,  $p=0.021$ ), ‘level by auxiliary’ ( $F_{(3,16)}=23.52$ ,  $p<0.001$ ) and ‘verb type by auxiliary’ ( $F_{(4,64)}=40.46$ ,  $p<0.001$ ) are also significant, while the second order interaction effect ‘level by verb type by auxiliary’ is not significant.

**Figure 1 Experiment 1 (Unaccusative, active): verb type main effect**



In figure 1 which represents the verb type main effect, a clear hierarchy between the types of active unaccusative verbs emerges: the mean acceptability rating increases steadily in proceeding along the unaccusative hierarchy from the core to the periphery.

**Figure 2 Experiment 1 (Unaccusative, active): level x verb type**



This hierarchy is present in all the levels, as shown in figure 2.

**Figure 3 Experiment 1 (Unaccusative, active): auxiliary main effect**

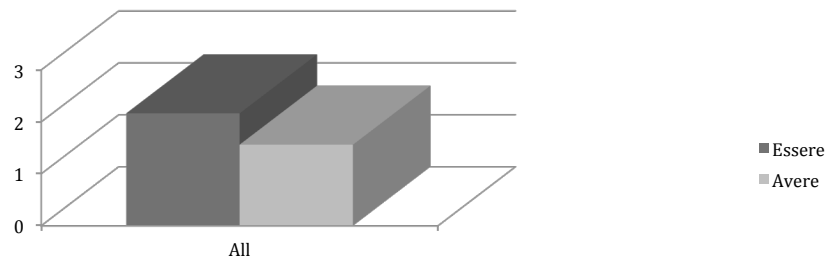
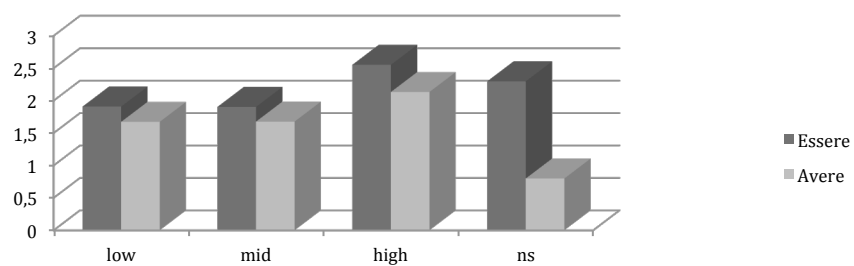


Figure 3 represents the auxiliary main effect and it shows that the mean acceptability rating for *essere* sentences is higher than that for *avere* sentences. This is entirely as was expected.

**Figure 4 Experiment 1 (Unaccusative, active): level x auxiliary**



The interaction between 'level' and 'auxiliary' represented in figure 4 shows that the mean acceptability rating for *essere* sentences is higher than for *avere* sentences for all the levels. For the native speaker group there is a very low

acceptability rating for the ungrammatical sentences. This is the first indication of the fact that the native speakers are more confident in expressing the unacceptability of a sentence.

**Figure 5 Experiment 1 (Unaccusative, active): verb type x auxiliary**

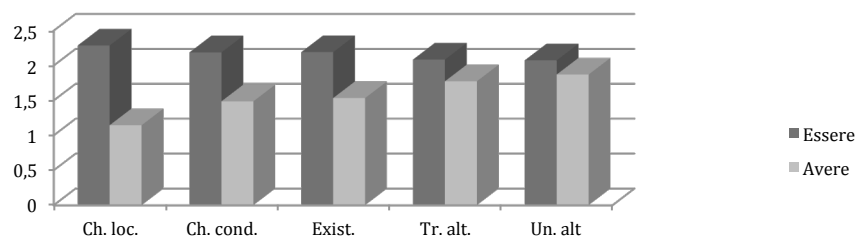
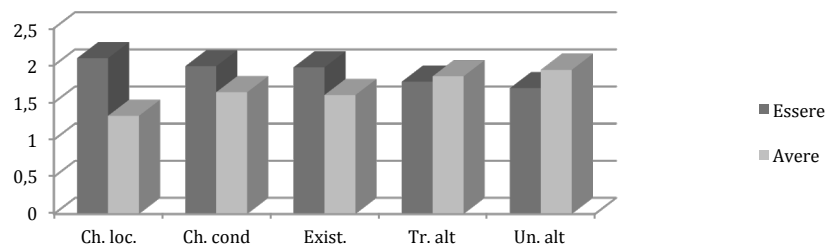


Figure 5, which delineates the interaction between the ‘verb type’ and the ‘auxiliary’, shows that the ungrammatical sentences increase in acceptability in progressing along the hierarchy. This pattern can be observed in all the levels.

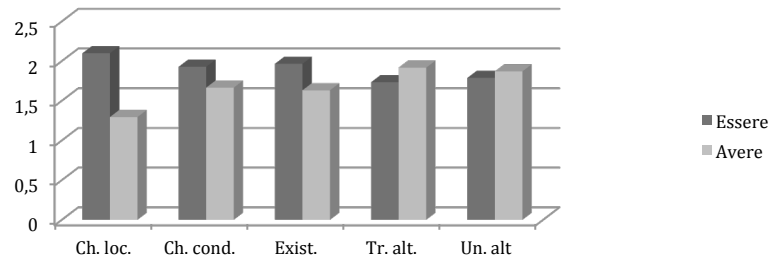
**Figure 6 Experiment 1 (Unaccusative, active): verb type x auxiliary (“low” group)**



This pattern is present in the “low” group as shown in figure 6.

Figure 7 represents the interaction between the ‘verb type’ and the ‘auxiliary’ in the “mid” group

**Figure 7 Experiment 1 (Unaccusative, active) verb type x auxiliary (“mid” group)**



It emerges that in the “low” and the “mid” group the mean acceptability rating for the ungrammatical version of unaccusatives with transitive and unergative alternant is higher than the grammatical version.

**Figure 8 Experiment 1 (Unaccusative, active): verb type x auxiliary (“high” group)**

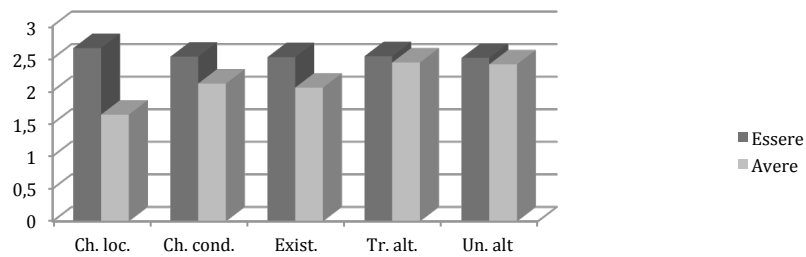
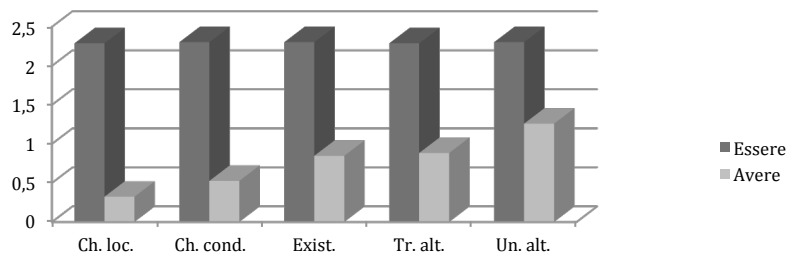


Figure 8 represents this clear hierarchy in the “high” group.

**Figure 9 Experiment 1 (Unaccusative, active): verb type x auxiliary (“ns” group)**



In the case of the native speakers, there is a clear hierarchy across the mean acceptability rating of the ungrammatical sentences that goes from the core to the periphery. Moreover, figure 9 confirms that the native speakers are more confident in expressing the unacceptability of a sentence.

**Experiment two**

The design of Experiment two is the same as Experiment one. The mean acceptability judgement for each cell of the design is represented in Table 4.

**Table 4: Experiment 2 (Unaccusative, reflexive): Level x Verb type x Auxiliary**

Mean	low	mid	high	ns	All
V2A1	2.0702	2.0694	2.6612	2.3030	2.2760
V2A2	1.4896	1.5024	1.9018	0.2772	1.2928
V3A1	2.0864	2.0524	2.5466	2.1494	2.2087
V3A2	1.4520	1.4134	1.8148	0.5310	1.3028
V4A1	2.0986	2.0374	2.6612	2.3030	2.2751
V4A2	1.3604	1.3142	1.7004	0.3234	1.1746
-----					
V2	1.7799	1.7859	2.2815	1.2901	1.7843
V3	1.7692	1.7329	2.1807	1.3402	1.7557
V4	1.7295	1.6758	2.1808	1.3132	1.7248
-----					
A1	2.0851	2.0531	2.6230	2.2518	2.2532
A2	1.4340	1.4100	1.8057	0.3772	1.2567
-----					
All	1.7595	1.7315	2.2143	1.3145	1.7550

The statistical significance of the various effects are reported in the following ANOVA table:

**Table 5 Experiment 2 (Unaccusative, reflexive) Level x Verb type x Auxiliary**

Source of Variation	SS	DF	MS	F	Sig of F
LEVEL	12.17	3	4.06	1.99	.156
WITHIN+RESIDUAL	32.63	16	2.04		
VERBTYPE	.07	2	.04	1.38	.266
LEVEL BY VERBTYPE	.08	6	.01	.55	.769
WITHIN+RESIDUAL	.82	32	.03		
AUXILIARY	29.79	1	29.79	177.83	.000
LEVEL BY AUXILIARY	7.86	3	2.62	15.63	.000
WITHIN+RESIDUAL	2.68	16	.17		
VERBTYPE BY AUXILIARY	.19	2	.10	5.33	.010
LEVEL BY VERBTYPE BY	.20	6	.03	1.83	.124
AUXILIARY					
WITHIN CELLS	.58	32	.02		

As shown in the ANOVA table, the only effects that are significant are ‘auxiliary’ ( $F_{(1,16)}=177.83$ ,  $p<0.001$ ), the first order interaction ‘level by auxiliary’ ( $F_{(3,16)}=15.63$ ,  $p<0.001$ ) and ‘verb type by auxiliary’ ( $F_{(2,32)}=5.33$ ,

$p=0.010$ ). The statistical significance of the effects are graphically represented with bar-charts in the figures below.

**Figure 10 Experiment 2 (Unaccusative, reflexive): auxiliary main effect**

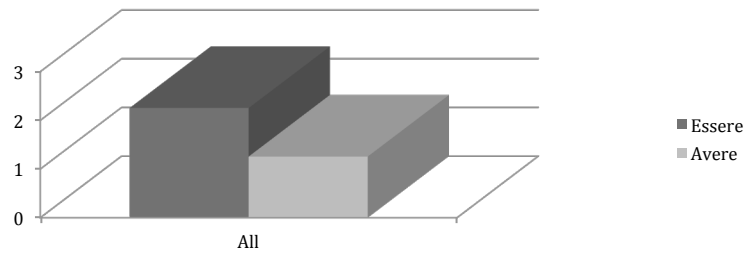
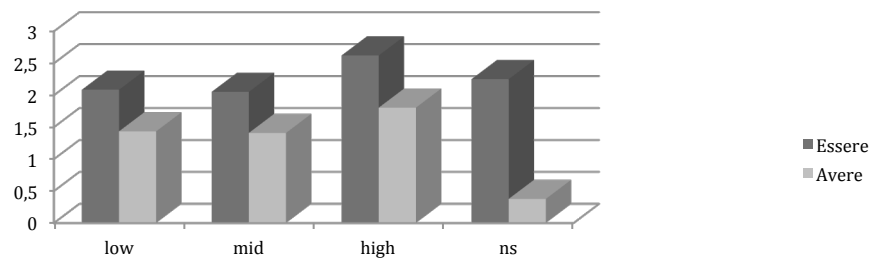


Figure 10, which represents the auxiliary main effect, shows that the mean acceptability rating for *essere* sentences is higher than that for *avere* sentences. This is entirely as was expected.

**Figure 11 Experiment 2 (Unaccusative, reflexive): level x auxiliary**

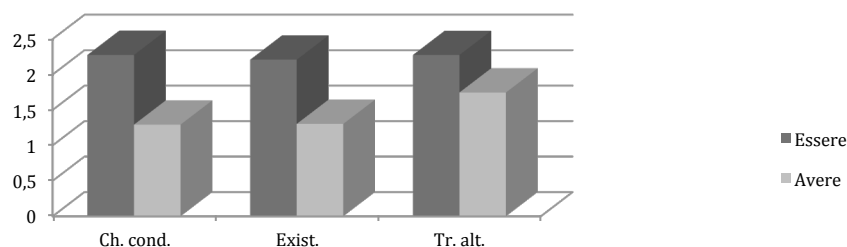


This pattern is present in all the levels as figure 11 makes clear, and there is a further indication of the fact that the native speakers are more confident in expressing the unacceptability of a sentence, given the low acceptability rating for the ungrammatical sentences.

Finally, it can be seen from figure 12 that there is no correlation in the use of the correct auxiliary and the verb type, as was expected.



**Figure 12 Experiment 2 (Unaccusative, reflexive): verb type x auxiliary**



**Experiment three**

The design of experiment three is the same as experiment one and two. The mean acceptability judgement for each cell of the design is represented in Table 6.

**Table 6 Experiment 3 (Impersonal “si”): Level x Verb type x Auxiliary**

Mean	low	mid	high	ns	All
V1A1	2.0986	2.0986	2.4354	2.2134	2.2115
V1A2	1.3604	1.2950	1.7398	0.4158	1.2027
V2A1	2.0986	2.0774	2.4792	2.2582	2.2283
V2A2	1.4178	1.3524	1.7764	0.2772	1.2060
V3A1	2.0538	2.0774	2.4484	2.1868	2.1916
V3A2	1.4178	1.2950	1.5120	0.2772	1.1255
V4A1	1.8070	1.6376	2.3882	2.2582	2.0227
V4A2	1.7764	2.0350	2.0616	0.2772	1.5375
V5A1	1.7398	1.7860	2.5742	2.1868	2.0717
V5A2	1.9612	1.8256	2.2464	0.2772	1.5776
V6A1	1.4082	1.6544	2.3876	2.2424	1.9232
V6A2	2.0620	1.9152	2.2122	0.2772	1.6166
V1	1.7295	1.6968	2.0876	1.3146	1.7071
V2	1.7582	1.7149	2.1278	1.2677	1.7171
V3	1.7358	1.6862	1.9802	1.2320	1.6585
V4	1.7917	1.8363	2.2249	1.2677	1.7802
V5	1.8505	1.8058	2.4103	1.2320	1.8246
V6	1.7351	1.7848	2.2999	1.2598	1.7699
A1	1.8677	1.8886	2.4522	2.2243	2.1082
A2	1.6659	1.6197	1.9247	0.3003	1.3777
All	1.7668	1.7541	2.1885	1.2623	1.7429

The statistical significance of the various effects are reported in table 7.

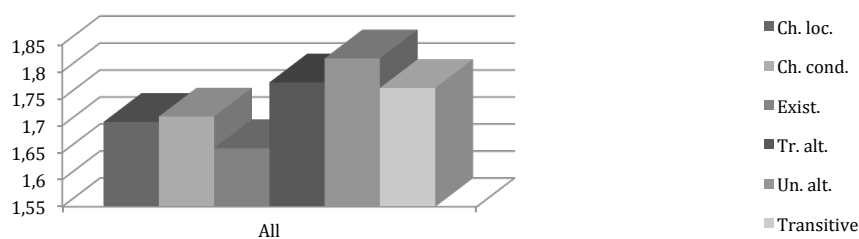
**Table 7 ANOVA table of Experiment 3 (Impersonal “si”): Level x Verb type x Auxiliary**

Source of Variation	SS	DF	MS	F	Sig of F
LEVEL	25.81	3	8.60	2.08	.144
WITHIN+RESIDUAL	66.25	16	4.14		
VERBTYPE	.71	5	.14	6.72	.000
LEVEL BY VERBTYPE	.84	15	.06	2.64	.003
WITHIN+RESIDUAL	1.70	80	.02		
AUXILIARY	32.02	1	32.02	103.67	.000
LEVEL BY AUXILIARY	29.38	3	9.79	31.70	.000
WITHIN+RESIDUAL	4.94	16	.31		
VERBTYPE BY AUXILIARY	5.71	5	1.14	19.85	.000
LEVEL BY VERBTYPE BY AUXILIARY	3.49	15	.23	4.04	.000
WITHIN CELLS	4.60	80	.06		

As shown in the ANOVA table, the effects of ‘verb type’ ( $F_{(5,80)}=6.72$ ,  $p<0.001$ ) and ‘auxiliary’ ( $F_{(1,16)}=103.67$ ,  $p<0.001$ ) are significant. The first order interaction effects that are significant are ‘level by verb type’ ( $F_{(15,80)}=2.64$ ,  $p=0.003$ ), ‘level by auxiliary’ ( $F_{(3,16)}=31.70$ ,  $p<0.001$ ) and ‘verb type by auxiliary’ ( $F_{(5,80)}=19.85$ ,  $p<0.001$ ) and the second order interaction effect ‘level by vertype by auxiliary’ ( $F_{(15,80)}=4.04$ ,  $p<0.001$ ) is also significant.

The statistical significance of the effects are graphically represented with bar-charts in the figures below.

**Figure 13 Experiment 3 (Impersonal *si*): Verb type main effect**



As the statistical analysis confirms, the type of verb used in *si* constructions plays an important role in the correct use of the auxiliary. Indeed, figure 13 shows that there is a hierarchy from the core to the periphery across the types

of unaccusative verbs used in constructions with the clitic. However, in the case of existence of condition unaccusatives, the acceptability rating is lower than that of change of state unaccusative. Moreover, it seems that there is no correlation between *si* constructions formed by unaccusative verbs and those made up of the clitic and transitive verbs.

**Figure 14 Experiment 3 (Impersonal *si*): Level x Verb type**

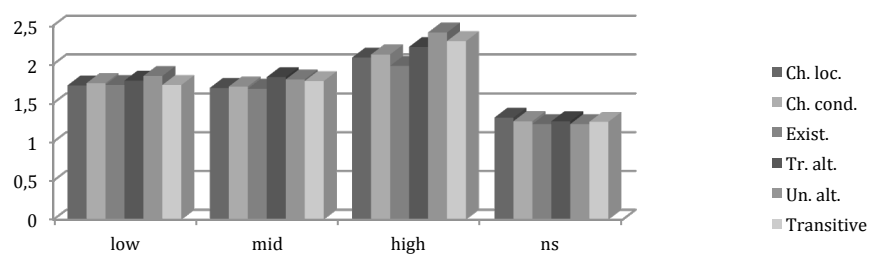
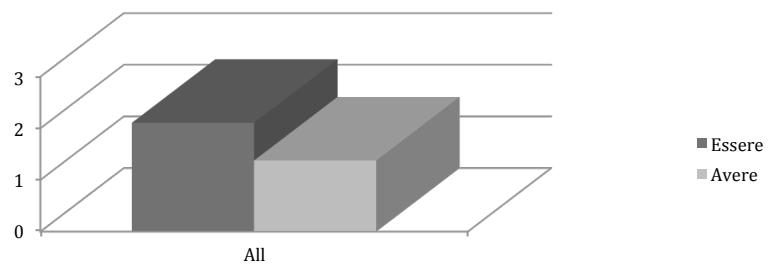


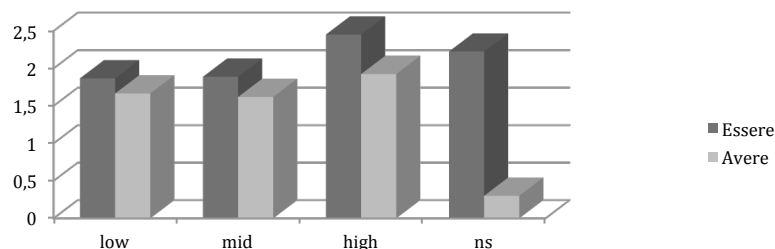
Figure 14, which represents the interaction between ‘level’ and ‘verb type’, shows this general trend in more detail. All groups of non-native speakers present this hierarchy, while the native speakers do not show any significant difference between the type of verb used in this construction. The Tukey test is needed in order to understand the differences found in the non-native speakers. As concerns the main effect of the ‘auxiliary’ which is graphically represented in figure 15, the mean acceptability rating for the grammatical auxiliary is higher than that for the ungrammatical one.

**Figure 15 Experiment 3 (Impersonal *si*): Auxiliary main effect**



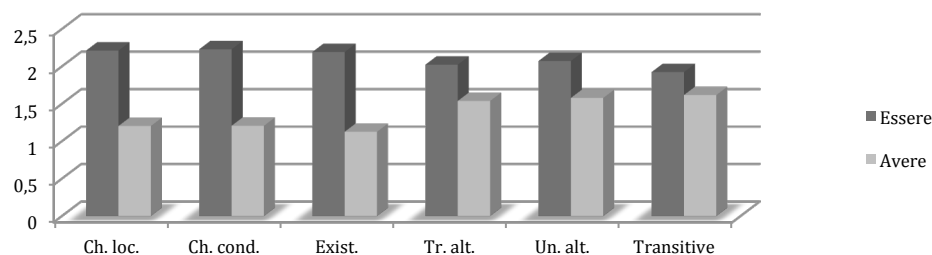
The picture is clearer in figure 16, which shows the interaction between the ‘auxiliary’ and the ‘level’.

**Figure 16 Experiment 3 (Impersonal *si*): Level x Auxiliary**



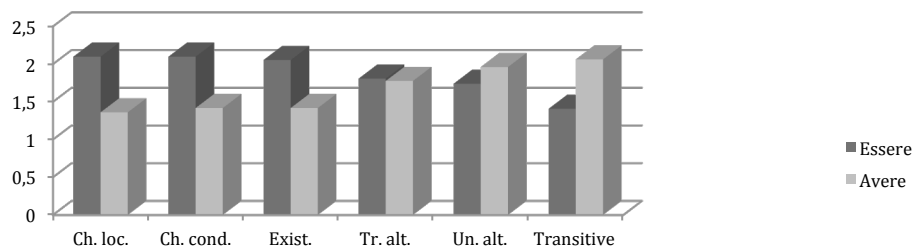
Here, the mean acceptability rating for *avere* sentences is lower than that for *essere* sentences for all the levels. It is worth noticing the difference between the mean acceptability rating for the three groups of non-native speakers for *avere* sentences and that of the native speakers.

**Figure 17 Experiment 3 (Impersonal *si*): Verb type x Auxiliary**



Analysing the interaction between ‘verb type’ and ‘auxiliary’, it can be seen in figure 17 that there is a hierarchy among the constructions formed by the clitic *si* and the unaccusative verbs: the mean acceptability rating for the ungrammatical constructions increases in proceeding along the hierarchy from the core to the periphery.

**Figure 18 Experiment 3 (Impersonal *si*): Verb type x Auxiliary (“low” group)**



This trend is noticeable in all the levels of non-native speakers. Figure 18 represents the interaction of the ‘verb type’ and the ‘auxiliary’ in the “low” group.

**Figure 19 Experiment 3 (Impersonal *si*): Verb type x Auxiliary (“mid” group)**

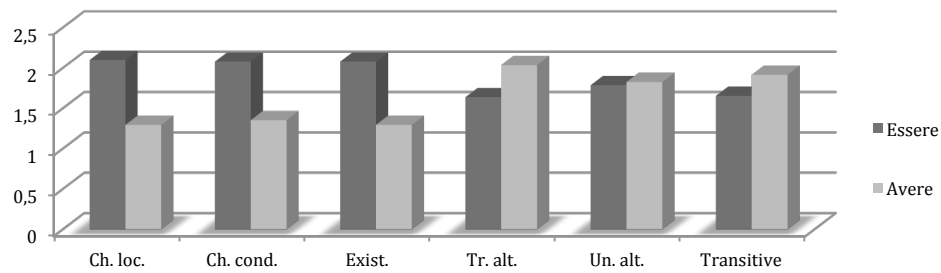
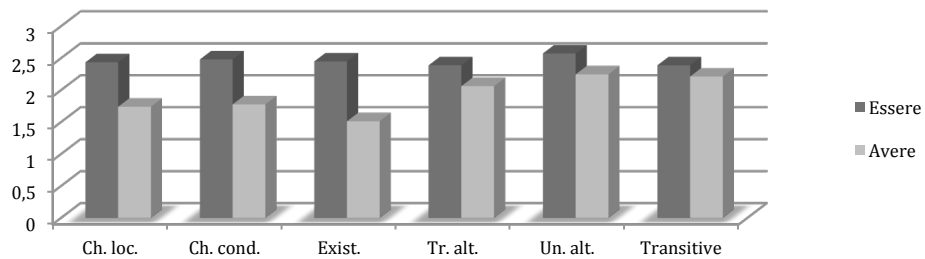


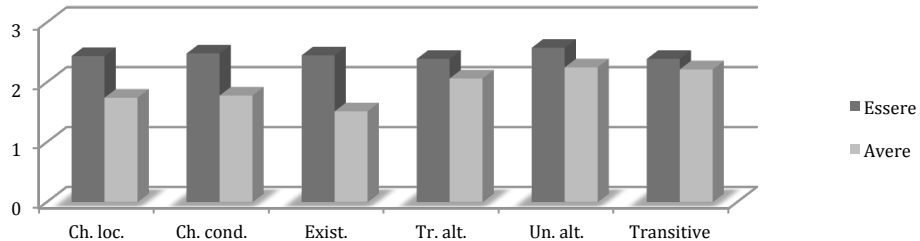
Figure 19 represents this interaction in the “mid” group. It can be seen that in the case of “mid” group the mean acceptability rating for *avere* sentences is higher than for *essere* sentences with constructions formed by *si* and unaccusatives with transitive and unergative alternant.

**Figure 20 Experiment 3 (Impersonal *si*): Verb type x Auxiliary (“high” group)**



This pattern is also present in the “high” group. Judging by the statistical analysis, it can be claimed that this hierarchy exists in all the groups of non-native speakers.

**Figure 21 Experiment 3 (Impersonal si): Verb type x Auxiliary (“ns” group)**



Comparing these results with those obtained by the native speakers, it can be seen the difference between the mean acceptability rating for the correct auxiliary and that for the incorrect auxiliary: in this case the type of verb does not influence the native speakers’ choice of the auxiliary with *si* constructions.

**Experiment four**

The design of experiment four is made up of:

1. One within-subjects factor:
  - 1.1. auxiliary;
2. One between-groups factor:
  - 2.1. level of development;
3. Different levels for each factor:
  - 3.1. two levels of the auxiliary factor: *essere* and *avere*,
  - 3.2. three levels of the level development factor: beginner, intermediate, advanced students, and native speakers.

The mean acceptability judgement for each cell of the design is represented in the following table:

**Table 8 Experiment 4 (Passive “si”): Level x Auxiliary**

Mean	low	mid	high	ns	All
A1	1.4626	1.5698	2.3772	2.2432	1.9132
A2	2.0580	1.9028	2.1808	0.2772	1.6047
All	1.7603	1.7363	2.2790	1.2602	1.7590

The statistical significance of the various effects are reported in the following ANOVA table.

**Table 9 ANOVA table of Experiment 4 (Passive “si”): Level x Auxiliary**

Source of Variation	SS	DF	MS	F	Sig of F
LEVEL	5.20	3	1.73	2.49	.097
WITHIN+RESIDUAL	11.12	16	.70		
AUXILIARY	.95	1	.95	7.47	.015
LEVEL BY AUXILIARY	9.97	3	3.32	26.09	.000
WITHIN+RESIDUAL	2.04	16	.13		

The effect of ‘auxiliary’ ( $F_{(1,16)}=7.47, p=0.015$ ) is significant and the first order interaction effect ‘level by auxiliary’ ( $F_{(3,16)}=26.09, p<0.001$ ) is significant. The statistical significance of the effects are graphically represented with bar-charts in the figures below.

**Figure 22 Experiment 4 (Passive si): Auxiliary main effect**

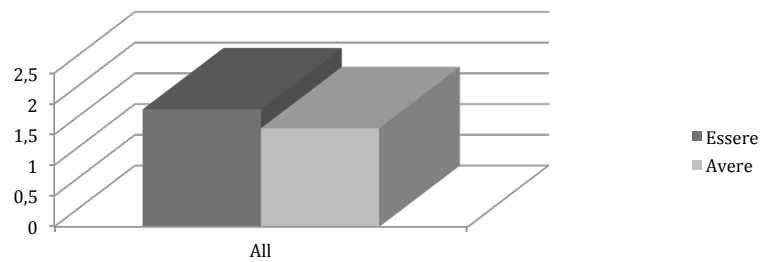
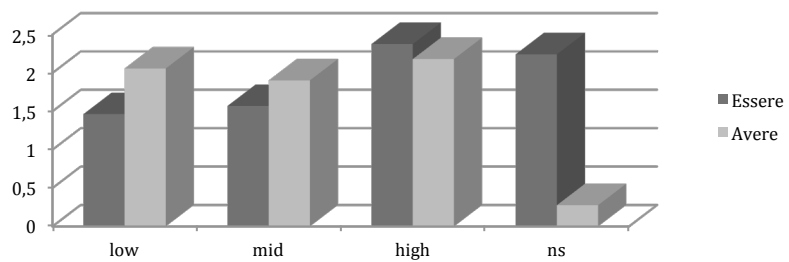


Figure 22 shows that the effect of ‘auxiliary’ is significant.

**Figure 23 Experiment 4 (Passive si): Level x Auxiliary**



mean acceptability rating for *avere* sentences is higher than that for *essere* sentences. Here too, there is difference with the native speakers who judged this syntactic based phenomenon correctly.

### ***Comparison of the interview data with the experimental data***

In order to assess the extent to which the judgements given by the non-native speakers in the experiment, using magnitude estimation agree with the judgements given in the interview, we used Spearman's rank order correlation coefficient. First of all we assigned a number to any judgement given in the interview using a five - point scale, that is an ordinary scale: 5 when the subject was completely confident that a sentence was grammatical and 1 when the subject was completely confident that a sentence was ungrammatical, and the intermediate numbers were used to express the degree of indeterminacy of a judgement. A complete list of the judgements and the number assigned for them can be seen in Appendix II. The correlation coefficient varies between a theoretical minimum of -1 (perfect negative correlation) and a theoretical maximum of +1 (perfect positive correlation). The nearer the coefficient is to +1, the more consistent the judgements. The Spearman correlation coefficient is calculated from the rank order of the numbers rather than from the numbers themselves.

Table 10 gives the correlation for subjects. These are obtained by correlating the judgements of the 30 interview sentences with the numbers assigned to these sentences in the experiment. The size of the correlation is a measure of the consistency of judgement by each subject between the experiment and the interview. It is a reasonable expectation that the more advanced the subject, the more determinate his/her intuitions, and therefore the more consistent his/her judgements. This does not seem to be the case, judging from the data in Table 10. The most consistent two subjects are from levels "mid" and "low" respectively, and the least consistent subjects are from levels "low" and "mid" respectively.



**Table 10 Spearman rank order correlation for subjects**

ME responses vs. Interview judgements

```

=====
id lev rho Level
-----
 9  2  0.994 mid
14  1  0.910 low
 3  3  0.898 high
10  2  0.885 mid
13  2  0.851 mid
11  3  0.836 high
 7  3  0.764 high
 2  1  0.764 low
 2  1  0.761 low
 5  2  0.749 mid
15  3  0.722 high
 8  1  0.691 low
 4  3  0.670 high
 1  1  0.626 low
 6  2  0.481 mid
-----

```

The table shows that some of the subjects are more consistent than others. Some have a very high degree of consistency, most are reasonably consistent, and the last one is not very consistent. However, all these correlation coefficients are statistically significant, since the critical value of Spearman's rho for  $df = 28$  at  $p < 0.05$  for a two-tailed test is 0.317. Therefore, in general we can say that the judgements given in the interview are reasonably consistent with those given in the experiment, although some subjects are more consistent than others. Another point worth making is that consistency does not seem to be directly related to proficiency, since some of the most consistent are in the "low" group, and some of the least consistent are in the "high" group. As far as the degree of consensus for each sentence, it is possible to do it by calculating the mean of the judgements given in the interview. Where the mean is 5 or near 5, this indicates that there is a high degree of consensus that the sentence is grammatical; where the mean is 1 or near 1, this indicates that there is a high degree of consensus that the sentence is ungrammatical.

**Table 11 Mean judgements given in the interview**

1	1	1	5.00	Il bambino e` andato a scuola
8	1	29	5.00	Mario si e` vergognato dell'amico
7	1	41	5.00	Luigi si e` svegliato alle dieci
13	1	59	4.87	Ieri sera si e` rimasti a casa
9	1	17	4.80	Gli Inglesi si sono arresi
10	1	55	4.80	Sabato scorso si e` andati al cinema
6	1	9	4.73	Maria e` caduta dalle scale
2	1	23	4.33	Il film e` durato molto
3	2	46	4.20	Il bambino ha rotolato per le scale
2	2	24	4.07	Il film ha durato molto
5	2	44	4.00	Gianni ha corso all'ospedale
3	1	45	4.00	Il bambino e` rotolato per le scale
15	2	68	4.00	Sabato scorso si ha bevuto molto liquore
5	1	43	3.87	Gianni e` corso all'ospedale
11	1	63	3.67	Ieri si e` corsi all'ospedale
4	1	31	3.60	La barchetta di carta e` affondata
4	2	32	3.60	La barchetta di carta ha affondato
14	2	66	3.53	Ieri sera si ha mangiato molto
12	2	62	3.40	Si ha affondato in un mare di guai ultimamente
12	1	61	3.27	Si e` affondati in un mare di guai ultimamente
11	2	64	3.00	Ieri si ha corso all'ospedale
14	1	65	2.60	Ieri sera si e` mangiato molto
15	1	67	2.00	Sabato scorso si e` bevuto molto liquore
6	2	10	1.47	Maria ha caduto dalle scale
10	2	56	1.13	Sabato scorso si ha andato al cinema
13	2	60	1.07	Ieri sera si ha rimasto a casa
1	2	2	1.00	Il bambino ha andato a scuola
9	2	18	1.00	Gli Inglesi si hanno arreso
8	2	30	1.00	Mario si ha vergognato dell'amico
7	2	42	1.00	Luigi si ha svegliato alle dieci

As shown in the table, the sentence 1 ('Il bambino è andato a scuola'), 29 ('Mario si è vergognato dell'amico') and 41 ('Luigi si è svegliato alle dieci') that respectively represent the class of change of location, the reflexive form of the class of the existence of a condition, and the reflexive form of the class of change of condition unaccusatives, received the maximum degree of consensus that the sentences are grammatical. On the other side, the sentence 2 ('Il bambino ha andato a scuola'), 18 ('Gli Inglesi si hanno arreso'), 30 ('Mario si ha vergognato dell'amico') and 42 ('Luigi si ha svegliato alle dieci') that respectively represent the incorrect version of the class of change of location, the reflexive form of the class change of condition, the reflexive form of the class of existence of condition and the reflexive form of transitive alternant unaccusatives received the maximum degree of consensus that the sentences are ungrammatical. What is worth noting about this table is that there are some ungrammatical sentences which receive a high mean rating (e.g. sentence 3.2 'Il bambino ha rotolato per le scale', and sentence 2.2 'Il film ha durato

molto’). This is presumably the result of the non-native speaker judgements. In conclusion, it is possible to claim that these results are a confirmation of the validity of the magnitude estimation and a confirmation of the validity of the sentences used in the magnitude estimation.

### **Discussion**

This work aimed at investigating the variations in native and non-native intuitions on Italian auxiliary selection with respect to the class of unaccusative verbs and *si* constructions. The results obtained from the experiment concerned with active unaccusative verbs show that native and non-native speakers of Italian do not judge all types of verbs within the unaccusative hierarchy in the same way. Indeed, the degree of consistency of their judgements is a function of the position of a verb category on the hierarchy it belongs to: judgements on the core categories will be more determinate and consistent than judgements on peripheral categories. Therefore, the hierarchy of active unaccusative verbs affects the order of acquisition in regard to the use of the auxiliary, as it is related to the position of a given verb category along its hierarchy: core categories are learned easier than peripheral categories. This also confirms the concept according to which grammatical structures have different degrees of acceptability, given that the internalised grammatical knowledge of native speakers consists of an indefinite number of acceptability hierarchies that go from a determinate core to an indeterminate periphery<sup>17</sup>. This is what happened with active unaccusative verbs: highest consistency of judgements for core verbs and decreasing consistency for the other verbs according to their distance from the core. The other conclusion related to this assumption is that indeterminacy exists not only in non-native grammars, but also in native grammars, even though non-native intuitions are characterised by a higher degree of indeterminacy than that characterising native speakers’ intuitions. The picture for reflexive unaccusative verbs is completely different: native and non-native grammars of Italian are not sensitive to the lexical-semantic distinction of reflexive verbs, even though they belong to the class of unaccusative verbs. It is possible to account for this difference assuming that reflexive verbs are not a semantic phenomenon like the other unaccusative verbs, but they are a highly frequent syntactic phenomenon. Therefore learners

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<sup>17</sup> For further discussion see *Variability in acceptability judgements* in this volume.

would acquire the correct auxiliary for reflexive verbs simply through positive evidence.

As regards the syntactically based constructions formed by the clitic *si* and the unaccusative verbs, it can be argued that in the case of non-native speakers the choice of the appropriate auxiliary is influenced by the lexical-semantic property of the verbs. Therefore in this case, too, there is a hierarchy among the unaccusative verbs that influences the order of the acquisition. In other words, it seems that the lexical-semantic properties of the verb are stronger than the syntactic ones. This leads to the following question in second language acquisition research: do second language learners acquire the semantic aspects of the verb first followed by the syntax of it or vice versa? The piece of evidence that was presented suggested that the first possibility is the case. On the contrary, both impersonal *si* constructions - made up of transitive or unergative verbs - and passive *si* constructions elicit less determinate judgements than those for the constructions with *si* and unaccusative verbs. It follows that aspects of auxiliary selection that have a semantic basis are easier to learn for non-native speakers than aspects of purely syntactic origin.

On the other hand, native grammars' judgements about *si* constructions formed by unaccusative verbs do not depend on the lexical-semantic property of the verbs, indeed they elicit uniform judgements. This is also the case for the other impersonal *si* constructions and passive *si* constructions. In conclusion, syntactically based phenomena are not influenced by any semantic aspect.

Finally, the comparison of the interview data and the experimental data confirms the validity of the magnitude estimation and confirms the validity of the sentences used in the magnitude estimation.

In conclusion, although the evidence is clear, it is not possible to give categorical justifications about these findings, because of the small size of the sample taken into consideration, and it is for this reason that other studies about the auxiliary choice with reflexive verbs and *si* constructions are needed to give light to these findings.

## **SPEAKERS' DISCOURSE IN MULTILINGUAL SETTINGS**

### **Introduction**

Language endangered situations are unusually analysed from a contact perspective at speakers' discourse level, commonly because scholars' attention has been primarily pointed at change occurring in a particular structural level, than at 'superficial' phenomena such as code switching<sup>18</sup>. In addition, an approach focusing on the correlation among contact phenomena and a particular sociolinguistic situation of an endangered speech community is infrequent in literature.

In this perspective, the aim of this study is to analyse language contact in two Francoprovençal communities in Southern Italy - Faeto and Celle di St. Vito - in relation to their sociolinguistic situation. I show whether and how a given sociolinguistic context determines particular bilinguals' discourse strategies.

### **The communities**

Despite the short distance between Faeto and Celle di St. Vito, a common socio-historical background, and the shared situation of isolation from the other Francoprovençal communities of Italy, their sociolinguistic conditions are deeply different. They differ in reference to the functional distribution of the codes of the repertoire and speakers' language uses, and in reference to the degree of permeability of the two Francoprovençal varieties towards Italian and its dialects.

There are conflicting accounts as concerns the origin of the two communities. It is not certain whether these groups were Angevins or Waldenses; whereas, the time period of their settlement has been established to be between the late of 1200s and 1500s<sup>19</sup>. Their uncertain origin has created confusion of identity, since most of the community members declare they speak Provençal rather than Francoprovençal<sup>20</sup>. In fact, it was only in 1888 that Suchier, on the basis of the language used in a brief novel (Papanti 1875), established that Faeto and

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<sup>18</sup> As Dal Negro (2005) pointed out, this might be due to the typology of data collected in these settings, usually translations, which are not suitable for code switching analyses.

<sup>19</sup> Sobrero (1974), Telmon (1994).

<sup>20</sup> Cf. Perta (2008a) and Perta (2010).

Celle varieties belong to the Francoprovençal group, rather than to the Provençal one.

The villages are isolated, situated near the top of a mountain, over an hour's drive from any city or train station. During the 20th century Faeto and Celle di St. Vito underwent repeated waves of migration towards Northern Italy and America, with a decrease from 4569 (census 1911) to 685 inhabitants (census 2005) in Faeto, and from 1050 (census 1911) to 223 inhabitants (census 2005) in Celle; the result is that the majority of people living in the villages belong to older generations.

A local Francoprovençal literary tradition does not exist, grammars of the minority language (Morosi 1890-1892; Kattenbusch 1982; Nagy 2000; SLF 2007b), as well as studies on the lexicon are few (Minichelli 1994; SLF 2005, 2007a).

### **The local varieties of Francoprovençal**

Since the contact situation between Faetar and Cellese and other Apulian varieties has existed for some 700 years, phonetically and lexically these varieties present numerous analogies with the surrounding dialects, even though particular features of grammar remain distinct from Italian and its dialects. For example, Faetar and Cellese have a negation marker [pa] which follows the highest verb, while Italian has the pre-verbal marker *non*. Moreover, Italian is a pro-drop language, while these varieties have a variable system: double subject pronouns is possible, at least one subject pronoun required in many contexts, and null subject pronoun in some instances<sup>21</sup>. Verbal suffixes, determiners and plural morphemes remain distinct from corresponding Italian forms (Nagy 2000).

Phonologically, their system echoes that of Italian and its close regional Italian varieties. Similar phonotactic constraints exist, even though coda position clusters are frequent in Faetar and Cellese due to the frequent deletion of post-tonic vowels. Furthermore, the presence of the reduced vowel shwa - which often appears in unstressed syllables and phonological role in uncertain<sup>22</sup> - is similar to the surrounding regional Italian varieties. Some evidence of

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21 It is worth noting that this last variant in Faetar and Cellese is common to other Francoprovençal varieties as well. For this structural feature see AIS maps (Jaberg, Jud and Scheuermeier 1928-1940: #512, #887), Nagy and Heap 1998. In Perta (2015b) it is shown that bilingual speakers use this variable structural feature to perform their minority identity.

22 Cf. Nagy 2001.

structural borrowing from Italian into Faetar and Cellese is seen in the presence of geminate consonants, a distinctive phonological structure of Italian<sup>23</sup>, besides cases of *rafforzamento fonosintattico*<sup>24</sup>.

### **Diffusion of Faetar**

In Faeto the minority language is largely used by the population: 92% of the informants, belonging to all age groups, declare they speak Faetar fluently. Only a low rate of respondents (8%), a small part of younger generation state they know Faetar, but are not fluent in it (Perta 2008a). Moreover, none of the social variables - age, sex, education and occupation - appear to be correlated to the speakers' degree of competence in Faetar. According to what speakers state, excluding any local Italian dialect, two languages are used by the community: (regional) Italian and Faetar. Their functional distribution is balanced, since Faetar is used more than Italian in all informal settings; in formal contexts, Italian is commonly used more than Faetar, even though the minority variety is trying to extend itself also to formal domains<sup>25</sup>. However, recent data (Perta 2016) show that in adult and younger generation's discourse an Apulian dialect emerges in competition with Faetar.

### **Diffusion of Cellese**

According to the above mentioned survey results, 56% of the informants are actively competent in Cellese, 22% state they know it passively, and 22% do not know the minority language at all. Age, education and occupation are statistically significant variables, which determine the degree of speakers' competence in Cellese. In other words, loyalty towards the minority language is associated with elderly, rural areas, and primary sector employment. The

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<sup>23</sup> Since Francoprovençal does not have contrastive length in its consonantal system, the Faetar and Cellese pattern should be attributed to language contact (Nagy 1994).

<sup>24</sup> According to it, Faetar and Cellese exhibit a process of word-initial consonant lengthening following a word-final stress vowel. For the analysis of *raddoppiamento fonosintattico* in Faetar see Nagy 2001.

<sup>25</sup> The presence of Faetar in formal settings is not tangible: since the approval of Law 482/1999, Faetar is one of the officially recognised minority languages in Italy. Local authorities and planners which have legal instruments are carrying out several operations to strengthen their language position and to promote it in new settings. The resulting codification gave birth to an exterior and slightly alien system, according to the speakers' reactions, since they feel this language does not reflect what they actually use (see Perta 2008b).

local variety of Francoprovençal is not commonly used by all the community, to the point that the repertoire of most of younger speakers is based on Italian and its regional dialect, both used according to the formality of the situation. For adult speakers, the use of Cellese increases and the use of Apulian dialect decreases as the speakers' age increases. Hence, in Celle the languages spoken by the community are (regional) Italian, Apulian dialect and Cellese. Italian, the High Language, is used also in informal settings as to determine a situation of dilalia<sup>26</sup>. The other languages, competing in the functional space of the Low Language, create a dangerous situation for the minority language maintenance, since Apulian dialect is gaining more domains and functions than Cellese.

### **Language contact and sociolinguistic context**

Native speakers of Faetar and Cellese frequently claim that the younger generation has lost almost all native vocabulary due to Italian influence, and therefore the local varieties of Francoprovençal are disappearing (Nagy 2000, 2011; Perta 2008a). Indeed, it is commonly argued that lexicon is the most variable part of the language, particularly in language contact situations<sup>27</sup>, even in cases of language maintenance. However, previous studies (Perta 2012, 2015a) focussing on the variable presence of Italian/Apulian dialect lexicon in speakers' discourse in Faetar and Cellese, demonstrate that lexical change, although a real phenomenon, is not presently happening in a severe way, and is not detected in an age-graded synchronic analysis. We would expect that the insertion of Italian/Apulian dialect lexical material affects more a situation where the ethnic language is declining, rather than a situation where the minority language is healthy. However, besides showing a similar pattern in that no social factor is significant in explaining the variation in lexicon, the foreign material is balanced among the two villages. The different sociolinguistic situations do not seem to affect the degree of Italian lexical insertion in speakers' discourse in the minority dialects. One possible reason could be, following Nagy (2011) and confirming Chamber's intuition (1992)<sup>28</sup>, that there will be more evidence of change in the early stages of contact

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<sup>26</sup> Dilalia is a diachronic evolution of diglossia: High Language is used also in informal domains and the functional space of Low Language is reduced (cf. Berruto 1995).

<sup>27</sup> Cf. Thomason and Kaufman (1988).

<sup>28</sup> Chambers (1992: 680) affirms that change happens more rapidly at the beginning of the acquisition process than later at the micro-level, whereas Nagy (2011) extends the principle to the whole community.



situation, because change would occur more rapidly. Faetar and Cellesse have had contact with Italian for a long time: in the early stages of contact with Italian, lexical interference had proceeded fast, but now it advances slowly. Since other studies are needed to understand whether the conclusion reached for the lexicon could be extended to other language areas, my aim is to analyse language contact phenomena at speakers' discourse level. I investigate bilinguals' discourse strategies and their correlation with sociolinguistic variables, both in situation of minority language shift, as in Celle di St. Vito, and in situation of minority language maintenance, as in Faeto.

### **Discourse strategies in bilingual speech**

Language contact phenomena at discourse level could be referred to as prototypes in a continuum (Berruto 2009), where alternation of code and fused lect are the opposite terminals (Auer 1999; Berruto 2009). From alternation of code, mostly due to change of interlocutor<sup>29</sup>, we go to intersentential code switching, then reaching code mixing<sup>30</sup>, finally to hybrid forms - switching occurring at the word level (Berruto 2005). Moreover, in some cases it is possible to obtain what Auer (1999) calls a fused lect, the starting point of the formation of a mixed language, a sort of frozen mixing, where phenomena of speakers' discourse start establishing in the language system. In other words, a fused lect presupposes code mixing which implies code switching, which implies alternation of code, while on the other way round, it is possible to have alternation of code phenomena without any code switching. This implication in synchrony is reflected in diachrony as well: first alternation of code, then switching, then mixing and in some cases hybrid forms and fused lect. In conclusion, there is a first stage (alternation of code) where the two languages are completely separated, a second one implies a situation of more and more interpenetration of the languages (from switching to mixing), even though speakers can choose to use one language rather the other, finally arriving in a

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<sup>29</sup> Since alternation of code depends on the typology of speech event and on change of interlocutor, this phenomenon is to be analysed from a functional-pragmatic point of view.

<sup>30</sup> There are conflicting accounts about the necessity of distinguishing intersentential and intrasentential code switching. However, it seems appropriate to maintain the opposition among code switching and code mixing, since the former process has functional-pragmatic value, rather than the latter. Hence, the level of analysis of code switching phenomena is pragmatics and textual linguistics, whereas code mixing phenomena could be analysed from a syntactic point of view (cf. Berruto 2009).

situation where their choice is reduced, to the point that lexical elements from the other language start being compulsory in use. In other words, from phenomena at level of speaker's discourse we pass to phenomena at the level of the language system.

### **The study**

The following bilinguals' discourse strategies, used by speakers according to their competence, are listed from a higher to a lower degree of knowledge of the minority language (Dal Negro 2005):

- discourse with a high frequency of alternation of code, generally caused by change of interlocutor, with a direct return to the minority language;
- discourse with a high frequency of intersential code switching, commonly used to meet either conversational or textual functions;
- discourse with a high frequency of code mixing in the form of insertion and alternation<sup>31</sup>.

In the case of Faeto and Celle di St. Vito, the applicability of the above scale of discourse strategies is investigated: firstly particular strategies in relation to the degree of speakers' competence in the minority language are identified, also by correlating bilinguals' strategies to sociolinguistic variables; speakers' discourse strategies in both communities are compared, in order to explore whether and how the sociolinguistic context of the community affects speakers' discourse.

### **Methodology**

The sample is constituted by forty-eight speakers split equally between Faeto and Celle and equally distributed between sex. In each town respondents are divided into four age groups, and segmented according to their occupations.

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<sup>31</sup> Alternation - where segments from one language are alternated with segments from another - entails a lower degree of mix between the languages, than the process of insertion, a phenomenon where one language provides the grammatical structure and material from another language is inserted into this structure (Muysken 2000).

**Table 1 Sample of Faeto and Celle di St. Vito**

Age Group	Village	Occupation				Total
		Student	Employee	Unemployed	Housewife	
9-20	Faeto	1M, 3F		2M		3F, 3M
	Celle di St. Vito	1M, 3F		2M		3F, 3M
21-40	Faeto		3M, 1F		2F	3F, 3M
	Celle di St. Vito		3M, 1F		2F	3F, 3M
41-60	Faeto		2M, 1F	1M	2F	3F, 3M
	Celle di St. Vito		2M, 1F	1M	2F	3F, 3M
61-85	Faeto		3M, 1F		2F	3F, 3M
	Celle di St. Vito		3M, 1F		2F	3F, 3M

Speakers from each age group both in Faeto and Celle talked to each other in a group; their discourse was recorded by a speaker of the community, who hid the tape-recorder and did not take part into the conversation, in order not to alter the data. The first three utterances from each speaker were introduced in the analysis, to have the same amount of material for each informant; hence for each age group 18 utterances are examined here.

### **Data analysis**

Discourse strategies listed in Section 6 are the starting point for the classification of data. Utterances from each informant are divided according to the degree of sociolinguistic vitality of the minority language<sup>32</sup>: 1. safe, 2. unsafe, 3. severely endangered<sup>33</sup>. Discourse is classified on the basis of eight variants of speakers' discourse<sup>34</sup>. Strategies from 1 to 3 are used in cases where the minority language is 'safe', strategies 4 and 5 mirror an unsafe language context, strategies from 6 to 8 reflect a severely endangered language situation:

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<sup>32</sup> The sociolinguistic vitality of a language is essentially based on the diffusion and use of the language in the community, and speakers' attitude towards it (Dressler 2003; Berruto 2011). For the vitality of Francoprovençal varieties in Apulia see Perta 2013.

<sup>33</sup> They are 3 of the 9 criteria of UNESCO's scale for assessing the status and vitality of languages (Brenzinger *et al.* 2003).

<sup>34</sup> In the examples Faetar and Cellese are reported in italics, while Italian and Apulian dialect in bold.

1. utterance in Faetar/Cellese;

2. utterance with alternation of code:

(1)

*sette gli- è ma nije + sa figlje de Donàt*  
this FEM. she- be 3 P. SING. my nephew + his daughter of Donato  
(change of interlocutor) ++

**Mariangela questa è la mamma di Anna**

Mariangela this be 3 P. SING. he mother of Anna

‘This is my nephew + Donato’s daughter ++ Mariangela this is Anna’s mother’;

3. utterance with code mixing, in the form of insertion of material from Italian/Apulian dialect into a Faetar/Cellese morpho-syntactic frame<sup>35</sup>:

(2)

**il materiale te l’ à mette**  
the material you WEAK PERS. PRON. 2 P. SING. it must 2 P. SING. put INF.  
**tì sèlle i mette la fattije**  
you STRONG PERS. PRON. 2 P. SING. that MAS. SING. he put PRES. 3 P. SING. the FEM. SING. work

‘You should provide the material he does the work’;

4. utterance with code switching:

(3)

**gi m’ é pettà do l’ éja frésche**  
I mysel must PRES. 1 P. SING. paint INF. with the FEM. SING. water fresh  
**con l’ acqua fresca e sono sempre bella**  
with the FEM. SING. water fresh and be PRES. 1 P. SING. always beautiful  
‘I should paint myself with fresh water with fresh water and (I) am always beautiful’

5. utterance with code mixing, in the form of alternation:

(4)

**ma Maria + gli ést zèn con te ?**  
but Maria + she be PRES. 3 P. SING. togheter with you ?  
‘but is Maria with you?’

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<sup>35</sup> I, a native speaker from Apulia, decided whether a word belongs to Italian/Apulian dialect or not.

6. utterance with code mixing, in the form of insertion of Faetar/Cellese lexical material into an Italian/Apulian dialect morpho-syntactic frame:

(5)  
**abbiamo**      **levato**                      **la**                      **roba**    *abbàsce*    + **per**      **questo**  
 have<sub>1 P. PLUR.</sub>    remove<sub>PAST PART.</sub>    the<sub>FEM. SING.</sub>    thing    downstairs + for    this<sub>MAS. SING.</sub>  
**sono**                      **venuta**  
 be<sub>PRES. 1 P. SING.</sub>    come<sub>PAST PART.</sub>  
 ‘I removed the things from downstairs I came for this reason’;

7. utterance with a hybrid form:

(6)  
**chissà**    **mamma**    **che**    **fa**                                      **a**    *ciannetta*  
 maybe    mummy    what    do<sub>PRES. 3 P. SING.</sub>                      at    home-little<sub>-DER. MORPH</sub>  
 ‘I wonder what mummy is doing at home’;

8. utterance in Italian/Apulian dialect only.

In cases of insertional code mixing, data shows that only NPs from Italian or Apulian dialect were inserted, mostly content words, so as to make the phenomenon ambiguous since it could belong either to mixing phenomena or borrowings<sup>36</sup>. Here, the lexical elements resulted from contact will be treated as a phenomenon belonging to discourse level<sup>37</sup>.

The package SPSS was used for calculating the statistical association between the eight variants of speakers’ discourse strategies (dependent variables) and their socio-demographic variables (independent variables). This association was calculated through a linear equation, which predicted the values of each dependent variable separately from knowledge of specified values of independent variables - i.e. predictors (age, sex, occupation, village). Each of them was tested in a separate model. The type of regression used, categorical

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<sup>36</sup> Setting a fixed line among contact phenomena occurring in the language system and those in discourse, particularly lexical elements, is very complex (cf. Thomason 2001; Halmari 1997), whatever perspective is adopted (for example Sankoff *et al.* 1990; Myers-Scotton 1993, 2002). This is mostly due to the fact that native monolingual speakers in the minority language do not exist, hence it is not possible to apply one of the most valuable test to determine whether the lexical item is either a form of borrowing or a code switching phenomenon (Thomason 2001).

<sup>37</sup> Even though I confirm the validity of the question, arguing on this matter would be out of the scope of this work.

regression, was chosen, since it allows the analysis of both quantitative and qualitative data.

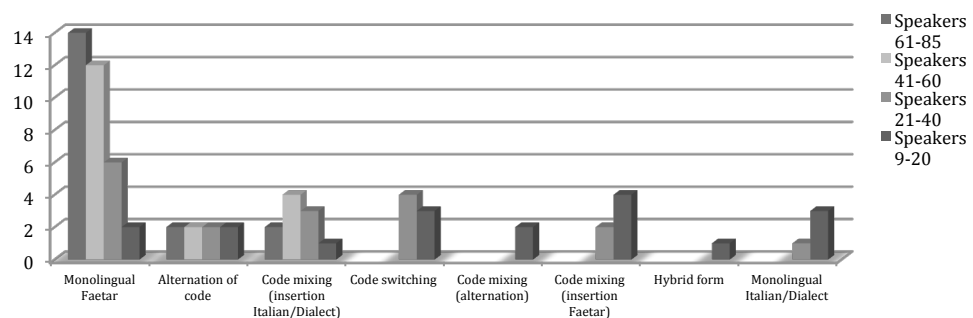
## The results

Table 2 shows the distribution of bilinguals' strategies in Faeto. Table 2  
Speakers' strategies in Faeto.

Strategies	Utterances
1 Monolingual Faetar	34
2 Alternation of code	8
3 Code mixing (insertion Italian/Dialect)	10
4 Code switching	7
5 Code mixing (alternation)	2
6 Code mixing (insertion Faetar)	6
7 Hybrid form	1
8 Monolingual Italian/Dialect	4

Most of the speakers use Faetar as the language of communication (34 utterances); in contrast there are 4 monolingual utterances in Italian/Dialect. Looking at the distribution of the strategy according to speakers' age (Fig. 1), it results a hierarchy of Faetar discourse: the number of utterances in the minority dialect increases as speaker's age. Moreover, as age diminishes, the mixture between the languages in speakers' discourse is deeper, to the point that the group of speakers ranging from 9 to 20 use all the strategies considered.

**Figure 1 Discourse strategies and age in Faeto**

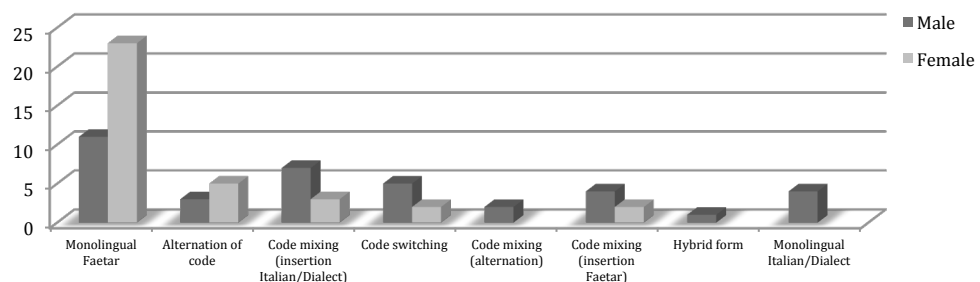


Through statistical analysis it results that 'age' is strongly significant ( $p < 0.001$ ) in determining strategy 1, that is the older the speaker is the more frequent

discourse in Faetar (Beta = .754); however strategy 2 and 3 cannot be predicted by ‘age’ ( $p>0.05$ ). ‘Age’ is statistically significant ( $p<0.05$ ) in determining strategy 4 and is correlated negatively with this discourse strategy (Beta=-.449), hence the frequency of code switching phenomena increases with the decreasing of speaker’s age. A similar result is obtained in the case of strategy 5: ‘age’ is a significant predictor in the variation of the use of mixing in the form of alternation ( $p<0.05$ ), and it is negatively correlated with this strategy (Beta=-.404); ‘age’ behaves similarly in case of strategy 6 ( $p<0.05$ ; Beta=-.501). Whereas, for strategy 7 and 8, ‘age’ is not a significant predictor in determining the variation ( $p>0.05$ ) in the use of hybrid forms and monolingual discourse in Italian/Dialect.

‘Sex’ is significant in predicting the variation in discourse in Faetar ( $p<0.05$ ): females are more likely than males to produce utterances in the minority dialect (Beta=.481). Moreover ‘sex’ is not a predictor for either of the other discourse strategies, as can be deduced from Fig. 2 which depicts a comparison of the distribution of bilinguals’ strategies according to sex.

**Figure 2 Discourse strategies and sex in Faeto**



Finally, ‘occupation’ is not significant in determining variation in speakers’ discourse strategies ( $p>0.05$ ).

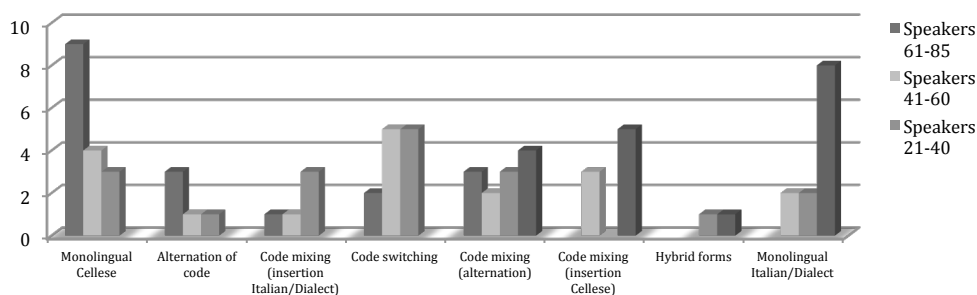
The distribution of bilinguals’ discourse strategies in Celle di St. Vito is shown in table 3.

**Table 3 Speakers' strategies in Celle di St. Vito**

Strategies	Utterances
1 Monolingual Cellese	16
2 Alternation of code	5
3 Code mixing (insertion Italian/Dialect)	5
4 Code switching	12
5 Code mixing (alternation)	12
6 Code mixing (insertion Cellese)	8
7 Hybrid form	2
8 Monolingual Italian/Dialect	12

The opposite strategies, monolingual utterances in Cellese (16) and utterances in Italian/Dialect (12) are almost balanced. In addition, the use of switching and mixing phenomena in the form of alternation records a high frequency (12). As the statistical analysis, 'age' is significant in determining strategy 1 ( $p < 0.001$ ; Beta = .482): Cellese is the language used for communication for older generation and its use decreases according to the speaker's age, to the point that speakers from younger generation do not use monolingual discourse in Cellese at all (see Fig. 3).

**Figure 3 Discourse strategies and age in Celle di St. Vito**

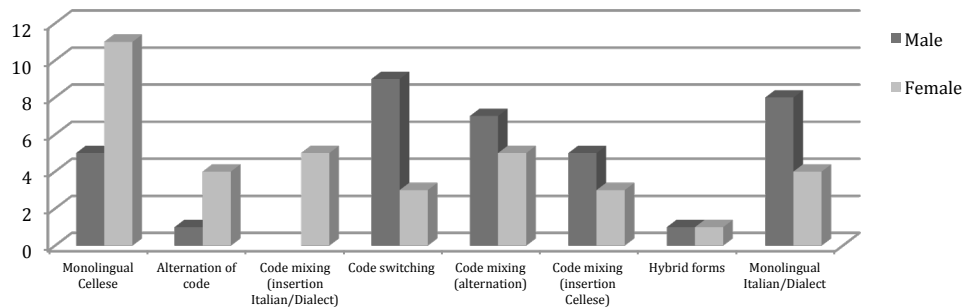


'Age' is a significant predictor for strategy 2 ( $p < 0.05$ ; Beta = .412) as well, and this strategy increases along with speakers' age; whereas the opposite trend is obtained in cases of strategy 6 ( $p < 0.05$ ; Beta = -.404), and 8 ( $p < 0.05$ ; Beta = -.547), since these phenomena increase as speakers' age decreases. While, for strategy 3, 4, 5 and 7 'age' does not make a statistically significant contribution ( $p > 0.05$ ) in their variation.



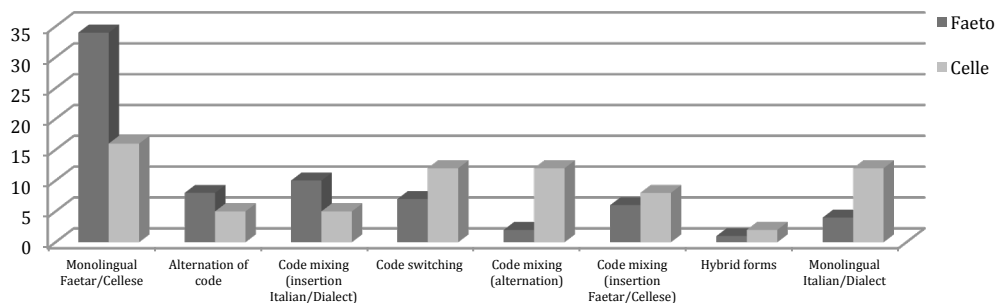
‘Sex’ is not a significant predictor in determining the variation in the typologies of discourse, apart from strategy 3 ( $p<0.05$ ; Beta=.512); hence in these cases, as is clear from Fig. 4, only females use this form of discourse strategy.

**Figure 4 Discourse strategies and sex: in Celle di St. Vito**



Again ‘occupation’ is not statistically significant in determining speakers’ discourse strategies.

**Figure 5 Bilinguals’ discourse strategies in Faeto and Celle di St. Vito**



Comparing the distribution of each discourse strategy in Faeto and Celle, a double hierarchy emerges (see Fig. 5). The first three strategies show a higher score in Faeto than in Celle. From strategy 4 to 8, the trend is opposite: in Celle the score is higher than in Faeto. Moreover, while in Faeto there is a decreasing score from strategy 4 on, Celle speakers show an increasing trend.

This result is statistically confirmed, since ‘village’ is a significant predictor in explaining the variation in strategy 1 ( $p<0.001$ ) and 8 ( $p<0.001$ ): Faeto is positively correlated to strategy 1 and inversely correlated to strategy 8.

## Conclusion

In Faeto speakers' discourse strategies are similar among pairs of age groups. For speakers from 41 to 85 years old, Faetar is the language usually used among older and adult generations, most of the communication is monolingual in Faetar. Some exceptions exist: cases of alternation of code - that usually occur in situation of shift of the interlocutor - and examples of insertive mixing, where Italian content words are introduced in a Faetar frame. The other two groups, with speakers from 9 to 40 years old, show a similar pattern in discourse strategies: first of all the number of monolingual utterances in Faetar decreases and the use of all bilinguals' discourse strategies increases. In the case of the age group ranging from 21-40, there is a preference in the use of code switching forms, along with cases of code mixing phenomena, where lexical material from Faetar is inserted into an Italian/Apulian dialect frame. In the case of speakers from 9 to 20 years old, the number of utterances in Faetar decreases and the number of those in Italian/Apulian dialect increases; moreover the number of mixing forms, where lexical material from Faetar into an Apulian dialect frame is inserted, are considerable. In Celle speakers from older generations use different strategies in their bilingual discourse: apart from utterances in Cellese only and some examples of insertion of Italian content words into a Cellese frame, there are code switching and some alternant mixing phenomena. Speakers from 41-60 use all the strategies; moreover, the number of utterances in Cellese decreases as utterances in Italian/Dialect appear. Speakers from 21 to 40 years old show a similar pattern, besides the emergence of hybrid forms. Things are completely different in the case of the younger generation: there are not utterances in Cellese, or alternation of code, or insertion of Italian content words, or switching phenomena. Their discourse is mostly based on Italian/Dialect, besides cases of alternant and insertive mixing and a hybrid form.

Discourse strategies listed in Section 6.2 are not in complementary distribution, indeed they co-exist and overlap, since minority sociolinguistic situations change rapidly; moreover they reflect different degrees of speakers' competence in the minority language, having three prototypical situations. A first case is characterised by speakers fully competent in Faetar/Cellese: the minority language is used as the language of the communication, with the emerging of phenomena of alternation of code, commonly due to change of interlocutor, and forms of insertion of Italian lexical material, which could be

the signal of particular lexical gaps. The second situation is characterised by speakers who are competent in both the languages, indeed there are various intersential switching forms usually with pragmatic values. Things are different when speakers' competence decreases: in their discourse there is a high frequency of code switching forms, along with cases of alternant mixing, and mostly cases where lexical elements from the minority language appear into an Italian/Apulian dialect morpho-syntactic frame. These are communicative situations usually involving younger speakers, who commonly use Italian/Apulian dialect as languages of the communication and cannot manage Faetar/Cellese well. In other words, it is possible to highlight a continuum of vitality of the minority dialects, starting from cases of ideal bilingualism, to settings of language shift - even though the minority language is still safe, since speakers have an individual repertoire with a good functional division among the codes, to situations where processes of language shift and decay are advanced.

Projecting the strategies used by speakers of Faetar and Cellese into the continuum of vitality of the minority dialects as outlined above, in Faeto bilinguals' strategies seem to reflect an ideal bilingualism shown by older and adult speakers, and safe cases of language shift revealed by younger generation; whereas in Celle the process of shift is more advanced, as shown by discourse strategies of both adult and mostly younger generation.

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