

# Word Order variation in L1 and L2 Italian speakers: the role of Focus and the Unaccusativity Hierarchy

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## Abstract

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This paper investigates the Italian Word Order variation in the position of subjects (S) with respect to finite predicates (V) in two adult populations: L1-Italian speakers and L1-French L2-Italian speakers. We test how discourse focus (Belletti, 2001) and a decomposed approach to Unaccusativity, i.e., Unaccusativity Hierarchy (Sorace, 2000), determine the SV/VS variation in L1 and L2 populations. The results of a forced-choice preference task show that both factors constrain the Italian word order in L1 and L2 Italian speakers: the VS order was preferred in the narrow focus and with Change of Location unaccusative verbs in both populations, although with different proportions. Overall L2 speakers chose the SV order more consistently than L1

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speakers but they did so mainly with the less-core unaccusative verbs of the Unaccusativity Hierarchy. We account for these findings suggesting a return to the original version of the Interface Hypothesis (Sorace, 2005), which predicts that interface phenomena, including those at the syntax-lexicon interface, represent a vulnerable domain in L2 acquisition.

**Keywords:** Adult L2 acquisition, Focus, Unaccusativity Hierarchy, Word Order variation, Italian, French, Interface Hypothesis, Lexical-Semantics

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## 1. Introduction

A central challenge in bilingual language acquisition is to explain the different degrees in which various linguistic phenomena are vulnerable. Why are certain linguistic phenomena more easily acquirable in situations of language contact, whereas others are more problematic and, thus, more prone to cross-linguistic influence? An interesting and influential proposal is represented by the Interface Hypothesis (Tsimplici & Sorace, 2006; Sorace & Filiaci, 2006), according to which the phenomena that are at the interface between the linguistic modules are vulnerable. In the original version of this hypothesis (Sorace, 2005), all phenomena interfacing with syntax were classified as being equally vulnerable in bilingual acquisition, while those pertaining exclusively to narrow syntax were expected to be unproblematic. A more recent version of the Interface Hypothesis revised the role of the interfaces, thereby differentiating between phenomena at the internal interface vs. those at the external interface (Tsimplici & Sorace, 2006; Sorace & Serratrice, 2009; White, 2011; Sorace, 2011; among others). The internal interface, i.e., the syntax-lexicon interface, integrates linguistic modules pertaining to formal grammar only. Conversely, external interfaces (e.g., syntax-discourse interface) combine linguistic domains which are both inside and outside the grammar. The combination of different linguistic modules causes a high processing load in the computation: this renders the phenomena pertaining to the external interfaces, but not those at the internal interface, vulnerable in bilingual acquisition (Sorace, 2011).

Various studies have tested the Interface Hypothesis on different types of bilingual populations, but results are mixed. While some studies have reported that bilingual speakers exhibit an incomplete acquisition of external interface phenomena (e.g., Sorace & Filiaci, 2006; Serratrice, Sorace, Filiaci, & Baldo, 2009; Domínguez, 2013; among others), others have shown the opposite (e.g., Rothman, 2008; Slabakova & Ivanov, 2011; Slabakova, Rothman, & Kempchinsky, 2012; among others). Furthermore, although the literature usually agrees on the native-like attainment of internal interface phenomena (e.g., Dekydtspotter, Sprouse & Anderson, 1997; Dekydtspotter, Sprouse & Swanson, 2001; Iverson & Rothman, 2008), few studies do show incomplete acquisition of the syntax-lexicon phenomena (e.g., Bruhn de Garavito & Valenzuela, 2006; Guijarro-Fuentes & Marinis, 2007; see also White, 2003, 2009). Consequently, the status of the interfaces is still a matter of debate in current research on bilingualism.

Our paper contributes to this debate by investigating a phenomenon constrained by both internal- and external-interface factors, namely Italian word order variation in L2 acquisition. Building on previous L2 acquisition studies (Belletti &

Leonini, 2004; Belletti, Bennati & Sorace, 2007; Caloi, Belletti & Poletto, 2018), we address the role of focus (Belletti, 2001) and the Unaccusativity Hierarchy (UH) (Sorace, 2000) in determining the variation between subject-verb (SV) and verb-subject (VS) orders testing both native Italian speakers and L1-French L2-Italian speakers. We argue that both factors regulate word order variation in both L1 and L2 speakers. Importantly, we show that the syntax-lexicon interface is also a vulnerable domain, as L2 speakers exhibit an incomplete acquisition of the Italian UH, transferring the French UH into L2. Theoretically, we propose that the way the UH determines the Italian word order variation mirrors the way in which it determines the auxiliary selection BE vs. HAVE in both Italian and French.

The paper is structured as follows. In section 2, we illustrate the constraints on word order variation in Italian and French, which will be relevant for our experiment. Section 3 contains a brief review of the previous L2 acquisition studies on the Italian word order variation. We discuss our study in Section 4, presenting the participants, the experimental design and the procedure. The presentation of the results is outlined in Section 5. The discussion of our findings is provided in section 6, while Section 7 concludes the paper.

## 2. Word Order variation

This Section describes the word order variation attested in Italian (Section 2.1) and in French (Section 2.2), focusing on two factors, i.e., the lexical semantics of the predicate and the type of information focus. In Section 2.3 we further refine the first factor by introducing the Unaccusativity Hierarchy proposed in Sorace (2000).

### 2.1. Italian word order variation

Modern Italian is a null-subject language. The finite verb can both follow and precede the subject in declarative finite clauses, yielding the orders SV and VS, respectively. The possibility of both SV and VS orders was initially ascribed to the positive setting of the Null Subject Parameter (Rizzi, 1982, 1986; Jaeggli & Safir, 1989). However, recent work on parameter theories and on the Null Subject Parameter has shown that the presence of null subjects is a necessary but not sufficient condition to allow for the VS order (e.g., Pinto, 1997; Belletti, 2001; Cardinaletti, 2004, 2018). Consequently, researchers have started looking for other factors responsible for the alternation between SV and VS orders. An uncontroversial claim is that Italian word order variation is constrained by several factors at the interfaces with syntax. In our study we focus on the lexical and discourse interface factors.

At the syntax-lexicon interface, the most relevant factor constraining the SV/VS orders is the lexical semantics of the predicate, i.e., unergative vs. unaccusative verbs (Unaccusativity or Split-Intransitivity, Perlmutter, 1978; Burzio, 1986). Accordingly, while the subject of unaccusative verbs as *arrivare* ‘to arrive’ is more likely to follow the verb, the subject of unergative verbs as *parlare* ‘to talk’ tends to precede the verb, as shown in (1a-b):

- (1) a. È arrivato Gianni (Unaccusative, VS)  
       is arrived Gianni  
       ‘Gianni arrived’

- b. Gianni ha parlato (Unergative, SV)  
 Gianni has spoken  
 ‘Gianni spoke’

Following the Unaccusative Hypothesis (Perlmutter, 1978; Burzio, 1986), the possibility for the subject to follow the predicate depends on its first merge position, i.e., if the subject is the internal argument of the predicate as with unaccusatives, it can remain in situ and can thus follow the finite predicate.<sup>1</sup>

At the syntax-discourse interface, the most relevant factor influencing the SV/VS orders is the informational focus of the sentence (Belletti, 2001, 2004; Cardinaletti, 2004, 2018; Bentley & Cruschina 2018). In our study, we distinguish between two types of foci: broad and narrow focus. In broad focus contexts, the informational focus is represented by the entire clause. This is illustrated by the question-answer pair in (2a): the answer is a clause with the unmarked word order SV with unergative and VS with unaccusative predicates.

- (2) a. Che cosa è successo? (Broad Focus)  
 what is happened?  
 ‘What happened?’
- b. È arrivato Gianni/Gianni ha parlato  
 is arrived Gianni/Gianni has spoken  
 ‘Gianni arrived/Gianni spoke’

On the contrary, in narrow focus contexts, the informational focus is a single phrase. In the question-answer pair in (3), the information focus is the subject. In these contexts, only the VS order is licensed with both unergatives and unaccusative predicates

- (3) a. Chi è arrivato/ ha parlato? (Narrow Focus)  
 who is arrived/ has spoken?  
 ‘Who arrived/spoke?’
- b. È arrivato Gianni/Ha parlato Gianni  
 is arrived Gianni/has spoken Gianni  
 ‘Gianni arrived/Gianni spoke’

Hence, while unaccusative and unergative verbs lead to the VS order in narrow focus contexts (3), they differ in broad focus context (2), where the VS order is mainly found with unaccusatives and SV with unergatives.<sup>2</sup>

<sup>1</sup> In its original formulation, the subject of the unaccusatives was base generated in the VP complement position, while the subject of unergatives was merged outside the VP layer. Nowadays, this structural distinction has been revised in light of the VP-internal hypothesis (Koopman & Sportiche, 1991) and the introduction of the VP-shells (Larson, 1988). See also Section 6.

<sup>2</sup> Pinto (1997) and Bentley & Cruschina (2018) argue that the possibility for a predicate to admit the VS order in broad focus contexts is strictly related to its argument structure: specifically, it depends on whether the verb selects a silent preverbal locative/temporal or benefactive argument in the internal thematic grid. The silent preverbal argument is assumed to trigger subject inversion. We come back to this point in Section 6.

Belletti (2001, 2004) argues that in narrow focus contexts both unaccusatives and unergatives display the VS order because the subject represents the focus of new information, which has a dedicated position, FocusP, in the vP left periphery (Belletti, 2001; 2004). Hence, the subject moves to Spec,FocusP and the verb moves to a higher position in the TP area, thereby yielding the linear VS order. On the contrary, in broad focus contexts, unaccusatives and unergatives tend to display different word orders, as expected under the Unaccusative Hypothesis. Unaccusatives display the VS order, which in this case results from moving the VP to Spec,FocusP: the VP consists of the predicate and the internal argument, i.e. the subject of the unaccusative verbs. On the contrary, with unergative predicates, the VP moves to Spec,FocusP, but it does not contain the external argument, as it is merged in a higher position than the VP. Consequently, the subject of unergatives can only target a position higher than the landing site of the verb in broad focus contexts, thereby yielding the SV order.

To summarize, according to the theoretical literature (Burzio, 1986; Belletti, 2001, 2004), unergative predicates exhibit variation between the SV and VS orders depending on the informational focus: the SV order is found in broad focus contexts, while narrow focus contexts trigger the VS order. Conversely, with unaccusatives the VS order is expected to occur in both focus contexts. This is schematically illustrated in Table 1:

**Table 1.** Expected word order of verb-type across focus-types in Italian

Verb type	Broad Focus	Narrow Focus
Unaccusative	VS (SV)	VS
Unergative	SV (VS)	VS

## 2.2. French word order variation

Modern French, the L1 of the L2 speakers investigated in this study, is not a null subject language. The subject usually precedes the predicate, in declarative finite clauses but, in very restricted contexts, it can also follow the verb (e.g., Lahousse, 2003; Lahousse & Lamiroy, 2012). As Italian, we consider the SV/VS word order variation with respect to the two target factors, Unaccusativity and Focus.

As for the lexical factor, residual occurrences of the VS order in main clauses are found in the following syntactic constructions: (4a) locative inversion structures preceded by a temporal adverb or a prepositional phrase (PP) with the function of stage topic in Lahousse's (2003, 2011) terms (i.e., scene-setting topics in Poletto & Benincà, 2004); (4b) existential inversion structures introduced by the expletive pronoun *il* ('there/it'), which gives athetic interpretation to the sentence (e.g., Jones, 1996; Belletti & Bianchi, 2016):

- (4) a. En septembre apparaissent les grosses araignées (Locative Inversion)  
 in september appear the big spiders  
 'The big spiders appear in September'
- b. Il est arrivé trois filles (Expletive Inversion)  
 it be.3SG arrived three girls  
 'Three girls have arrived'

Although both constructions are claimed to be more acceptable with unaccusative verbs than with unergative verbs as predicted by the Unaccusative Hypothesis (Perlmutter, 1978; Burzio, 1986), some exceptions are found with both verb-types when considering their lexical-semantic properties (e.g., Levin and Rappaport Hovav, 1995; Cornish, 2005; Carlier, 2005). It must be noted that the examples in (4), albeit grammatical, are mostly limited to literary and poetic registers (Lahousse, 2003, 2011): the usual way to express them is with the SV order independent of the verb-type. In this sense, Unaccusativity does not constrain the word order variation in French. On the contrary, Focus constrains the syntax of French: in broad focus contexts both unaccusatives and unergatives display the SV order (5); in narrow focus contexts, reduced clefts are the preferred answering strategy with both verb-types (6), although the SV order is also admitted (e.g., Belletti 2008; Lahousse & Lamiroy, 2012; Destruel, 2013):

- (5) a. Que s'est-il passé? (Broad Focus)  
 what is happened  
 'What happened?'  
 b. Jean est arrivé/ a parlé  
 Jean is arrived/has spoken  
 'Jean arrived/spoke'
- (6) a. Qui est arrivé/ a parlé? (Narrow Focus)  
 who is arrived/ has spoken?  
 'Who left/spoke?'  
 b. C'est Jean (qui est arrivé/a parlé)  
 it=is Jean that is arrivé/has spoken  
 'It is Jean that arrived/spoke'

To summarize, French word order variation seems to be constrained by Focus, but not by Unaccusativity, as illustrated in Table 2.

**Table 2.** Expected word order of verb-type across focus-type in French

Verb type	Broad Focus	Narrow Focus
Unaccusative	SV	Cleft
Unergative	SV	Cleft

### 2.3. The Unaccusativity Hierarchy

As previously stated, the lexical factor of Unaccusativity, in combination with focus, constrains word order variation in Italian, while in French it seems not to be operative. How can we account for this difference? A promising and plausible answer may be the Unaccusativity Hierarchy. Sorace (2000) proposes that the distinction between unaccusatives and unergatives is not binary: rather, predicates are arranged along a scale, the Unaccusativity Hierarchy (UH), which goes from the core unaccusatives, Change of Location, to the core unergatives, Controlled Process (non-motional), as represented in (7):

- (7) The Unaccusativity Hierarchy (UH) (adapted from Sorace, 2000: 863)
- Change of Location Unaccusative select BE (least variation)
  - Change of State
  - Continuation of pre-existing state
  - Existence of state
  - Uncontrolled Process
  - Controlled Process (motional)
  - Controlled Process (non-motional) Unergative select HAVE (least variation)

The classes of the UH are ordered depending on the interplay between semantic and aspectual parameters: telicity, i.e., the core of Unaccusativity, agentivity, i.e., the core of Unergativity, as well as the degree of dynamicity (Ramchand 2008). Core and non-core unaccusatives as Change of Location and Change of state verbs are mostly telic and non-agentive dynamic process predicates. Conversely, core and non-core unergatives as Controlled Process motional and non-motional verbs are mostly non-telic and agentive dynamic process predicates. On the other hand, peripheral verbs as Continuation of pre-existing state, Existence of state and Uncontrolled Process verbs exhibit different properties from the core classes. Continuation of pre-existing state, Existence of state denote a state, while Uncontrolled Process verbs encode a lower degree of dynamicity than the other core-unergative predicates. Given the properties of the classes in the UH, a first divide can be made based on the degree of dynamicity of the predicates (Ramchand 2008), i.e., dynamic process predicates vs. state predicates: all predicates, with the exception of Continuation of pre-existing state and Existence of state verbs, denote dynamic processes, although with different degrees of dynamicity.

The UH captures the non-categorical distinction between unaccusative and unergative predicates and accounts for a variety of linguistic phenomena, among which the selection of the auxiliaries ‘BE’ vs. ‘HAVE’ in compound tenses. In languages that adopt this alternation, the two auxiliaries are reserved to the core poles of the UH: the auxiliary BE consistently selects Change of location predicates, while the auxiliary HAVE appears with Controlled process verbs. In contrast, non-core and peripheral verbs exhibit more variation in the auxiliary selection.

While the UH is cross-linguistically universal, languages differ in where to place the cut-off, i.e., the transition zone, which divides unaccusatives and unergatives with respect to the choice of the auxiliary (Sorace, 2000). Focusing on the two languages investigated in this study, Table 3 shows that Italian and French display two different cut-off points in the UH (Sorace & Legendre, 2003).

**Table 3.** The UH in Italian and French (adapted from Sorace & Legendre, 2003)

Semantic classes	Italian	French	Examples
Change of location	BE	BE	<i>to arrive, to come</i>
Change of State	BE (HAVE)	BE or HAVE	<i>to grow, to die</i>
Continuation of pre-existing state	BE or HAVE	HAVE	<i>to stay, to last</i>
Existence of state	BE or HAVE	HAVE	<i>to exist, to be</i>
Uncontrolled process	BE or HAVE	HAVE	<i>to tremble, to buzz</i>
Controlled process (motional)	BE (HAVE)	HAVE	<i>to dance, to walk</i>
Controlled process (non-motional)	HAVE	HAVE	<i>to talk, to shout</i>

The cut-off point between unaccusatives and unergatives in Italian is located between Existence of state and Uncontrolled process verbs, while in French it is higher, i.e., between Change of state and Continuation of pre-existing state verbs. In both languages the auxiliaries BE and HAVE consistently select the core predicates, i.e., Change of location verbs and Controlled process (non-motional) verbs respectively. In both languages, the predicates that sit around the cut-off point display a high degree of variation in the auxiliary selection. In Italian, Change of state and Motional controlled process verbs allow for both BE and HAVE depending on the *Aktionsart* of the verb (Bertinetto, 1986), while Stative and Uncontrolled process verbs display optionality in the choice between the two auxiliaries. On the contrary, in French both classes of unergative and stative verbs uniformly select the HAVE auxiliary. Change of state predicates allow for both BE and HAVE depending on the *Aktionsart* of the verb.

Hence, since the UH provides a finer characterization of the lexical factor constraining the auxiliary selection, as well as other linguistic phenomena, it is plausible to hypothesize that it also constrains the SV/VS word order variation.

### 3. Italian word order variation in L2 acquisition

The question as to how L2 speakers acquire the alternation between SV and VS in Italian was first addressed by Belletti & Leonini (2004). The specific goal of the study was to assess the production of the VS order in narrow focus contexts across different verb classes i.e., unaccusative, unergative and transitive. An elicited production task was administered to L1-German and L1-French speakers learning Italian as their L2 (intermediate level of proficiency) and to L1 Italian speakers as the control group. The experiment consisted of 22 short videos, each of which ended with a narrow-focus question, prompting the production of the VS order in the answers (Belletti, 2001; 2004). The study showed that L2 speakers produce fewer VS orders in their answers than L1 Italian control group. While L1 Italian speakers produced VS answers at a rate of 98%, L1-German speakers of L2 Italian produced the VS order at a rate of 27% and L1-French speakers of L2 Italian at 21%. Conversely, L1 German speakers mainly produced SV answers (68%), while L1 French produced cleft structures (69%).<sup>3</sup> The authors concluded that the L2 speakers transferred the answering strategy used in their L1 in narrow focus contexts, namely the SV order in German and the cleft structure in French.

Similar results were replicated by Belletti, Bennati & Sorace (2007), who administered the same elicited production task to near-native speakers of L2 Italian with English as their L1. As found in Belletti & Leonini (2004), L1-English speakers transferred their L1 answering strategy into the L2. They produced the VS order at a low rate (29%), while the control group of native Italian speakers produced the VS order at ceiling (98%). The same experiment was administered by Caloi, Beletti & Poletto (2018) to two multilingual populations: L1-German heritage speakers of L2 Italian and L1-Italian attrited speakers of L2 German. As in the previous studies using the same experimental design, the Italian VS order was mastered in a non-native-like

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<sup>3</sup> The productions of L2 speakers contained other structures, e.g., fragments, which amounted to 5% in the German group and 12% in the French group.



fashion. Heritage speakers produced the SV order at a rate of 50%, whereas the VS order was produced at a rate of 45%: this indicates that their preference for either order was at chance level. Likewise, the performance of the attrited speakers was different from that of L1 speakers. Attrited speakers produced the SV order at a rate of 26%, while they produced the VS order at a rate of 62%, i.e., at a rate higher than heritage speakers, but lower than the Italian control group, who produced 98% of VS structures. All the three reviewed studies which adopted the same design converge on two conclusions: (i) L2/multilingual speakers transfer the answering strategy of their L1 in narrow focus contexts, thereby avoiding the production of the VS order; (ii) the few VS structures produced by L2 speakers were mainly found with unaccusative verbs. Ultimately, Listanti & Torregrossa (under review) studied the L2 acquisition of the Italian VS order through the LIPS corpus (the official collection of oral productions in CILS exams). Both the lexical and discourse factors constraining the Italian VS order were analyzed, i.e., the different verb classes (unaccusatives, unergatives and transitives) and the type of subject based on the information structure (given or new). Likewise, the authors also considered the L2 speakers' proficiency levels following the Common European Framework of Reference for Languages (CEFR). Results of their study showed that the production of VS structures with transitive verbs and with contrastive focused subjects increased as a function of the L2 learners' proficiency level. Conversely, the rate of the VS order with unaccusative and unergative verbs remained steadily across levels. This result indicates that VS with Unaccusativity is acquired by the L2 Italian speakers from the beginning of L2 acquisition.

To summarize, previous L2 acquisition studies on the Italian word order variation corroborate the second version of the Interface Hypothesis (Sorace & Serratrice, 2009; White, 2011; Sorace, 2011): L2 populations show an incomplete acquisition of the syntax-discourse properties constraining the Italian word order variation, whereas the syntax-lexicon properties (i.e., Unaccusativity) seem to be less problematic to acquire and therefore to be mastered earlier.

Some questions are however still open. Since the main goal of the previous experimental studies (Belletti & Leonini, 2004; Belletti, Bennati & Sorace, 2007; Caloi, Beletti & Poletto, 2018) was to assess the L2 participants' answering strategy with respect to the production of the VS order in the narrow focus, the type of discourse focus, broad vs. narrow, was not manipulated in the experimental design. Likewise, a possible effect of the Unaccusativity Hierarchy still needs to be fully explored experimentally. An investigation in this direction may shed light on the nature of the lexical factor constraining Italian word order.

#### **4. Our study**

We investigate the role of two factors, discourse focus and the Unaccusative Hierarchy (UH), which are claimed to constrain the word order variation between the subject and the finite verb in Italian. We test adult L1-Italian speakers and L1-French L2-Italian speakers with a contextualized forced-choice preference task. We chose to target L2 speakers of Italian with French as L1 for two main reasons. First, Italian and French alternate in the auxiliary selection according to the classes of the UH and display different cut-off points (Table 3) (Sorace, 2000; Legendre & Sorace, 2003; Legendre, 2007). Second, as stated in Section (2), Italian and French differ with respect to their

answering strategies according to the focus-type: in Italian, in broad focus contexts the unmarked order tends to be SV with unergative verbs and VS with unaccusative verbs, whereas in narrow focus both verb classes exhibit VS (Table 1); in French, the SV order is found in broad focus with both unergatives and unaccusatives, while cleft sentences are attested in narrow focus in addition to the SV order (Table 2). If discourse focus and the UH play a role in constraining word order variation, precise predictions can be formulated for the two languages.

#### 4.1. Participants

74 participants were tested: 34 L1-French L2-Italian speakers and 40 native Italian speakers. Their age ranged between 19 and 35 years old. The 34 L2-Italian speakers were students either doing a BA or MA degree in Italian Studies in France or a double-joint degree with a university in Northern Italy. Specifically, 14 of L2 speakers were French students of the binational master's degree in Modern Philology between the University of Padua and the University of Grenoble; 8 L2 speakers were Erasmus students in a Northern Italian city, i.e., Venice, Milan, Bologna, Turin, Genoa; 12 L2 participants were in Italy, specifically Padua, Venice, for professional purposes. All the L2 participants were monolingual speakers of French, born and raised in different cities of France. 13 of them were also resident in Northern Italy at the time of testing. They all learned Italian after puberty, mainly via formal instruction at school and/or at the university and, to a lesser extent, via private L2 Italian courses. Importantly, all the L2 speakers participating in this study were required to have a minimum B2 level of proficiency in Italian following the Common European Framework of Reference for Languages (CEFR). They were asked to self-assess their L2 proficiency level in the sociolinguistic background questionnaire prior to the experiment: 10 of them had a B2 level, while 24 had a C1 level. The 40 native Italian speakers were recruited among university students and personal acquaintances in the Padua area (Veneto, North-East Italy). Therefore, they were all speakers of the regional variety of Italian spoken in Veneto. Both L1 and L2 Italian speakers were selected with same characteristics in terms of age and educational level to maximize the homogeneity of the results not only within each group, but also to allow for a better comparison between the two groups. A summary of the demographic information regarding both the L1 and L2 participants is provided in Table 4.

**Table 4.** L1 and L2 Italian speakers' demographic information

Participants (N = 74)	Language	Mean Age (SD)	Mean Exposure to L2
40	Italian	24,67 (1,41)	-
34	French	24,15 (3,61)	6,67 years

#### 4.2. The Task: stimuli and procedure

We adopted a contextualized forced-choice preference task, which was performed online in the form of a computer-based questionnaire. A  $4 \times 2$  Latin Square design was used to create 32 target stimuli, manipulated for two independent variables: (a) discourse focus, i.e., broad vs. narrow (16 items each); (b) the semantic classes of the UH denoting a dynamic process (4 items each class), i.e., Change of location and Change of state as for unaccusative predicates vs. Uncontrolled process and Controlled

process as for unergative predicates.<sup>4</sup> Within the unaccusatives, we chose 4 verbs representing change of state (*sparire* ‘to disappear’, *crescere* ‘to grow’, *morire* ‘to die’, *esplosione* ‘to explode’) and 4 representing a change of location (*venire* ‘to come’, *cadere* ‘to fall’, *entrare* ‘to enter’, *arrivare* ‘to arrive’). All of them were combined with the auxiliary BE in the experiment. Within the unergatives, we chose 4 verbs denoting controlled process (*parlare* ‘to talk’, *ballare* ‘to dance’, *urlare* ‘to shout’, *camminare* ‘to walk’) and 4 denoting uncontrolled process (*cedere* ‘to collapse’, *tremare* ‘to tremble’, *vibrare* ‘to buzz’, *stonare* ‘to be out of tune’). All of these were combined with the auxiliary HAVE in the experiment. To create the target stimuli, all predicates were matched with animate subject DPs, with the exception of the uncontrolled process verb *vibrare* (‘to buzz’) which had an inanimate subject.<sup>5</sup> The 16 predicates appeared twice in the task, as they represented the target answers to both broad and narrow focus questions.

Each target stimulus was introduced by a short story giving pragmatic context. Each story ended with a question with broad focus, *Cosa è successo?* (‘What happened?’), or with narrow focus, *Chi è/ha V<sub>participle</sub>?* (‘Who is/has V<sub>participle</sub>?’). Each question was then followed by two pre-recorded target sentences, minimally differing in their word orders, i.e., one with the SV order and one the VS order. The two target answers were pre-recorded by a female native Italian speaker from the Veneto region with the neutral unmarked intonation of declarative matrix clauses, i.e., with the main stress falling rightmost in the clause (Marotta & Vanelli 2021). Answers were prerecorded in order to prevent the participants from emphasizing the subject in the preverbal position triggering a focus-like interpretation. The recordings were inserted after the broad/narrow focus question. The target stimuli were presented in a pseudo-randomized order.<sup>6</sup> Participants were asked to read each story carefully, then to listen to the two pre-recorded target sentences, and finally to select the answer they would have uttered to answer the question, choosing between the SV or the VS order.

An example of target stimuli with is provided below in (8):

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<sup>4</sup> We refer the reader to Section 2.3 and, more generally, to Ramchand (2008) for a distinction between process and state predicates. The classes of the UH denoting a state, i.e., Continuation of pre-existing state and Existence of state verbs are left for future research.

<sup>5</sup> An interesting follow up of the present study may include animacy among the variables of the experimental design, as suggested by an anonymous reviewer. Indeed, the animacy of the DP subject may be a factor constraining the SV/VS word order variation, especially with unergative predicates (Vernice & Sorace 2018). An item analysis is reported in section 5.1.

<sup>6</sup> Fillers were not included in the experiment to avoid any possible priming effect for either the SV or the VS order, which could have arisen when including other syntactic structures, e.g., declarative clauses with transitive predicates, exclamative or interrogative clauses, exclamative or interrogative clauses. With transitive predicates, the order is consistently SV. In exclamative or interrogative clauses the subject must follow the predicate except in *perché* ‘why’ interrogatives (Bianchi, Bocci & Cruschina 2017). Notice, however, that, in the latter clauses, the VS order is not constrained by pragmatics, but rather by the grammar. We nonetheless acknowledge that this decision could have somehow led our participants to adopt some response strategies, as suggested by an anonymous reviewer. However, we also notice that the amount of the VS order found in both L1 and L2 populations is not substantially different from previous L2 studies, where fillers were included.

## (8) Unaccusative broad and narrow focus

Stai studiando in camera tua. Un pomeriggio il dottore di famiglia si ferma a casa per un controllo di routine a tua nonna. Sentendo qualcuno che conosci parlare al piano di sotto, dopo un po' scendi in cucina e, incontrando tua mamma, le chiedi: *Cosa è successo?* (Broad Focus) or *Chi è venuto?* (Narrow Focus)

A. È venuto il dottore (VS)

B. Il dottore è venuto (SV)

You are studying in your room. During the afternoon the family doctor arrives to visit your grandma. You hear the voice of someone you know coming from downstairs, so you go to the kitchen and you meet your mum. You ask her: What happened? (Broad Focus) or Who came? (Narrow Focus):

A. Has come the doctor (VS)

B. The doctor has come (SV)

#### 4.3. Research Questions and Predictions

On the basis of both previous L2 acquisition studies (Section 3) and theoretical observations (Section 2), we formulated three research questions and their respective predictions.

(Q1) Do L1 and L2 Italian speakers overall differ in the word order patterns?

Based on previous findings (Belletti & Leonini, 2004; Belletti, Bennati & Sorace, 2007; Caloi, Belletti & Poletto, 2018), we predict VS orders to be chosen more consistently by L1 Italian speakers than by L2 speakers; conversely, we expect L2 speakers to choose the SV order at a higher rate than L1 Italian speakers.

(Q2) Does the focus-type, broad vs. narrow, lead to different word orders?

Following the theoretical proposal in Belletti (2001, 2004), we expect L1 Italian speakers to prefer the VS order in the narrow focus context than in the broad focus context. Moreover, we predict that, in the narrow focus context, there should be no difference between unaccusative and unergative verbs in the amount of VS orders chosen by L1 speakers, while a difference between unaccusative and unergative verbs should arise in the broad focus context (Table 1). Conversely, according to the revised version of the Interface Hypothesis (e.g., Sorace, 2011), L2 speakers are predicted to exhibit an incomplete acquisition of the discourse focus, since focus qualifies as a factor at the vulnerable interface. Hence, based on the previous L2 studies (Section 3), L1-French L2-Italian speakers are expected to transfer their L1 strategy into the L2, i.e., to overgeneralize the SV order with both foci. Alternatively, since discourse focus constraints French word order variation, i.e., SV mainly appears in broad focus and clefts in narrow focus, we may expect L1-French L2-Italian speakers to differentiate their answering strategies depending on the type of focus also in L2 Italian. This may be reflected in a higher amount of SV orders chosen in broad focus contexts than in narrow focus and, conversely, in a higher amount of VS orders in the narrow focus context than in the broad focus one.

(Q3) Does the Unaccusativity Hierarchy play a role in the SV/VS variation?

This question explores the role of the UH in both L1 and L2 Italian speakers. If a decomposed approach to Unaccusativity constrains the Italian word order variation, we expect to find a difference in the word order patterns, which should follow the UH. Recall that the UH is responsible for various phenomena, among which auxiliary selection (Section 2.3). Focusing on only the dynamic process predicates investigated here, we provide a new version of Table 3, i.e., Table 5, which will be used to formulate precise predictions.

**Table 5.** The UH in Italian and French (adapted from Sorace & Legendre, 2003)

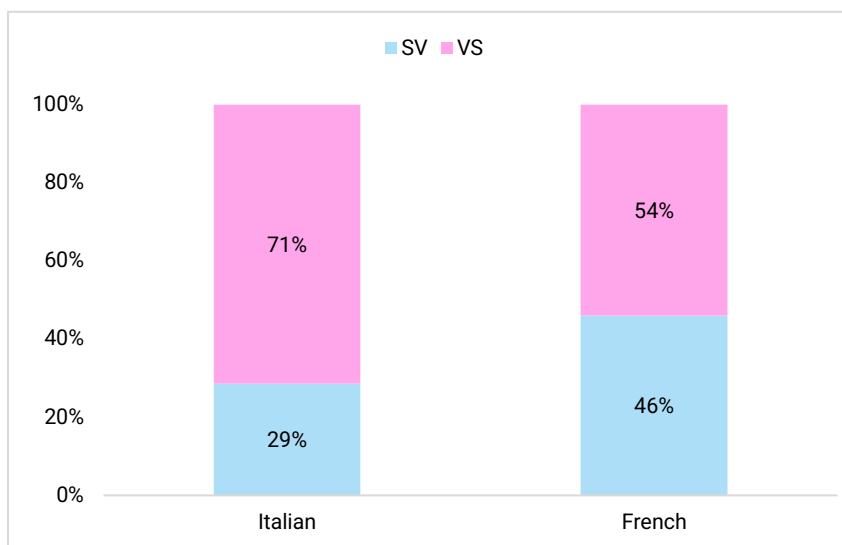
Semantic classes	Italian	French	Examples
Change of location	BE	BE	<i>to arrive, to come</i>
Change of State	BE (HAVE)	BE or HAVE	<i>to grow, to die</i>
Uncontrolled process	BE or HAVE	HAVE	<i>to tremble, to buzz</i>
Controlled process	HAVE	HAVE	<i>to talk, to shout</i>

Table 5 shows that in both languages the extreme poles have a consistent behavior in exhibiting one single auxiliary, BE with Change of location and HAVE with Controlled process predicates. In Italian each predicate of the UH behaves differently with respect to auxiliary selection, while in French the UH seems tripartite, i.e., Change of location vs. Change of State vs. Uncontrolled/Controlled process verbs. Accordingly, we expect the VS order to be mainly chosen with Change of location verbs and the SV order to appear consistently with the Controlled process verbs in both languages. We further expect a gradual decrease in the amount of the VS order as a function of the UH in L1 Italian speakers. Conversely, if the syntax-lexicon interface is also a vulnerable domain in L2 acquisition, we predict a different outcome in L2 speakers as they should transfer their L1 patterns into L2. L2 speakers are expected (i) to choose the VS order with Change of location more consistently, (ii) to exhibit a variable selection pattern with Change of State verbs which sit at the border of the cut-off point, and (iii) to choose the SV order with both unergatives to the same extent. Alternatively, if the UH does not constrain the Italian variation, we expect a bipartite dichotomy between unaccusatives and unergative predicates in both L1 and L2 participants' answers, with VS mainly reserved to unaccusatives and SV to unergatives, in line with previous studies (Section 3).

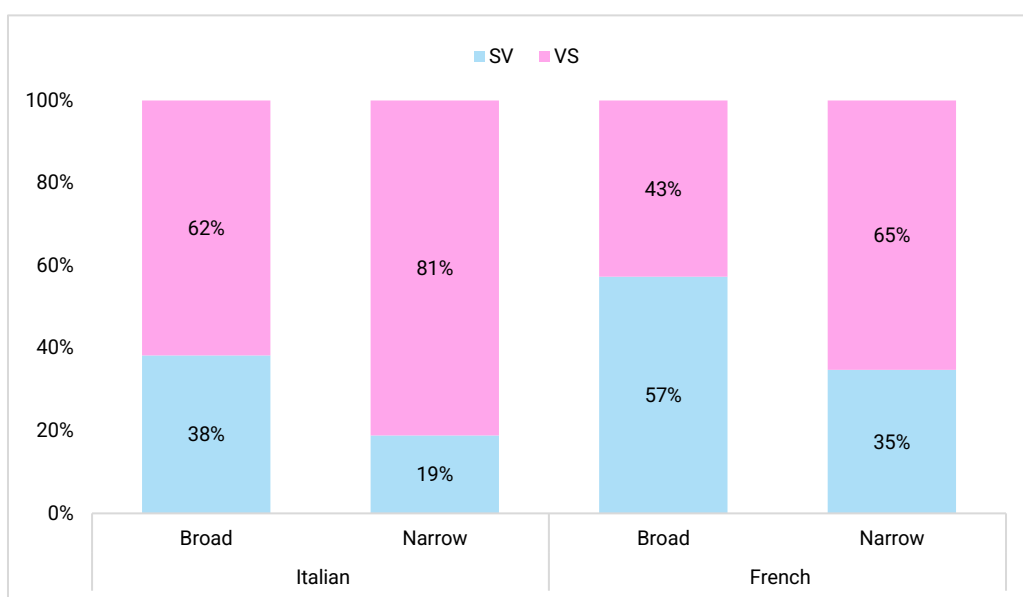
## 5. Results

Results are reported according to our three research questions. We first provide a descriptive overview, then we outline the statistical analyses and finally we present the item-based analysis.

As for (Q1), we found that L1 and L2 Italian speakers overall differed in the word order patterns. L2 speakers chose SV answers more frequently than L1 Italian speakers. Graph 1 illustrates this finding.

**Graph 1.** Amount of SV/VS answers across conditions in L1/L2 groups

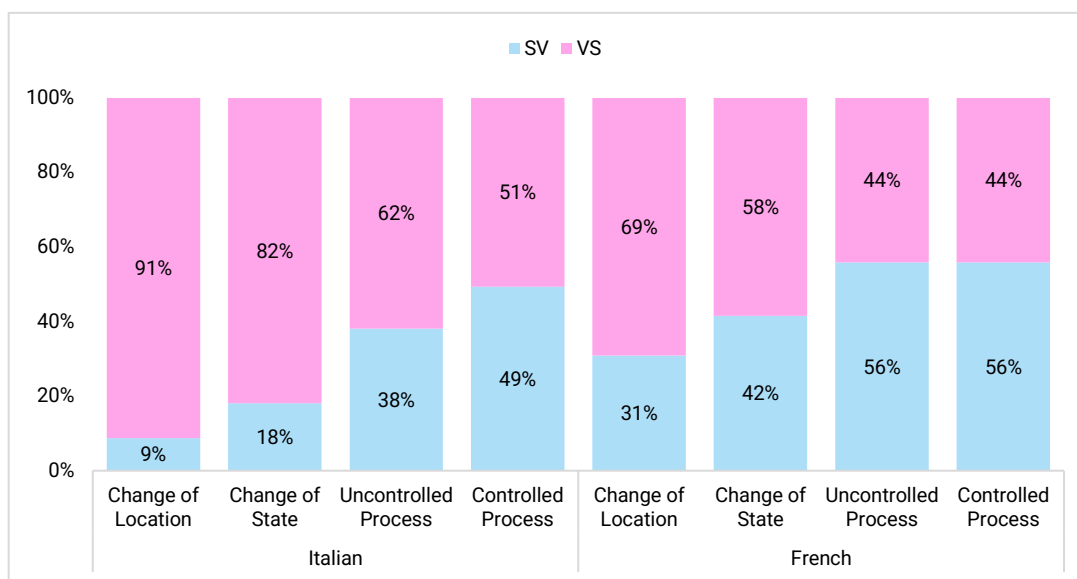
As for (Q2), both groups chose different word orders depending on the discourse focus manipulated in the question. Both L1 and L2 Italian speakers chose the VS order more frequently in the narrow focus than in the broad focus context. This is depicted in Graph 2.<sup>7</sup>

**Graph 2.** Amount of SV/VS answers based on Discourse Focus in the L1/L2 groups

<sup>7</sup> An anonymous reviewer wondered why in the L1-Italian group the proportion of the SV answers is relatively high in the narrow focus (19%) whereas it is low in the broad focus (38%). This result is due to the role of the UH. In the narrow focus condition, the classes of unaccusatives overall licensed more VS orders than those of unergatives. In the classes of unergative verbs, some residual SV answers were found. In the broad focus condition, the amount of the VS order decreases progressively along the classes UH similarly to the pattern depicted in Graph 3. Therefore, it is not surprising that the VS order in Broad Focus is not (50%) and the VS order in Narrow Focus is not (100%), as we would expect from Table 1.

Finally, as for (Q3), Graph 3 illustrates the amount of SV/VS responses chosen by the two groups across the different semantic classes of verbs in the UH. Graph 3 shows that the amount of VS answers chosen by L1 Italian speakers gradually decreases along the UH. Conversely, L2 speakers display a tripartite pattern. The VS order was chosen more frequently with Change of Location than with Change of State, which in turn triggered more VS responses than Uncontrolled and Controlled Process predicates. The latter two semantic classes did not differ in the amount of VS responses.

**Graph 3.** Amount of SV/VS answers based on the UH in L1/L2 groups



Our data were fitted to a generalized mixed effect model in R (R development Core Team, 2021) using the *lme4* package with the specification of the logit link function and the binomial family. Our dependent variable was the word order variation, where value 1 was assigned to the VS order and value 0 to the SV order. As fixed factors we considered: language (Italian vs. French), discourse focus (broad vs. narrow), the 4 semantic classes of the UH (change of location, change of state, uncontrolled process, and controlled process) as well as two interactions, i.e., language \* UH and language \* discourse focus. Levels of the factors were all mean-centered using orthogonal sum-to zero contrasts via the *contr.sdif* function (MASS package), which allowed to compare means of adjacent levels. Therefore, the intercept of the model represented the overall grand mean against which the levels of each fixed factor were referred to.<sup>8</sup> Participants were added as random intercepts in the model, including the random slopes to improve the fit of the model. The model was fitted using a restricted maximum likelihood technique.

<sup>8</sup> As for language, the contrast checked the difference between L1-French L2-Italian speakers (coded -0.5) and L1-Italian speakers (coded as +0.5). As for the discourse focus, the contrast checked the difference between broad focus (coded as -0.5) vs. narrow focus (coded as +0.5). As for the classes of the UH, the contrast for semantic class (1) checked the difference between Change of Location verbs (coded as -0.75) vs. Change of State verbs (coded as +0.25), the contrast for semantic class (2) checked the difference between Change of State verbs (coded as -0.5) and Uncontrolled Process verbs (coded as +0.5), while the contrast for semantic class (3) checked the difference between Uncontrolled Process verbs (coded as -0.25) and Controlled Process verbs (codes as +0.75).

The model revealed significant effects of the three factors, i.e., language, focus and UH as well as a significant two-way interaction between language and the UH. The estimates of the fixed effects model are reported in Table 6.

**Table 6.** Fixed Effects Estimates of the generalized linear mixed model

Predictors	$\beta$	SE	$z$	$P$
Intercept (Grand Mean)	0.925	0.095	9.714	<.001
Language (1)	1.068	0.179	5.970	<.001
Focus (1)	1.443	0.182	7.919	<.001
Semantic class (1)	-0.832	0.193	-4.313	<.001
Semantic class (2)	-0.896	0.157	-5.707	<.001
Semantic class (3)	-0.384	0.147	-2.623	0.008
Language (1) * Focus (1)	0.195	0.339	0.575	0.565
Language (1) * Semantic class (1)	-0.331	0.334	-0.989	0.322
Language (1) * Semantic class (2)	-0.519	0.286	-1.811	0.070
Language (1) * Semantic class (3)	-0.564	0.271	-2.078	0.037

*AIC*= 2656.4; *BIC*= 2761.0; *LogLik*= -1306.7; *Dev* = 2613.4

The contrast for Language (1) indicates that L1-Italian speakers chose the VS order significantly more often than the L1-French L2-Italian speakers ( $\beta=1.068$ ,  $SE=0.179$ ,  $z=5.970$ ,  $p<.001$ ). The contrast for Focus (1) shows that the VS order was selected significantly more often in the narrow focus context than in the broad focus context ( $\beta=1.443$ ,  $SE=0.182$ ,  $z=7.919$ ,  $p<.001$ ). Tukey's post-hoc comparisons further revealed that this effect arises within each group (L1 Italian group:  $\beta=-1.35$ ,  $SE=0.255$ ,  $z=-5.282$ ,  $p_{\text{tukey}}<.001$ ; L2-Italian group:  $\beta=-1.54$ ,  $SE=0.243$ ,  $z=-6.342$ ,  $p_{\text{tukey}}<.001$ ), as depicted in Graph 2. The contrast for Semantic class (1) indicates that the VS order was chosen more often with Change of Location verbs than with Change of State verbs ( $\beta=-0.832$ ,  $SE=0.193$ ,  $z=-4.313$ ,  $p<.001$ ). A similar result was detected in the contrast for Semantic class (2) and Semantic class (3): the VS order was chosen more often with Change of State verbs than with Uncontrolled process verbs ( $\beta=-0.896$ ,  $SE=0.157$ ,  $z=-5.707$ ,  $p<.001$ ) and more with Uncontrolled Process verbs than with Controlled process verbs ( $\beta=-0.384$ ,  $SE=1.147$ ,  $z=-2.623$ ,  $p=0.008$ ). Tukey's post-hoc comparisons revealed that L1 and L2 Italian speakers differed accordingly. In the L1-Italian group, the amount of VS responses differed between each semantic verb class according to the UH: the contrast between the Change of Location and Change of State verbs ( $\beta=0.998$ ,  $SE=2.87$ ,  $z=3.473$ ,  $p_{\text{tukey}}=0.003$ ), between Change of State and Uncontrolled Process verbs ( $\beta=1.156$ ,  $SE=2.18$ ,  $z=5.297$ ,  $p_{\text{tukey}}<.001$ ) as well as between Uncontrolled Process verbs and Controlled Process verbs ( $\beta=0.667$ ,  $SE=0.191$ ,  $z=3.491$ ,  $p_{\text{tukey}}=0.003$ ) (see Graph 3). Conversely, in the L2 group the amount of the VS order was significantly different in the comparison between the Change of Location and Change of State verbs ( $\beta=0.667$ ,  $SE=0.2197$ ,  $z=3.048$ ,  $p_{\text{tukey}}=0.012$ ), Change of State and Uncontrolled Process verbs ( $\beta=0.636$ ,  $SE=0.207$ ,  $z=3.075$ ,  $p_{\text{tukey}}=0.011$ ), but crucially not between Uncontrolled Process verbs and Controlled Process verbs ( $\beta=0.103$ ,  $SE=0.208$ ,  $z=0.492$ ,  $p_{\text{tukey}}=0.960$ ), where the amount of SV/VS responses was identical (see Graph 3).



These statistical analyses indicate that both L1 and L2 Italian speakers have a significant preference for the VS order with the classes of unaccusatives and, more specifically, with Change of location verbs. Conversely, the two groups exhibit a different pattern with the two classes of unergatives. The significant interaction found in the contrast between Language (1) and Semantic class (3) suggests that the two populations differ precisely in the distribution of SV/VS orders between Uncontrolled process and Controlled process verbs ( $\beta=-0.564$ ,  $SE=0.271$ ,  $z=-2.078$ ,  $p=0.037$ ). While in L2 Italian speakers both verbs license the same amount of SV/VS orders, Uncontrolled process and Controlled process verbs trigger different amounts of SV/VS orders in L1 Italian speakers, with the former licensing more VS responses than the latter.

### 5.1. Item-based analysis: L1 and L2 Italian speakers

To check whether the patterns depicted in Graph 3 were consistent across all the four predicates of each semantic class of the UH or whether there were individual differences across the lexical items, an item analysis was carried out.

Table 7 illustrates the rate of SV/VS orders chosen by L1 and L2 Italian speakers distributed across the four lexical predicates for the four semantic classes.

**Table 7.** Percentages of SV/VS orders across lexical items of the UH (L1/L2 Italian)

Semantic Class	Predicate	L1 Italian		L2 Italian	
		SV	VS	SV	VS
Change of Location	<i>cadere</i> ('to fall')	12%	88%	34%	66%
	<i>entrare</i> ('to enter')	16%	84%	28%	72%
	<i>arrivare</i> ('to arrive')	3%	98%	26%	74%
	<i>venire</i> ('to come')	4%	96%	35%	65%
Change of State	<i>morire</i> ('to die')	8%	92%	28%	72%
	<i>esplodere</i> ('to explode')	10%	90%	47%	53%
	<i>sparire</i> ('to disappear')	34%	66%	44%	56%
	<i>creocere</i> ('to grow')	21%	79%	47%	53%
Uncontrolled Process	<i>tremare</i> ('to tremble')	51%	49%	60%	40%
	<i>cedere</i> ('to give up')	26%	74%	62%	38%
	<i>vibrare</i> ('to buzz')	46%	54%	52%	48%
	<i>stonare</i> ('to be out of tune')	54%	46%	53%	47%
Controlled Process	<i>ballare</i> ('to dance')	61%	39%	65%	35%
	<i>camminare</i> ('to walk')	55%	45%	59%	41%
	<i>urlare</i> ('to shout')	61%	39%	49%	51%
	<i>parlare</i> ('to talk')	22%	78%	51%	49%

As for L1-Italian speakers, we found some variation with the predicates of the UH: within the Controlled process predicates, *parlare* prompted more VS orders (78%) than *urlare* (39%) *ballare* (39%) and *camminare* (45%). Within the Uncontrolled process verbs, *cedere* (74%) prompted more VS orders than *tremare* (49%), *stonare* (46%) and *vibrare* (53%). Within Change of State verbs, *crescere* and *sparire* prompted less VS orders (79% and 66%, respectively) than *morire* (92%) and *esplodere* (90%). On the contrary, Change of Location verbs licensed the VS order consistently. As for the L2-Italian speakers, some variation was found within Change of state verbs: *morire* (72%) prompted more VS order than *crescere* (53%), *esplodere* (53%) and *sparire* (56%), thereby patterning similarly to Change of Location predicates. On the contrary, both Controlled process and Uncontrolled process unergative verbs yielded the SV order quite consistently.

## 6. Discussion

This study investigated to what extent the discourse focus and the Unaccusativity Hierarchy determine the Italian word order variation in both L1-Italian speakers and L1-French L2-Italian adult speakers. We asked three research questions: (Q1) Do L1 and L2 Italian speakers overall differ in their word order patterns? (Q2) Does the focus-type, broad vs. narrow, lead to different word orders? (Q3) Does the Unaccusativity Hierarchy play a role in the SV/VS variation?

### 6.1. (Q1) *The role of Language*

As expected, we found a significant effect of language: L1-Italian speakers chose the VS order more often than the L2-Italian speakers. This result meets our expectations and, more generally, confirms the findings reported in previous L2 Italian studies (Belletti & Leonini, 2004; Belletti, Bennati & Sorace, 2007; Caloi, Belletti & Poletto, 2018). Conversely, L1-French L2-Italian speakers chose the SV order more frequently than L1-Italian speakers did. This suggests that L2 speakers transfer their L1 answering strategy into L2, as the SV order is usually found in French, at least in broad focus contexts (Section 2.2).

### 6.2. (Q2) *The role of Focus*

In both L1- and L2-Italian speakers we found a significant effect of focus. The VS order was chosen more frequently in narrow focus than in broad focus contexts by both groups. As for L1-Italian speakers, this result met our predictions and, more generally, it is in line with the theoretical proposal given by Belletti (2001) on the cartography of postverbal new-information subjects in Italian.

Conversely, our expectations for the L1-French L2-Italian speakers' group were not entirely borne out. Following the revised version of the Interface Hypothesis (e.g., Sorace, 2011), we expected L2 Italian speakers to have an incomplete acquisition of the focus factor, as focus pertains to the external syntax-discourse interface, which is vulnerable in bilingual acquisition. SV was the predicted order with both foci. However, our study demonstrates that L2 speakers opted for the VS order in narrow focus contexts more frequently than in broad focus contexts. This finding diverges from previous results on L2-Italian speakers. A possible explanation to account for this difference may lie in the different experimental designs adopted. While previous

L2 acquisition studies investigated the Italian word order variation either using an elicited production task (Belletti & Leonini, 2004; Belletti, Bennati & Sorace, 2007; Caloi, Belletti & Poletto, 2018) or a corpus of oral productions (Listanti & Torregrossa, under review), we adopted a forced-choice task. The two tasks are fundamentally different, i.e., oral vs. written, production vs. selection of given options, *et cetera*. It may be that L2 Italian speakers have a better performance on written tasks than on oral ones. Indeed, it has been noticed that, while in oral tasks heritage speakers perform better than L2 speakers, L2 speakers are more likely to succeed in both written and judgment tasks given that they learn the second language via formal instruction (Kupisch & Rothman 2016). In addition, the groups of speakers recruited here and those tested in previous studies exhibit different L2 proficiency levels. If so, a comparison between our results and previous findings may not be straightforward.

Alternatively, the reported sensitivity to focus exhibited by L2-Italian speakers may result from the manipulation of both foci in our experiment. Whereas previous L2 acquisition studies assessed the production of VS structures in the narrow focus context only, our study addressed the role of discourse focus on the Italian word order variation including both narrow and broad focus contexts. Maybe, L2 speakers became aware of the role of focus because the contrast between the foci was presented in the task.<sup>9</sup> Whether our results can be replicated with different methodologies and testing different L2 populations remains a topic for future research.

Finally, another plausible explanation to account for L2 sensitivity to focus may reside in how discourse focus is encoded in French. As discussed in section 2, French word order variation is determined by focus-type: the SV order is displayed in broad focus contexts, but reduced clefts are the preferred answering strategy in narrow focus contexts. Consequently, considering that our experiment did not include clefts as target answers, our L1-French L2-Italian speakers may have preferred the VS order in the narrow focus condition simply because it represented the option that was not SV. Moreover, if we consider the cartographic proposal of clefts in Belletti (2008), French reduced clefts are claimed to exploit the *v*P-periphery to host the subject of new information in the same way as the Italian postverbal subjects. Hence, we may speculate that narrow focus contexts licensed the VS order because the VS order corresponds to the cleft strategy used in French originally found in Belletti & Leonini (2004).

### 6.3. (Q3) *The role of the Unaccusativity Hierarchy*

Our results indicate that the Italian SV/VS alternation is constrained by the lexical factor, which should be conceived as a multilayered factor as captured with the Unaccusativity Hierarchy. Indeed, our findings demonstrate that the Unaccusativity Hierarchy regulates the SV/VS variation in both L1 and L2 speakers and that,

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<sup>9</sup> As suggested by an anonymous reviewer, L2 speakers' sensitivity to the VS order in the narrow focus context may be due to the formal instruction received during the Italian language courses. Our task might have reactivated their metalinguistic knowledge of the phenomenon. However, to the best of our knowledge, word order variation is neither a traditional teaching topic, nor is present in the L2 Italian grammars. Therefore, although this option cannot be excluded, we believe that it is unlikely that the L2 speakers had prior knowledge of what the experiment was about (see also Listanti & Torregrossa, accepted, for a recent discussion on L2 Italian teaching). We thank Elena Maria Duso for the fruitful discussion on L2 Italian grammars.

interestingly, the way it does so in the two language groups nicely mirrors the different auxiliary selection patterns of Italian and French illustrated in Table 5. In L1-Italian speakers the amount of VS orders decreases progressively along the UH from core unaccusatives to core unergatives. The closer the verb is to the unaccusativity pole, the higher is the probability to license the VS order. Vice versa, the closer the verb is to the unergative pole, the higher is the probability to license the SV order. Crucially, this probability is a function of the UH: each class differed from one another as it does with respect to auxiliary selection (Table 5). Conversely, in the L2-Italian speakers the amount of the VS order decreases along the UH identifying three portions of the hierarchy: Change of Location vs. Change of State vs. Uncontrolled/Controlled Process verbs. This tripartition essentially replicates the situation seen for the auxiliary selection in Table 5. Hence, our findings suggest that the way the UH determines the Italian SV/VS alternation mirrors the way in which it determines the auxiliary selection BE vs. HAVE in both Italian and French. Interestingly, our results on the L2-Italian speakers also reveal that L2 acquisition of the UH is a vulnerable domain. L2-Italian speakers transfer their L1 word order based on the French UH. Indeed, a significant interaction was detected between language and Uncontrolled vs. Controlled Process verbs, a point in the hierarchy where French and Italian differ (Table 5): while the amount of VS in L1 speakers was higher with Uncontrolled Process than with Controlled process verbs, the two verbal classes licensed the same amount of VS in L2 speakers' responses. Given this result, a follow-up study on word order variation including stative verbs would be relevant as this class is another point of the UH where French and Italian differ (Table 3). Finally, a natural extension of our study would consist in testing auxiliary selection patterns by L1-French L2-Italian speakers, whose results are expected to align with those reported for the SV/VS order, if our account is on the right track. The item analysis in Section 5.1. seems to corroborate our hypothesis: *morire* ('to die') licensed more VS orders than the other Change of state verbs. Crucially, *morire* is the only predicate among the Change of state predicates that selects the auxiliary BE in French, thereby patterning with Change of Location predicates. On the contrary, all the unergative verbs used in the experimental design select the auxiliary HAVE in French and all yielded the SV order. In a similar vein, in the L1-Italian speakers *cedere* ('to give up'), which can select both the auxiliary BE and HAVE, prompted more VS order than the other uncontrolled process predicates. Likewise, *crescere* ('to grow') can also select both the auxiliary BE and HAVE depending on the *Aktionsart* and, interestingly, licensed less VS order than the other Change of state verbs. While these observations support the alleged correlation between auxiliary selection and SV/VS orders, the behavior of other lexical items seems to require a more articulated explanation. Both *parlare* 'to talk' and *sparire* 'to disappear' pattern differently from the predicates of the class they belong to, i.e., Controlled process and Change of state verbs respectively, regardless of the auxiliary selection. *Parlare* 'to talk' selects HAVE, but licensed more VS orders than the other Controlled process predicates; *sparire* 'to disappear' selects BE but yielded less VS orders than the other Change of state verbs. A plausible explanation may lie in the argument structure of these two predicates (Pinto, 1997; Bentley & Cruschina, 2018). The literature has indeed noticed that those predicates which select a silent preverbal benefactive or locative/temporal argument in their thematic grid license subject inversion more easily. This proposal may account for the behavior of *parlare* ('to talk') which can be argued to select a locative or benefactive argument, lacking in the

argument structure of the other Controlled process predicates. Hence, the presence of the silent locative/benefactive argument may be responsible for the high amount of VS orders with *parlare*. However, this hypothesis does not easily extend to the verb *sparire* ('to disappear'), as it licenses subject inversion less frequently than the other Change of state verbs, although a locative argument can be postulated. We can advance some speculation for this behavior. It may be that the type of locative argument in *sparire* does not trigger subject inversion (source vs. location). Alternatively, the presence of the *s-* prefix may be an intervener in the movement of the silent locative phrase. Further research is needed to clarify this issue. Therefore, one possible follow-up study on native Italian speakers may also look at the internal argument structure of the predicates of the UH with the aim to verify what kind of locative argument triggers the VS order in Italian and, therefore, to account for the possible different behavior of certain predicates within the semantic classes of the UH.

If a correlation between the auxiliary selection and the word order variation were to be found, an analysis of the syntax of auxiliaries that takes into account the subject position will become necessary. One hypothesis may be that the two auxiliaries BE and HAVE display a different syntax, as the former selects for an internal argument while HAVE selects for an external one (see footnote 1). Alternatively, adopting a decomposed structure of the  $vP/VP$  area as in Ramchand (2008), the auxiliary BE may select for a  $vP$  which is qualitatively different (and smaller) than the  $vP$  selected by HAVE, lacking for instance the higher CauserP or InitiatorP projections. Under both analyses, the subject position depends on its internal vs. external status. Another option may be that the two auxiliaries have a similar syntax as suggested in Kayne (1993: 3): "HAVE is identical to BE but for the incorporation of an abstract preposition". The incorporation of the preposition forces the Location (or Possessor) to raise out of the XP, because the XP is unstable for labelling (Roberts & Kallulli, 2022). Along these lines, the variation in the auxiliary selection and the positioning of the subject may depend on whether the preposition (the locative feature in Roberts & Kallulli, 2022) optionally or obligatorily incorporates onto BE or not and therefore on the consequent raising of the possessor out of the XP.

## 7. Conclusion

This paper investigated whether discourse focus and the Unaccusativity Hierarchy determine the Italian word order variation in L1-Italian and L1-French L2-Italian adult speakers. Our results confirm that discourse focus regulates the Italian word order variation, with narrow focus licensing the VS order more consistently than broad focus in both L1 and L2 speakers. In addition, our results demonstrate that, in both L1 and L2 speakers, the SV/VS variation is also constrained by the lexical semantic properties of the predicate decomposed along the UH (Sorace, 2000). Interestingly, we showed that the way the UH determines the Italian SV/VS alternation mirrors the way in which it determines the auxiliary selection of BE vs. HAVE in both Italian and French. We further found that, for the semantic classes in which Italian and French differ, L2 speakers transferred the L1 word order based on the French UH into L2. Therefore, we conclude that, in addition to the phenomena at the syntax-discourse interface, also those at the syntax-lexicon interface are vulnerable in L2 acquisition: this is in line with the original version of the Interface Hypothesis (Sorace, 2005).

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