# Language Optionality and Variation

## Festschrift in Honor of Anna Cardinaletti

edited by
Chiara Branchini, Gianluca Lebani,
Lara Mantovan, Francesca Volpato

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# Abstract

*Language Optionality and Variation* is a Festschrift honoring Anna Cardinaletti and her outstanding contributions to linguistic research. The volume brings together 28 contributions by her colleagues, organized into three thematic sections: Theoretical Linguistics; Sociolinguistics and Language Variation; and Language Acquisition, Bilingualism and Multilingualism. Exploring linguistic optionality and variation across a wide range of languages and language varieties, the volume combines theoretical and empirical perspectives, highlighting the interplay between linguistic structure, language use, and acquisition.

**Keywords** Theoretical linguistics. Language variation. Sociolinguistics. Language Acquisition. Bilingualism. Multilingualism.

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# Language Optionality and Variation

Festschrift in Honor of Anna Cardinaletti

# Introduction

This festschrift celebrates Anna Cardinaletti's 65th birthday, an opportunity to acknowledge her scientific achievements, her relevant contribution to the field of linguistics, as well as her solid institutional commitment at Ca' Foscari University of Venice and her constant dedication to building and enlarging a research network open to different scientific areas.

To list Anna's many research interests, awards, publications, national and international collaborations and institutional roles would be too long and, we feel, would not meet her desire.

We would rather like to thank her for supporting young researchers, for encouraging intellectual independence and for always stimulating novel research questions. On a more personal level, we thank her for being a generous and reliable friend, and for her integrity and strong moral principles.

The contributions collected in *Language Optionality and Variation* reflect, in different ways, the wide scope of Anna's research interests. The volume is organised into three thematic sections.

The first section, *Theoretical Linguistics*, brings together studies addressing a range of linguistic phenomena through comparative and formal analysis, with the aim of understanding how linguistic structures vary and how apparently optional patterns are constrained by grammar. This section spans a wide range of languages, including Italian, Brazilian Portuguese, Gascon, and Turkish.

The second section, *Sociolinguistics and Language Variation*, explores variation from a cross-linguistic, diachronic, diatopic, and cross-modal perspective. These studies show how patterns

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of variation and optionality emerge across languages, varieties, historical stages, and modalities. Their analysis contributes to a more fine-grained understanding of linguistic diversity. Several languages and regional varieties, including Italian, Spanish, Catalan, Anconetano, Dutch, earlier stages of Spanish, as well as Italian Sign Language are investigated.

The third section, *Language Acquisition, Bilingualism, and Multilingualism*, brings together studies on how linguistic structures are acquired, processed, and used across different populations and contexts. These contributions highlight how theoretical linguistics and formal syntax contribute to explaining the developmental trajectories of monolingual and bilingual typically developing individuals and individuals with deafness or language disorders. The languages object of research within this section are Italian, Dutch, Romanian, Spanish, Catalan, English, Greek, and Italian Sign Language.

Taken together, these studies address topics that have been central to Anna's work throughout her career: the interplay between variation and structural constraints, cross-linguistic and cross-modal comparison, and the search for explanations connecting linguistic diversity and the architecture of the language faculty.

We are deeply grateful to all the authors who enthusiastically accepted our invitation and offered their important contributions to this volume. We would also like to express our sincere gratitude to the reviewers, whose careful reading and constructive comments significantly contributed to shaping the volume in its final form.

The final, warmest gratitude is for Anna.

## List of Contributors

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# Theoretical Linguistics

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# Subjects in the Left Periphery

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**Abstract** In seminal research, Anna Cardinaletti drew a systematic map of subject positions with special reference to the subject positions occurring in the high part of the IP space, in the sense of Guglielmo Cinque's cartographic analysis of the clausal structure. In this note, we would like to enrich Cardinaletti's typology by reviewing a number of cases in different languages which suggest that an A-position for subjects should be postulated also in the CP space, analyzed along the lines of Luigi Rizzi's cartography of the left periphery and much subsequent work: therefore, A-chains may extend from the thematic positions in vP up to the left periphery of the clause. We will discuss different constructions in Romance and Germanic (Complex Inversion, Verb Second, clefts, relatives) which appear to require a subject position in the left periphery, a position functioning in some cases as the final landing site of movement, and in other cases as a transiting position for subject extraction.

**Keywords** Subject positions. Cartographic syntax. Left periphery. A-chains. Subject extraction.

**Summary** 1 Introduction. – 2 French Complex Inversion. – 3 Subject V2 in Germanic. – 4 Cleft Sentences. – 5 *Que→qui* Phenomena in Extraction Environments. – 6 Conclusions.

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## 1 Introduction

In a seminal paper, Anna Cardinaletti showed that more than a single subject position occurs in the higher part of the IP space (Cardinaletti 2004), so that the map of the IP, in Cinque's (1999) sense, should be enriched accordingly. In this note, we would like to extend Cardinaletti's typology by reviewing a number of cases in different languages which suggest that an A-position for subjects should be postulated also in the left periphery of the clause, the map of the CP space, in the sense of Rizzi (1997) and much subsequent work: therefore, A-chains may extend from the thematic positions in vP up to the left periphery. We will discuss several constructions in Romance and Germanic (Complex Inversion, Verb Second, clefts, relatives) which appear to require an A position in the left periphery.[1] This position, contrary to left peripheral A' positions, may only be filled by the subject of the adjacent clause for locality reasons. It functions in some cases as the final landing site of subject movement, and in other cases as a transiting position for subject extraction.

## 2 French Complex Inversion

One possible case in point is French complex inversion (Kayne 1972; Rizzi, Roberts 1989):

(1) Où Jean est-il allé?
Where Jean is-he gone?
'Where has Jean gone?'

Complex inversion is based on subject clitic inversion, plus an additional slot for the lexical subject in between the wh-element and the inverted verb. In a classical paper, Den Besten (1977-83) argued that French subject clitic inversion is a residual manifestation of Verb-Second, whence its root character, a typical property of V2 (among other properties). If one expresses V2 in cartographic terms (e.g., along the lines of Samo 2019 and Wolfe 2018, a.o.), then the inverted verb targets a left-peripheral position, minimally the Fin

**1** The dialects of Italy also offer a wealth of cases amenable to the postulation of a position available to subjects in the left periphery of the clause: e.g., the Neapolitan double subject construction, analyzed by Ledgeway (2010), and the subjects in the CP-system observed by Poletto (2000), Paoli (2007) in Piedmontese, Ligurian, and other Romance varieties, also in diachrony. Certain subject clitics in the Northern Italian dialects have also been claimed to occur in the left periphery (Benincà 1983; Poletto 2000). Due to space constraints, we will not address these cases in the present article.

head. This analysis is supported by the complementarity between subject clitic inversion and the presence of complementizer *que* with certain adverbials (Goldsmith 1989):

| | | | | | |
|---|---|---|---|---|---|
| (2) | a. | Peut-être | qu'il | viendra | |
| | | Maybe | that he | will-come | |
| | | 'Maybe he will come' | | | |
| | b. | Peut-être | viendra-t- | il | |
| | | Maybe | will-come | He | |
| | c. | *Peut-être | que | viendra-t- | il |
| | | Maybe | that | will-come | he |

If subject clitic inversion involves movement of the inflected verb to Fin, and *que* is generated in Fin (possibly moving to higher positions in certain constructions), the complementarity is immediately explained: the inflected verb could not move to a position already occupied by *que*. Complex inversion shows the same incompatibility with *que*:

| | | | | | |
|---|---|---|---|---|---|
| (3) | a. | Peut-être | Jean | viendra-t-il | |
| | | Maybe | Jean | will-come-he | |
| | | 'Maybe Jean will come' | | | |
| | b. | *Peut-être | que | Jean | viendra-t-il |
| | | Maybe | That | Jean | will-come-he |
| | c. | *Peut-être | Jean | que | viendra-t-il |
| | | Maybe | Jean | that | will-come-he |

So, if the incompatibility with *que* is a reliable detector of I to C movement, the inverted verb must be in Fin in (3a), hence the lexical subject preceding it must be located in the left periphery.

Let us slightly update the analysis of Rizzi and Roberts (1989). A key ingredient is a special functional head licensing the subject position in the higher part of the IP system (Subj: Rizzi 2005; Rizzi, Shlonsky 2007).[2] When the inflected verb moves to Fin (in wh-and other constructions), it passes through Subj and carries the Subj head to the C-system, where Subj retains its capacity to license an A-specifier. Whence the double expression of the subject in (1), etc.

The position of the lexical subject must be in the lower part of the left periphery (LP), as it is preceded in (1) by the landing site

**2** This line of analysis builds on Cardinaletti (2004), but assumes the Subj head to be an obligatory member of the spine of all clauses, much as T. This move is instrumental for capturing *that*-trace effects through criterial freezing; see below.

of wh-movement (plausibly the Foc position).[3] This left peripheral subject position is clearly distinct from a topic position in that it can be filled by quantificational elements that are not felicitous topics, e.g. *personne* (nobody), as is shown by the contrast (4)-(5):

| | | | | | |
|---|---|---|---|---|---|
| (4) | Pourquoi | personne | n'a-t-il | critiqué | le président? |
| | Why | nobody | didn't he | criticize | the president? |
| (5) | *Pourquoi | personne | ne l'as-tu | contacté ? | (vs OK Pourquoi n'as-tu contacté personne?) |
| | Why | nobody | did you | contact him? | (vs OK Why did you contact nobody?) |

So, the CP-internal subject position can host quantificational and non-quantificational elements, much as the IP-internal subject position. Nevertheless, a salient property distinguishing left peripheral from IP internal subjects is that the high subject position in complex inversion cannot function as a launching site for wh-movement, i.e., the following (7) is impossible (with the subject further moved from the LP position):

| | | | |
|---|---|---|---|
| (6) | Où | Jean | partira-t-il? |
| | Where | Jean | will leave he? |
| (7) | *Qui __ | | partira-t-il? |
| | Who | | will leave he? |

Why is it so? If the moved Subj head retains its status of a criterial head and the lexical subject must satisfy the Subject Criterion, (7) may be excluded as a violation of Criterial Freezing (Rizzi 2005 and much subsequent work).[4]

**3** If the adverbial in (3)a is in the Spec of Mod(ifier), the lexical subject position is also lower than Mod. Here we leave open the question of whether the subject position in the LP is the Spec of the Fin node containing Subj (after I to C movement), or the Spec of a projection immediately adjacent to Fin.

**4** Criterial Freezing: an element satisfying a criterion is frozen in place.
This constraint has the consequence, among other things, of capturing *that*-trace effects. If there is a subject criterion, much as a topic criterion, a focus criterion, etc., extraction of the subject violates Criterial Freezing:

(i) * Qui crois-tu que __ Subj viendra?
'Who do you think that __ Subj will come?'

See Rizzi 2016 for discussion and the attempt to derive Criterial Freezing from principles of labeling and maximality. See section 4 for further discussion.

Notice that a wh-question on the subject is possible in a simple clause:

(8) Qui partira?
'Who will-leave?'

Why this contrast between the subject in IP and the subject in CP, only the former admitting wh-movement ((8) vs (7))?

In (8) the wh-subject presumably must move to the LP, in order to reach the appropriate scope position in the Spec of Foc (as is the case for other wh elements: Rizzi 1997), and it is able to circumvent Criterial Freezing through one of the techniques discussed in Rizzi and Shlonsky (2007), e.g. because a nominal Fin, acting as an expletive-like element, formally satisfies the subject Criterion, hence the wh-element remains movable from a lower position:

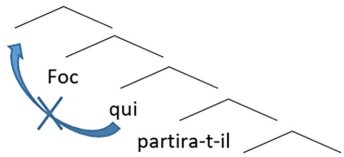
(9) Qui *Foc* $Fin_N$ *Subj* __partira __?

The nominal Fin head postulated by this analysis is not pronounced in Standard French, but it may actually be overtly realized, and pronounced as *qui* in subject questions (alternating with *que* in non-subject questions) in the varieties of French not respecting the doubly filled COMP effect, such as colloquial Québec French:

(10) a. Qui *qui* partira?
'Who *qui* partira?'
b. Qui *que* t'as vu?
Who *que* you saw?'

Why can't (7) be salvaged in the same way? Presumably, in (7) the interrogative pronoun *qui* should be moved to Spec of Foc from the high subject position in the left periphery, a position already higher than Fin, hence not accessible to the salvaging mechanism operative in (8)-(9), which crucially involves the Fin node. The representation, after I-to-C movement (carrying the Subj head to Fin, with Subj licensing the subject position in the LP), would be:

(7')



Therefore, the ill-formedness of (7) follows from Criterial Freezing, in addition to the map of the functional elements (only the relevant part is given here, with $Subj_{CP}$ designating the subject position in the LP, whereas $Subj_{IP}$ designates the canonical subject position in the high part of the IP):

(11) … Foc … $Subj_{CP}$ … Fin … $Subj_{IP}$ …

## 3 Subject V2 in Germanic

Moving now to Germanic languages showing generalized Verb Second, the initial position in V2 configurations can be filled (among many other types of potential fillers) by a local expletive (quasi-argument) subject in German and other V2 languages (Travis 1984; Cardinaletti 1990):

(12) Es regnet
'It is raining'

If one adopts a uniform analysis of V2, by which all V2 clauses involve movement of the inflected verb to Fin (Vikner 1995: if an asymmetric theory is adopted, à la Zwart 1993, the conclusions would be different), a dedicated left-peripheral position must be postulated for such subjects. Expletives are not topicalizable (as there is no referent meeting the interpretive conditions for topics), nor focalizable (there are no alternative referents in the discourse context to license focalization), so that they cannot be moved to a topic or focus position, nor can they be moved to the Mod(ifier) position, restricted to preposed adverbials. As expected, expletives cannot survive long distance (Taraldsen 1986), contrary to referential strong pronouns (which can be topicalized and focalized):

(13) * Es glaubt Peter regnet
'It believes Peter is raining' (meaning 'Peter believes it is raining')

So, presumably *es* in (12) sits in an A-position, which, under the symmetric approach to V2, must be in the LP. (13) is ruled out because topicalisation and focalization are barred with expletives, and movement to the left-peripheral A-position cannot cross the subject of the main clause (a Relativized Minimality (RM) violation: Rizzi 1990).

The same analysis applies to weak pronominal subjects, which, in spite of being referential, cannot be topicalized or focalized because weak pronominals are legitimate only in a restricted set of environments, including the Spec of a head agreeing in Phi features (Cardinaletti, Starke 1999):

(14) Er kommt
'He is coming'

(15) * Er glaubt Peter kommt
'He believes Peter comes'

(the relevant interpretation of (15) being that *er* is the preposed subject of the embedded clause and *Peter* is the subject of the main clause).

Again, an A-chain terminating in the LP is legitimate in (14), but it involves a locality violation in (15) (in the relevant interpretation), due to the intervention of the main clause subject, another A-position.

## 4 Cleft Sentences

Another case in point may be represented by the cleft construction, a device to focalize a constituent through movement to the left periphery. The device has the hallmark of A'-configurations, e.g., both subject and object (or more generally non-subject arguments) clefts are possible. Nevertheless, Belletti (2009; 2012; 2015) has argued that subject and non-subject clefts may also have distinct structural and interpretive properties, a distinction that may be particularly visible in some languages characteristically adopting clefts as answering strategies. One such language is French. In French, only subject clefts (possibly reduced) can convey simple new information, e.g. functioning as a felicitous answer to a wh-question on the identification of the subject:

(16) Q: Qui a dit ça?
'Who said that?'
A: C'est Jean (qui a dit ça)
'It is Jean (who said that)'

Object clefts are not felicitous in comparable discourse exchanges (Belletti, Bocci 2024 for recent experimental supporting evidence):

(17) Q: Qu'as-tu acheté?
'What have you bought?'
A: *C'est un livre (que j'ai acheté)
'It is a book (that I have bought)'

Object clefts like (17)A necessarily involve a more complex contrastive/corrective focal interpretation.

This contrast suggests that in subject and non-subject clefts the focalized elements occupy two different positions: as the typical position for new information focus in Romance is the vP peripheral

position, it is argued in the references quoted that in subject clefts the focalized subject can move to the new information focus of the main vP (the projection of the copular verb). Only a subject can move there, first through the LP subject position and from there to the new information focus position in the vP-periphery of the copula, in the matrix clause. This position has the status of a mixed position sharing both A and A' properties (Belletti 2015, a.o.). Crucially, its A-status allows the subject to reach it through the subject position in the LP; an object (more generally a non-subject argument), in contrast, cannot perform the same operation due to locality and the resulting violation of RM caused by the presence of the intervening subject. In contrast, an object can move to the LP focus position, expressing contrastive-corrective focus, but it could not move into the matrix vP-peripheral (new information) Spec/Focus by transiting through the LP (contrastive-corrective) focus position as this would result in an instance of improper movement: from a pure A'-position in the LP to a position which is also an A-position in the vP periphery of the copula. Whence the impossibility of using object clefts to express new information focus, and the sharp interpretive difference of the two types of clefts ((16) vs (17)).

A salient property distinguishing subject vs object (non-subject) clefts in French is found in the form of the complementizer utilized in the two cases: *qui* vs *que*. Given the mechanism at the origin of *qui* in instances of subject extraction outlined in the preceding section as developed in Rizzi and Shlonsky (2007), this distinction is expected: based on the derivation of subject clefts just described, only a subject cleft allows for the presence of a nominal Fin, which is at the source of *qui*, crucially involving the availability of the LP A-subject position.

The observed pattern also holds for another construction, the pseudo-relative. The complement of perception verbs is known to allow for a pseudo-relative in which the subject precedes the low complementizer, as in the Italian example in (18):

(18) Ho visto Maria che salutava Gianni
I-have seen Maria that greeted Gianni
'I have seen Maria greeting Gianni'

(18) can be the answer to a question requiring the identification of the subject (Belletti 2009):

(19) Chi hai visto (che salutava Gianni)?
'whom have you seen (greeting Gianni)?'

So, (18) can be naturally amenable to an analysis along the same lines as the one outlined for subject clefts: the subject of the

embedded clause moves through the LP subject position into the vP-peripheral new information focus position in the matrix clause.[5] The perception verb pseudo-relative construction shares with new information clefts also the fact that only a subject can be involved, a well-known property (Guasti 1988; Cinque 2009; Casalicchio 2016) of the construction clearly illustrating the fact that it cannot be fully assimilated to the relative clause:

| | | | | | | |
|---|---|---|---|---|---|---|
| (20) | *Ho | visto | Gianni | che | Maria | salutava |
| | I-have | seen | Gianni | that | Maria | greeted |

The object has no access to the LP subject position for locality/RM reasons, and hence also no access to the new information focus position in the vP-periphery of the matrix perception verb. No exchange as in (18)-(19) can thus involve an object.

A sentence like (18) can also be the answer to a general question requiring a whole new answer, as in the exchange in (21):

(21) Q: Cosa è successo/Cosa hai visto?
'What happened/what have you seen?'

| | | | | | | |
|---|---|---|---|---|---|---|
| A: | Ho | visto | Maria | che | salutava | Gianni |
| | I-have | seen | Maria | that | greeted | Gianni |

'I have seen Maria greeting Gianni'

In this case the entire CP complement of the perception verb expressing the new information fills the relevant (Spec of) new information focus position. The order *...S che...* of this case directly illustrates the presence of the subject position in the LP.

A possible answer to the question in (21) can also be (22), where the new information is a standard CP-complement:

(22) A": Ho visto che Maria salutava Gianni
'I have seen that Mary was greeting Gianni'

In contrast, and consistently with the proposed analysis, (22) could not also be an alternative answer to the question in (19), since in

**5** Movement of V yielding the final word order.

this case the new information focus interpretation only concerns the subject (narrow focus), as in the appropriate answer (18).[6]

Finally, it should be noted that, not surprisingly, the form of the complementizer is systematically *qui* in the French pseudo-relative equivalent of the Italian one in (18):

(23) J'ai vu Marie qui saluait Jean

## 5 *Que→qui* Phenomena in Extraction Environments

The *que* → *qui* rule in French (and analogues in other languages: Perlmutter 1971; Taraldsen 1986; Haegeman 1992) is a device able to license subject extraction. In non-Null Subject Languages like French, it provides a way to escape *that*-trace effects. The rule applies in subject relatives, in pseudo-relatives and in (new information) subject clefts (previous section) and, as a more marked device not uniformly accepted, with subject extraction from an embedded declarative:

(24) J'ai rencontré l'homme qui viendra avec vous
'I met the man qui will come with you

(25) % Voilà l'homme que je crois qui viendra avec vous
'Here is the man who I think qui will come with you'

The line of analysis introduced in Rizzi (1990) had *qui* analyzed as the agreeing form of *que*, i.e. *qui* = *que+Agr*. *Qui* would then properly govern the subject trace, permitting satisfaction of the Empty Category Principle (ECP) of the Government-Binding framework (Chomsky 1981). The Spec of the agreeing complementizer would function as an A-position, a general property of specifiers of agreement in Phi features. This would immediately capture the fact that *qui* is distributionally limited to subject extraction, and disallowed with object extraction (the following examples become grammatical with the ordinary, non-agreeing complementizer *que*):

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| (26) | * J'ai | rencontré | l'homme | qui | Marie | connait | | | |
| | I | met | the man | qui | Marie | knows | | | |
| (27) | * Voilà | l'homme | que | je | crois | qui | Marie | a | rencontré |
| | Here is | the man | that | I | think | qui | Marie | has | met |

**6** On the subtle interpretive distinction between (21)A and (22), both counting as possible answers to the same question in (21)Q see Rizzi's 2000 distinction between 'direct' vs 'indirect' perception (i.e. through the entire event) of the subject of the complement clause.

If the Spec of *qui* is an A-position, sentences (26)-(27) would involve an A-chain crossing a subject position, a violation of Relativized Minimality. So *qui* is only possible in environments of local subject extraction, as any other extraction would violate locality.

Building on Taraldsen (1986), this analysis has been adapted to a framework not postulating the ECP, but assuming Criterial Freezing as the operative principle (Rizzi 2005; Rizzi, Shlonsky 2007; Berthelot 2017, 2022). Subject extraction with no changes in the C system violates Criterial Freezing, as the subject is extracted from the subject position, a criterial position:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| (28) | * J'ai | rencontré | l'homme | que | __Subj | viendra | avec vous |
| | I | met | the man | que | __Subj | will come | with you |

*Qui* is in fact *que+i*, an expletive-like element akin to *il* (Taraldsen 1986). This is a possible nominal realization of Fin, which, if externally merged with the projection of Subj, formally satisfies the Subject Criterion. So, (24) is fine with a representation like the following[7] (see also the discussion in section 1):

(29) J'ai rencontré l'homme $qui_{Fin}$ Subj __ viendra avec vous

The launching site of the relative head in (24) is a non-criterial position lower than Subj (possibly the AgrSP position, involved in the checking of verbal agreement in the typology of subject positions presented in Cardinaletti 2004; on Subj see the discussion in section 1). Notice that the possible occurrence of $qui_{Fin}$ is contingent upon the local movement of the relativized subject. If there is no movement as in a declarative without extraction, $qui_{Fin}$ is impossible:

| | | | | | | |
|---|---|---|---|---|---|---|
| (30) | * Je | pense | qui | cet homme | viendra | avec vous |
| | I | think | qui | this man | will come | with you |

Example (30) may be excluded by the assumption that $qui_{Fin}$ has Phi features which must be checked by a nominal in a Spec-head configuration (much as in past participle agreement: see below).

This analysis has in common with Rizzi's (1990) analysis of *que→qui* the hypothesis that *qui* requires an A-position in its Spec, whence the relevance for the present paper.

**7** We have seen that que→qui, generally acceptable in the relative C system (24), is variably acceptable in the C-system of embedded declarative (25). See Berthelot 2017; 2022 for an analysis in terms of Case theory of the difference (24)-(25).

Whether the relative head remains in the Spec of $qui_{Fin}$ in (24) or moves further (remaining in the LP of the relative, or moving to a higher nominal projection), depends on the details of the analysis of relative clauses (Kayne 1994; Bianchi 1999; Cinque 2020, and much related work).

In cases of long-distance extraction like (25) (for the speakers who accept this structure), the wh subject licenses *qui* by checking its Phi features in a Spec-head configuration, and moves further:

(31) Voilà l'homme que je crois [__ $qui_{Fin}$ Subj __viendra __avec vous]

Therefore, in terms of the system we are assuming, here the Spec of $qui_{Fin}$ clearly is not a criterial position: it is a transiting position. From this viewpoint, the Spec of *qui* is akin to the Spec position licensing past participle agreement under Kayne's (1989) influential analysis:

(32) Voilà la voiture que Jean a __repeinte __
'Here is the car that Jean has repainted$_{fem, sing}$'

The participial agreement position is a transiting position, necessary to license past participle agreement in a Spec-head configuration (under Kayne's analysis), but not a criterial position, which would permit and require the moved element to stay there, under Criterial Freezing.

A possible problem with this analysis is the following. If Spec $qui_{Fin}$ is an A-position, one would incorrectly expect the possibility of further extending the A-chain, e.g. when the clause is the complement of a raising verb:

| | | | | | | |
|---|---|---|---|---|---|---|
| (33) | *Jean | semble | [__ $qui_{Fin}$ | __ | viendra | __] |
| | Jean | seems | __ $qui_{Fin}$ | __ | will come | |

One possible way to exclude (33) is to assume that Spec $qui_{Fin}$ is both an A-position (qua specifier of a head agreeing in Phi features) and an A'-position (possibly, this could be a general property of left-peripheral positions). If improper movement blocks a chain link from an A'-position to an A-position, this constraint would naturally extend to a chain with a launching site characterized as both A and A'.[8]

**8** No similar problem would arise in new information subject clefts, since in the assumed analysis, also the landing position is a mixed A/A' position.

## 6 Conclusions

At first sight, the subject position is unique in the clausal structure, in contrast with the possibility of multiple complements (most notably, in double object constructions across languages). But various considerations have led syntacticians to multiply subject positions: the VP internal subject hypothesis implied a distinction between the thematic position and the surface position of subjects, whereas Cardinaletti (2004) motivated finer distinctions in the higher part of the IP structure.

All these positions are IP internal, but a complete cartography of subject positions should also take into account plausible cases with a position hosting the subject in the CP system. We have argued for a number of such cases:

- The position of lexical subjects in French Complex inversion, which precedes the landing site of I to C movement, hence is left peripheral under the assumption that I to C targets Fin.
- The position of expletive subjects (and other weak pronominal subjects) in V2 constructions in Germanic, a position which is neither topical nor focal and respects locality conditions of A-chains.
- The focalized position of certain subject clefts.
- The left-peripheral A-position licensing *que→qui* type phenomena, devices to circumvent freezing effects and permit subject extraction.

All these cases involve an A-position in the C-system. In some cases (e.g., Complex Inversion) the subject position is criterial, hence it is a "halting" position because of Criterial Freezing. In other cases, the A-position in the CP is a "transiting" position: it is still restricted to local subject movement (because of locality), but the position is not criterial, hence the local subject transits through it to reach a higher criterial destination.

## Bibliography

Belletti, A. (2009). *Structures and Strategies*. New York: Routledge.

Belletti, A. (2012). "Revisiting the CP of Clefts". Grewendorf, G.; Zimmermann T.E. (eds), *Discourse and Grammar. From Sentence Types to Lexical Categories*. Berlin: De Gruyter, 91-114.

Belletti, A. (2015). "The Focus Map of Clefts: Extraposition and Predication". Shlonsky, U. (ed.), *Beyond Functional Sequence. The Cartography of Syntactic Structures, Vol. 10*. Oxford; New York: Oxford University Press, 42-59.

Belletti, A.; Bocci G. (2024). "Subject vs Object Clefts: A Fresh Perspective on a Robust Asymmetry. Insights from French Answering Strategies". Bonan, C; Ledgeway, A. (eds), *It-Clefts: Empirical and Theoretical Surveys and Advances*. Berlin: De Gruyter, 81-104.

Benincà, P. (1983). "Il clitico 'a' nel dialetto padovano". *Scritti linguistici in onore di Giovan Battista Pellegrini*. Pisa: Pacini, 25-32.

Berthelot, F. (2017). *Movement of and out of Subjects in French* [Unpublished PhD Thesis]. https://archive-ouverte.unige.ch/unige:96575.

Berthelot, F. (2022). "Long Subject Questions in French: An Insight into the Left Periphery of Selected CPs". *Probus*, 34(1), 27-54(28). https://doi.org/10.1515/probus-2022-0004.

Bianchi, V. (1999). *Consequences of Antisymmetry: Headed Relative Clauses*, Berlin: Mouton de Gruyter.

Cardinaletti, A. (1990). *Impersonal Constructions and Sentential Arguments in German*, Padova: UNIPRESS.

Cardinaletti, A. (2004). "Toward a Cartography of Subject Positions". Rizzi, L. (ed.), *The Structure of CP and IP*, 115-65. Oxford; New York: Oxford University Press.

Cardinaletti, A.; M. Starke (1999). "The Typology of Structural Deficiency: A Case Study of the Three Classes of Pronouns". van Riemsdijk, H. (ed.), *Eurotyp*. Vol. 5(part 1), *Clitics in the Languages of Europe*. Berlin; New York: Mouton De Gruyter, 145-234.

Casalicchio, J. (2016). "Pseudo-Relatives and Their Left-Periphery: A Unified Account". Carrilho, E.; Fiéis, A.; Lobo, M.; Pereira, S. (eds), *Romance languages and linguistic theory, 10: selected papers from 'Going romance' 28, Lisbon*. Amsterdam: John Benjamins, 23-42.

Chomsky, N. (1981). *Lectures on Government and Binding*. Dordrecht: Foris Publications.

Cinque, G. (2009). "The Pseudo-Relative and ACC-*ing* Constructions After Verbs of Perception". *Italian Syntax and Universal Grammar*. Cambridge; New York: Cambridge University Press, 244-75.

Cinque, G. (1999). *Adverbs and Functional Heads*. Oxford; New York: Oxford University Press.

Cinque, G. (2020). "The Syntax of Relative Clauses". *The Syntax of Relative Clauses: A Unified Analysis*. Cambridge; New York: Cambridge University Press. Cambridge Studies in Linguistics.

Den Besten, H. (1977-83). "On the Interaction of Root Transformations and Lexical Deletive Rules". Abraham, W. (ed.), *On the Formal Syntax of the Westgermania*. Amsterdam: John Benjamins, 47-131.

Goldsmith, J. (1989). "The Complementizer Signature". Kirschner C.; Decesaris, J. (eds), *Studies in Romance Linguistics.* Amsterdam: Benjamins Publishing Co., 115-28.

Guasti, M.T. (1988). "La pseudorelative et les phénomènes d'accord". *Rivista di Grammatica Generativa*, 13, 35-80.

Haegeman, L. (1992). *Theory and Description in Generative Syntax – A Case Study in West Flemish*. Cambridge; New York: Cambridge University Press.

Kayne, R. (1972). "Subject Inversion in French Interrogatives". Casagrande, J.; Saciuk, B. (eds), *Generative Studies in Romance Languages*. Rowley, MA: Newbury House, 70-126.

Kayne, R. (1989). "Facets of Romance Past Participle Agreement". Benincà, P. (ed.), *Dialect Variation and the Theory of Grammar.* Dordrecht: Foris, 85-103.

Kayne, R. (1994). *The Antisymmetry of syntax*. Cambridge, MA: MIT Press.

Ledgeway, A. (2010). "Subject Licensing in CP: The Neapolitan Double-Subject Construction". Benincà, P.; Munaro, N. (eds), *Mapping the Left Periphery*. Oxford; New York: Oxford University Press, 257-96.

Paoli, S. (2007). "The Fine Structure of the Left Periphery: COMPs and Subjects. Evidence from Romance". *Lingua*, 1279, 1-23. https://doi.org/10.1016/j.lingua.2006.05.007.

Perlmutter, D. (1971). *Deep and Surface Structure Constraints in Syntax*. New York: Holt, Rinehart and Winston.

Poletto, C. (2000). *The Higher Functional Field. Evidence from Northern Italian Dialects*. Oxford; New York: Oxford University Press.

Rizzi, L. (1990). *Relativized Minimality.* Cambridge, MA: MIT Press.

Rizzi, L. (1997). "The Fine Structure of the Left Periphery". Haegeman, L. (ed.), *Elements of Grammar*. Dordrecht: Kluwer Academic Publishing 281-337.

Rizzi, L. (2000). *Comparative Syntax and Language Acquisition*. New York: Routledge.

Rizzi, L. (2005). "On Some Properties of Subjects and Topics". Brugè, L.; Giusti, G.; Munaro, N.; Schweikert, W.; Turano, G. (eds), *Contributions to the XXX Incontro di Grammatica Generativa*. Venezia: Cafoscarina, 203-24.

Rizzi, L. (2016). "Labeling, Maximality, and the Head-Phrase Distinction". *The Linguistic Review*, 33(1), 103-27. https://doi.org/10.1515/tlr-2015-0016.

Rizzi, L.; Roberts, I (1989). "Complex Inversion in French". *Probus*, 1(1), 1-30. https://doi.org/10.1515/prbs.1989.1.1.1.

Rizzi, L.; Shlonsky, U. (2007). "Strategies of Subject Extraction". Sauerland, U.; Gärtner, H.-M. (eds), Interfaces + Recursion = Language? Chomsky's Minimalism and the View from Syntax-Semantics. Berlin: Mouton de Gruyter, 115-60.

Samo, G. (2019). *A Criterial Approach to the Cartography of V2*. Amsterdam: John Benjamins.

Taraldsen, T. (1986). "*Som* and the Binding Theory". Hellan, L.; Christensen, K.K. (eds), *Topics in Scandinavian Syntax*. Dordrecht: Reidel, 149-84.

Travis, L. (1984). *Parameters and Effects of Word Order Variation* [PhD Dissertation]. Cambridge, MA: MIT.

Vikner, S. (1995). *Verb Movement and Expletive Subjects in the Germanic Languages*. Oxford, New York: Oxford University Press.

Wolfe, S. (2018). *Verb Second in Medieval Romance*. Oxford: Oxford University Press. Oxford Studies in Diachronic and Historical Linguistics.

Zwart, J.V. (1993). *Dutch Syntax: A Minimalist Approach* [PhD Dissertation]. Groningen: University of Groningen.

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# Which *of* These Analyses Do You Prefer… *among* Those?

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**Abstract** In a series of influential works, Cardinaletti and Giusti argue that true partitivity in Italian is expressed by the preposition *di* (of), whereas the prepositions *tra/fra* (among) introduce *adjunct partitives*. In this paper, we speculate on the ability of the *wh*-item *quale* (which) to qualify as a selector of true partitives, and attempt to account for the relativized minimality-mitigation effect associated with the so-called lexical restriction, observed in superiority configurations. Despite the intuitive appeal of a 'selection' analysis distinguishing true partitives from adjunct partitives, the results of our experiments indicate that a formulation of featural relativized minimality in terms of selection may not make the right predictions.

**Keywords** Partitives. Adjunct-partitives. wh-questions. D-linking. Superiority effects. Selection.

**Summary** 1 Introduction. –2 Investigating the Structural Background. – 3 Experimental Evidence. – 4 Discussion.

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## 1 Introduction

D(iscourse)-linking (Comorovski 1989; Pesetsky 1987; 2000) has traditionally been regarded as a clear source of amelioration in *superiority* configurations with *wh*-questions. As illustrated in (1), the unacceptable configuration in (1a), headed by bare *what*, is (partially) "rescued" by D-linked *which book*, (1b), leading to better acceptability.

(1) a. **What* do you wonder [*who* read __]?
b. ?*Which book* do you wonder [*who* read __]?

This classic contrast has been extensively investigated both theoretically and experimentally (Rizzi 2001; Szabolcsi, Zwarts 1993; Villata et al. 2015; 2016). In this paper, we examine the specific case of argumental *wh-islands* through the lens of *featural relativized minimality* (*fRM*, Friedmann et al. 2009). This theoretical perspective follows the intuition of a featural hierarchy, namely the idea that a richer featural make-up can help escape (or mitigate) locality constraints (Starke 2001), and more generally facilitate processing of syntactic dependencies. This idea has been applied fruitfully to pathological speech, where individuals with poor representations of morphosyntactic features (e.g., aphasic patients) struggle to distinguish the relevant features on moved constituents from those on interveners, thus experiencing no advantage related to feature richness (Grillo 2008). The same logic applies to processing difficulties during acquisition: young children struggle with A'-dependencies in which the movement trigger and the intervener are featurally similar, and they cannot take advantage of the featural richness of the former to overcome this processing complexity (Friedmann et al. 2009).

In (1b), *which book* qualifies as a featurally richer constituent than embedded *who* due to the *lexical restriction* (+N) that the former, but not the latter, bears. This analysis, however, requires careful consideration (§2). The intent of this paper is twofold. First, we aim to determine the necessary selectional properties for a lexical restriction to modulate intervention configurations (§2.1), and we explore some diagnostics to assess them (§2.2). Second, we present a set of experimental results (§3) showing that, despite robust generalizations to distinguish selected and adjunct forms of lexical restriction, the intervention analysis requires further stipulations (§4).

## 2 Investigating the Structural Background

In this section, we explore the main intuition underlying the *fRM* framework to lexically-restricted *wh*-items. We then show how true

partitive arguments can be minimally distinguished from adjunct PPs adopting Cardinaletti and Giusti (1992; 2006; 2017). This distinction may play a role in intervention, since only features accessible to the DP edge domain should count for locality (§2.1). A tentative hypothesis for the structure of true partitive constructions (based on Falco, Zamparelli 2019) will then be linked to the idea that only true partitives behave as selected items, whereas adjunct partitives do not (§2.2).

## 2.1 Featural Relativized Minimality and Selection

The relevant featural configurations of the sentences in (1) are shown in (2), together with the intervention conditions assumed by the *fRM* framework (Friedmann et al. 2009):

| (2) | | Criterial position | | Intervener position | | Condition |
|---|---|---|---|---|---|---|
| | a. | *what*<br>+Q | … | *who*<br>+Q | … | *Identity* |
| | b. | *which book*<br>+Q +N | … | *who*<br>+Q | … | *Inclusion* |

When both a criterial and an intervener position host a bare *wh*-item, (2a), an *identity condition* is obtained – i.e., a classical *superiority* configuration in which the intervener *who* bears exactly the same features as the moved *what* (+Q), giving rise to the strongest case of intervention. In (2b), the criterial item *which book* bears not only +Q, but also a +N feature, the so-called *lexical restriction*. This is the *inclusion condition*: +N makes the criterial item featurally "richer" than the intervener, with a (partial) mitigation of the superiority effect.

This logic may in principle extend beyond *wh*-items with a simple NP complement. Since Obenauer's work on French, it has been observed that movement of bare *combien* (how many) to a criterial *wh*-position results in a sharp degradation if it crosses over an adverbial or negation, as in (3a). In contrast, if it pied-pipes a PP like *de problèmes* (of problems), (3b), a better outcome is obtained (Belletti, Rizzi 2013).

| (3) | | | | | | |
|---|---|---|---|---|---|---|
| | a. | **Combien*$_i$ | ne sais-tu pas | comment | résoudre | [$__i$ *de problèmes*] ? |
| | | how-many | don't you know | how | to solve | of problems |
| | b. | ?[*Combien* | *de problèmes*]$_i$ | ne sais-tu pas | comment | résoudre $__i$ ? |
| | | how-many | of problems | don't you know | how | to solve? |

Considering the PP (and the NP within it) as an instance of *lexical restriction*, the configuration in (3b) should also fall under the rubric

of the *inclusion condition*, where a lexically-restricted *wh*- (+Q +N) moves across a bare *wh*- (+Q).

Crucially, however, in the *fRM* framework only movement-triggering features (i.e., syntactically active features) are assumed to enter into play for intervention. This has two independent implications.

First, bare *wh*-items and lexically-restricted *wh*-items should target different criterial positions, under the reasonable assumption that both feature clusters trigger and direct movement, and that criterial probes are selective with respect to their goals. The distribution of bare vs. lexically-restricted *wh*-items in some varieties of Bellunese (Munaro et al. 2001) supports this distinction, with bare *wh*- remaining *in situ* and complex *wh*- moving to the beginning of the sentence (4).

| | | | | |
|---|---|---|---|---|
| (4) | a. | **Che* | a-tu | magnà? |
| | | What | have-you | eaten |
| | a'. | A-tu | magnà | *che*? |
| | | have-you | eaten | what |
| | b. | *Che vestito* | a-la | comprà? |
| | | What dress | has-she | bought |
| | b'. | *A-la | comprà | *che vestito*? |
| | | Has-she | bought | what dress |

Second, the +N feature, is not criterial and it is not expected to trigger movement *per se* (Rizzi 2018). Thus, to serve as goal for movement it should be accessible at the edge of the *wh*-constituent together with +Q (Chomsky 2001). This issue is more complex and theory-internal. To tackle it, consider Cecchetto and Donati (2010)'s discussion on the contrast between French (3a) and its Italian equivalent (5a), based on *labeling*.

| | | | | | |
|---|---|---|---|---|---|
| (5) | a. | **Quanti*$_i$ | non sai | come risolvere | |
| | | how-many-PL | don't (you) know | how to solve | |
| | | [ $__i$ *dei problemi*]? | | | |
| | | of-the problems | | | |
| | b. | ?[*Quanti dei problemi* ]$_i$ | non sai | come risolvere | $__i$ ? |
| | | how-many-PL of-the problems | don't (you) know | how to solve | |

In Italian, but not in French, *quanti* (how many) cannot move to its final landing site while stranding its PP. The contrast is explained in terms of agreement within the DP. In French, *combien* does not agree with its lexical restriction, whereas Italian *quanti* does. According to Cecchetto and Donati, the agreement probe (D) *quanti* (how many.PL)

labels the constituent *quanti dei problemi* (how many of the problems), blocking subextraction of D. When D does not label its complement, as in invariant *quanto* (6a), head movement of D alone is possible, instead.

| | | | | | | |
|---|---|---|---|---|---|---|
| (6) | a. | *Quanto*$_i$ | hai detto | che | sono | [_$_i$ *alti*]? |
| | | how-much-SG | have (you) said | that | (they) are | tall-PL |
| | b. | [*Quanto alti* ]$_i$ | hai detto | che | sono | _$_i$ ? |
| | | how-much-SG tall-PL | have (you) said | that | (they are) | |

While the agreement-based intuition may overgeneralize,[1] we retain the idea that a probe-goal relation is indeed crucial. As briefly noted in (Belletti, Rizzi 2013, fn. 2), if the features selected for by D count as criterial, a lexical restriction like *de problèmes* in (3b) might be visible at the edge of the DP, and count as syntactically active for *fRM*. Thus, the contrast in (3) would be driven precisely by +N, embedded in the complex *wh*-constituent. This suggestion would rephrase Cecchetto and Donati's intuition: *quali* would *select* its lexical restriction, while *quanto* would not. We leave the exact nature of the dependency between *quanto* and *alti* in (6) for further investigation, but we maintain the view that whenever selection is carried out by D, this may have consequences in terms of *fRM*, with embedded features visible for intervention computation.

## 2.2 Partitivity and Selection

In light of the above discussion, argumental *wh*-islands like (1) find a natural explanation in terms of intervention. In this sense, then, variations in their acceptability may be associated with different degrees of intervention strength, and with the featural properties of what is moved across the island boundary. As shown by Szabolcsi and Zwarts (1993), overt partitives yield the greatest improvement on the acceptability scale for extraction across weak islands (7):

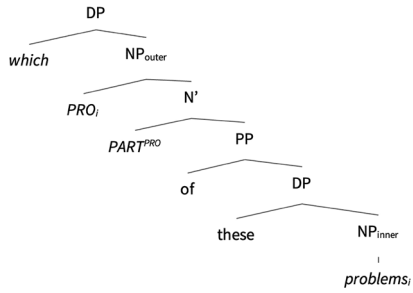
(7) [*Which of the men* > *which man* > *?Who* > *??What* > *??How many* > **How much* > ***Who the hell* ]$_i$ do you *regret* that I saw _$_i$ ?

Re-adapting Falco and Zamparelli's (2019) analysis of partitives, we assume the structure in (8) for the phrase *which of these problems*,

**1** Both overgeneralize – "*quali*$_i$ hai comprato [_$_i$ *di questi libri*]", "*which-PL* did you buy _ *of these books*" – and undergeneralize – as in (4) where invariant "*che*" does not label its complement, and yet they cannot be stranded.

where *problems* sits in the "inner NP" position, and it is in turn selected by a (phonologically null) PRO – the so-called "outer NP".[2]

(8)




From our selection perspective, the overt realization of the inner or the outer NP introduces a crucial structural distinction, as in (9):

(9) a. *Which* $PRO_i$ of these *problems*$_i$
b. *Which problems*$_i$ of these [e]$_i$

Ignoring the nature of the empty outer NP, we assume that (9a) is an exact instantiation of (8), while (9b) is not. There, the outer NP is overt, and the inner NP is a case of ellipsis. According to Cardinaletti and Giusti (2006), there are several reasons to assume this differential analysis. First, the non-overt realization of the outer NP, (9a), is only compatible with the pronominal determiner *uno*, and not with the weak determiner *un*, (10a). The opposite pattern is observed with an overt outer NP, (10b).

| | | | |
|---|---|---|---|
| (10) | a. | *Un/Uno | di questi problemi |
| | | One | of these problems |
| | b. | Un/*Uno | problema di questi |
| | | One | problem of these |

Second, while an overt inner NP can select a complement PP, e.g., *di matematica* (of maths), (11a), its phonologically empty counterpart cannot, (11b). This suggests that the inner NP cannot license a stranded partitive PP, in line with ellipsis properties.

**2** For reasons of space, we do not discuss here the full structure in (8), or the nature of its null functional elements, PRO and $PART^{PRO}$. We direct the reader to the original work for a wider discussion (Falco, Zamparelli 2019).

| | | | | | |
|---|---|---|---|---|---|
| (11) | a. | *Quali _ di questi problemi* | di matematica | hai | risolto? |
| | | Which of these problems | of maths | have (you) | solved? |
| | b. | **Quali problemi* | *di questi _* | di matematica | hai risolto? |
| | | Which problems | of these | of maths | have (you) solved? |

The two structures lead to different *fRM* predictions, if selection is one of its critical properties: only an overt outer NP, (9b), would enrich its selecting *wh*-item with a +N feature, while an empty outer NP would not (9a).

Cardinaletti and Giusti highlight a further distinction related to PPs specifying a lexical restriction in Italian: they distinguish true partitives, selected for by a D and introduced by the preposition *di* (of), (12a), from "adjunct" partitives (or semi-partitives, Hoeksema 1996), not selected by D and introduced by *tra/fra* (among), (12b).

| | | | | | |
|---|---|---|---|---|---|
| (12) | a. | Quali (problemi) | *di* questi (problemi) | hai | risolto? |
| | | Which (problems) | of these (problems) | have (you) | solved? |
| | b. | Quali (problemi) | *tra* questi (problemi) | hai | risolto? |
| | | Which (problems) | among these (problems) | have (you) | solved? |

This distinction is based on various pieces of evidence. First, "among" is infelicitous with mass partitives (13) and double genitives (14) (Falco, Zamparelli 2019).

(13) a. half *of* the people
b. *half *among* the people

(14) a. A problem *of* Hilbert's has just been solved.
b. *A problem *among* Hilbert's has just been solved.

Second, only adjunct partitives, (15b), are compatible with indefinite determiners like *dei*:

| | | | | |
|---|---|---|---|---|
| (15) | a. | *Ho risolto | dei problemi | *di* questi |
| | | (I) have solved | some problems | of these |
| | b. | Ho risolto | dei problemi | *tra* questi |
| | | (I) have solved | some problems | among these |

If true and adjunct partitives differ in terms of selection, this also has direct consequences for the characterization of *fRM* discussed in §2.1. Specifically, only true partitives selected by *wh*-phrases would bear a readable +N and modulate intervention (and acceptability) when moved from an argumental *wh*-island. The same is not expected

for adjunct partitives, instead. We move on to experimental work to verify this claim.

## 3 Experimental Evidence

Experimental works addressing the ameliorating effect of complex *wh*-items in *wh*-islands mainly focus on contrasts like (1), comparing *what* vs. *which N* questions. One of the few exceptions is Chesi et al. (2023)'s work, where (1) has been reduced to a more minimal comparison of two lexically restricted *wh*-items, *which N* and *what N*. The underlying reason was that a true minimal pair should only differ by one relevant feature; *which N*, however, differs from *what* both in terms of lexical restriction and in terms of the inherent D-linked interpretation it has, forcing a presupposition of existence. In the more minimal pair *which N* vs. *what N*, instead, both *wh*- bear a lexical restriction, while inherent D-linking only enriches the former (16):

| | | | | | |
|---|---|---|---|---|---|
| (16) | a. | *Which problem* | do you wonder | *who* | solved? |
| | | D-linked, +Q, +N | | +Q | |
| | b. | *What problem* | do you wonder | *who* | solved? |
| | | +Q, +N | | +Q | |

Despite suggestions that other factors might influence acceptability (e.g., animacy, Atkinson et al. 2016), here we focus on contrasts among Italian *wh*-items that directly address selection of a lexical restriction by the *wh-*, as discussed in §2. To set the stage, we start with a minimal contrast between morphologically similar *wh*- with a simple lexical restriction (§3.1); then, we move to critical contrasts including true (§3.2) and adjunct partitives (§3.3).

### 3.1 Different *wh*- Items: *Quanti* vs. *Quali*

The first contrast compares Italian *quanti N* (how many N) and *quali N* (which N). The two *wh*-items have similar morphosyntactic properties: both inflect for number and both may select a partitive structure. Crucially, however, they differ in their potential to trigger a D-linked interpretation: *quali N* naturally gives rise to a D-linked, presuppositional reading, while *quanti N* does not. Hence, if a difference in D-linking is sufficient to enrich the moved *wh*- in a significant way, better extractability is expected for *quali N* vs. *quanti N*. On the contrary, if (selection of a) lexical restriction is the critical factor, no substantial contrast is expected between the two *wh*-.

### 3.1.1 Materials and Procedures

We created a 2x2 design crossing *wh*-type (D-linked *quali* vs. non-D-linked *quanti*), and extraction type (no-intervention, i.e., extraction out of a *that*-clause, vs. intervention, i.e., extraction out of a *wh*-island). One of the 24 lexically-matched paradigms is reported in (17):

(17) a. Quali libri pensi che abbia letto? *[quali, no-interv.]*
Which books (do you) think that (he) has read?
b. Quanti libri pensi che abbia letto? *[quanti, no-interv.]*
How.many books (do you) think that (he) has read?
c. Quali libri ti chiedi chi abbia letto? *[quali, interv.]*
Which books (do you) to.you wonder who has read?
d. Quanti libri ti chiedi chi abbia letto? *[quanti, interv.]*
How.many books (do you) to.you wonder who has read?

Four lists were created, each including 24 stimuli (six per condition, one per paradigm). All lists included 48 fillers of varying degrees of acceptability. Each participant saw a total of 72 trials.

A web-based acceptability judgment study was prepared (JSPsych platform, De Leeuw 2015), to be performed on a smartphone, laptop or tablet. Each trial consisted of the visual presentation of one stimulus in isolation, screen-centered, and on a single line. Participants were required to read each stimulus and assign it an acceptability judgment on a 7-point Likert scale (7=fully acceptable, 1=fully unacceptable) by clicking on numerical values on their screen.

42 native speakers of Italian took part in the study (age range=21-60, M=31.77, SD=9.63; variety of Italian: northern=25, central=9, southern/insular=6).

### 3.1.2 Results and Analyses

2 participants were excluded since they did not meet our inclusion criteria (coherent judgments to clearly acceptable and clearly unacceptable fillers below 80%; 2.44% of our datapoints excluded).

Observation of the mean acceptability in the four conditions **[fig. 1]** clearly revealed a degrading effect of intervention, whereas the same did not emerge for *wh*-type: both *quali N* and *quanti N* received low acceptability in intervention (~2 out of 7) and higher acceptability in no-intervention (>6).

Acceptability was then modelled with mixed-effects ordinal logistic regressions (Christensen 2023; R Core Team 2023) using *wh*-type and extraction type as fixed factors, as well as random adjustments by-subject and by-item. A main effect of extraction type emerged, with intervention

conditions significantly decreasing acceptability ($Est_{interv.vs.no\text{-}interv}$=-3.896, $SE$=0.176, $z$=-22.096, $p$<.0001). On the contrary, no significant effect of *wh*-type was detected ($Est_{quali.vs.quanti}$=0.027, $SE$=0.069, $z$=0.392, $p$=.695).

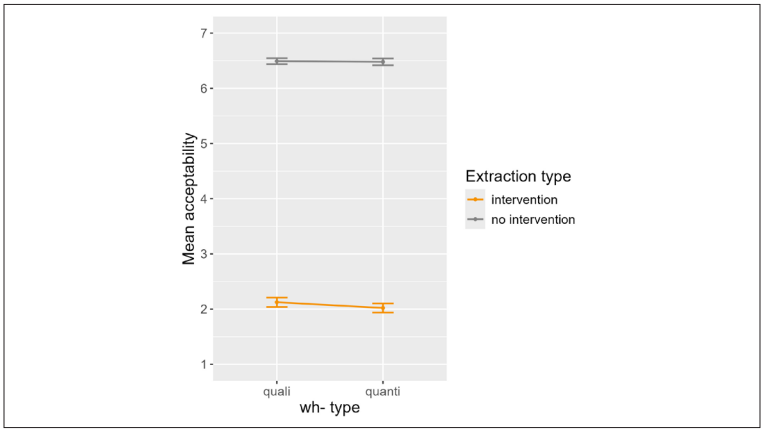



**Figure 1** Mean acceptability in the four conditions. Error bars represent standard error

## 3.2 The Presence of True Partitives: *Quali di Questi* vs. *Quanti di Questi*

### 3.2.1 Materials and Procedure

To test the possible relation between selection and partitivity, we added a two-level variable (*presence* vs. *absence* of a true partitive PP) to the 2×2 design in the previous study (18). If overt selection is the relevant feature, we expect overt partitives to mark the selection feature in D and induce similar ameliorations both with *quali* and *quanti*.

| | | | | | |
|---|---|---|---|---|---|
| (18) | a. | Quali {ø/di questi} libri<br>Which {ø/of these} books | pensi<br>(do you) think | che abbia letto?<br>that (he) has read? | *[quali, no-PP/PP, no-interv.]* |
| | b. | Quanti {ø/di questi} libri<br>How.many {ø/of these} books | pensi<br>(do you) think | che abbia letto?<br>that (he) has read? | [*quanti, no-PP/PP, no- interv.*] |
| | c. | Quali {ø/di questi} libri<br>Which {ø/of these} books | ti chiedi<br>(do you) to.you wonder | chi abbia letto?<br>who has read? | [*quali, no-PP/PP, interv.*] |
| | d. | Quanti {ø/di questi} libri<br>How.many {ø/of these} books | ti chiedi<br>(do you) to.you wonder | chi abbia letto?<br>who has read? | [quanti, *no-PP/PP, interv.*] |

Stimuli were grouped into eight counterbalanced lists, each including three stimuli per condition, and one per paradigm. All lists included the same fillers as in the previous study. Each participant saw a total of 72 stimuli.

The same procedure as the previous study was adopted.

49 native speakers of Italian took part in the study (age range=22-62, M=34.94, SD=13.13; variety of Italian: northern=32, central=15, southern/insular=2).

### 3.2.2 Results and Analyses

Inspection of judgements on the fillers resulted in the exclusion of one participant, who did not comply with the inclusion criteria outlined in the previous experiment (2.04% of our datapoints).

Looking at mean acceptability, extraction type was again associated with sharply asymmetrical ratings **[fig. 2]**, with intervention overall much less acceptable (<2.5) than no-intervention (>6). *Wh*-type, instead, only showed a slight advantage for the absence of partitive PP (~6.6) against its presence (~6.3), but limited to no-intervention conditions.

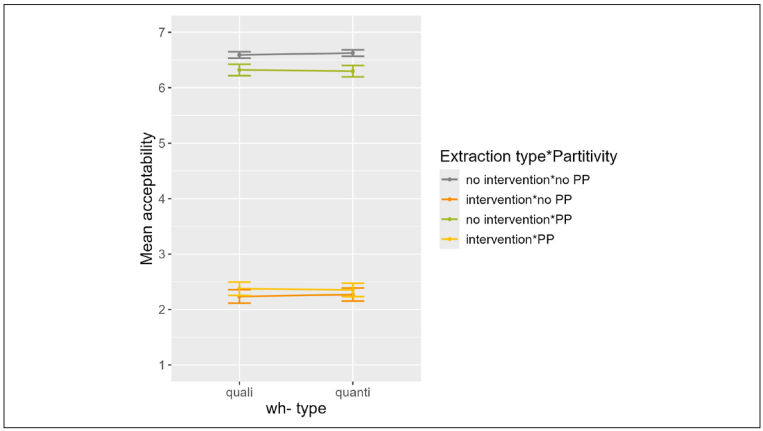



**Figure 2** Mean acceptability in the eight conditions. Error bars represent standard error

As for data modelling, the procedure was similar to the previous experiment. The most complete converging model included extraction type and partitivity as predictors, as well as random adjustments by subject and item. *Wh*-type was not included since it did not contribute any significant increase in model fit. A main effect of extraction type was obtained ($Est_{interv.vs.no.interv.}$=-3.900, $SE$=0.285, $z$=-13.685, $p$<.0001), again showing a negative effect of intervention on acceptability. A

main effect of partitivity emerged, as well ($Est_{part.vs.no\text{-}part.}$=-0.299, $SE$=0.082, $z$=-3.662, $p$=.0003), as well as the interaction between partitivity and extraction type ($Est$=0.410, $SE$=0.115, $z$=3.662, $p$=.0015). *Post-hoc* pairwise comparisons (*emmeans*, Lenth 2023) revealed that this was driven by the no-intervention condition: focusing on the two contrasts with similar intervention values (no-intervention.no-PP vs. no-intervention.PP; intervention.no-PP vs. intervention.PP; Table 1), we observe that manipulations on the partitive significantly affect acceptability only in the no-intervention condition, when the *wh-* is moved from a *that*-clause. By contrast, no significant contrast emerges within intervention conditions, where the effect of partitivity seems to be bleached by the island violation.

**Table 1** Summary of post-hoc pairwise comparisons among conditions via emmeans. Stars mark statistical significance

| ***contrasts*** | ***estimate*** | ***SE*** | ***z-value*** | ***p-value*** |
|---|---|---|---|---|
| no-intervention.no-PP vs. intervention.no-PP | -8.361 | 0.598 | -13.982 | <.0001* |
| no-intervention.no-PP vs. no-intervention.PP | -0.851 | 0.213 | -3.997 | .0004* |
| no-intervention.no-PP vs. intervention.PP | -8.090 | 0.594 | -13.610 | <.0001* |
| intervention.no-PP vs. no-intervention.PP | 7.510 | 0.576 | 13.033 | <.0001* |
| intervention.no-PP vs. intervention.PP | 0.271 | 0.162 | 1.669 | .3401 |
| no-intervention.PP vs. intervention.PP | -7.239 | 0.573 | -12.638 | <.0001* |

## 3.3 True Partitives and Adjunct Partitives: *Quali di Questi* vs. *Quali tra Questi*

### 3.3.1 Materials and Procedures

In the final experiment, we focused on *quali* with a 2×3 design including extraction type (intervention vs. no-intervention) and partitivity, which was refined into three levels inspired by Cardinaletti and Giusti (1992; 2006; 2017): bare N vs. partitive vs. adjunct (19):

| | | | | | |
|---|---|---|---|---|---|
| (19) | a. | Quali libri | pensi | che abbia letto? | *[bare N,* |
| | | Which books | (do you) think | that (he) has read? | *no- interv.]* |
| | b. | Quali di questi libri | pensi | che abbia letto? | *[partitive,* |
| | | Which of these books | (do you) think | that (he) has read? | *no- interv.]* |
| | c. | Quali tra questi libri | pensi | che abbia letto? | *[adjunct,* |
| | | Which among these books | (do you) think | that (he) has read? | *no- interv.]* |
| | d. | Quali libri | ti chiedi | chi abbia letto? | *[bare N,* |
| | | Which books | (do you) to.you wonder | who has read? | *interv.]* |
| | e. | Quali di questi libri | ti chiedi | chi abbia letto? | *[partitive,* |
| | | Which of these books | (do you) to.you wonder | who has read? | *interv.]* |
| | f. | Quali tra questi libri | ti chiedi | chi abbia letto? | *[adjunct,* |
| | | Which among these books | (do you) to.you wonder | who has read? | *interv.]* |

If selection of a lexical restriction induces a measurable effect, we expect a difference between true and adjunct partitives, since the latter is necessarily unselected by the partitive head. Adjunct partitives, then, should induce milder ameliorations than true (selected) partitives.

We created 24 lexically-matched paradigms. The stimuli were grouped into six lists, each including four stimuli per condition and one per paradigm. All lists included the same fillers as in the previous studies. Each participant saw 72 trials.

The same procedure as the previous studies was adopted.

44 native speakers of Italian took part in the study (age range=19-61, M=33.16, SD=12.54; variety of Italian: northern=35, central=4, southern/insular=5). One additional participant completed the experiment but was excluded due to age not matching our desired range.

### 3.3.2 Results and Analyses

As in the two studies above, we performed filler analysis as a premise for further exploration of acceptability. One experimental subject was excluded due to inconsistent responses (2.78% of our data).

Exploration of mean acceptability ratings confirmed a sharp difference between the two extraction types: intervention received very low judgments (~2-2.5), while no-intervention received full acceptability (>6) **[fig. 3]**.

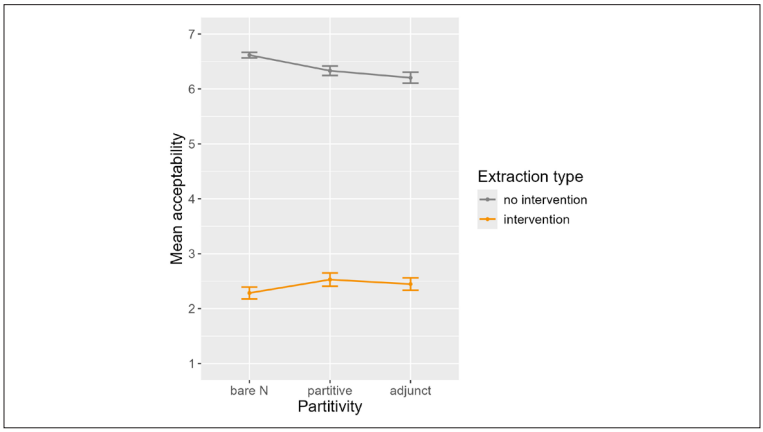



**Figure 3** Mean acceptability in the six conditions. Error bars represent standard error

Finally, mixed-effects ordinal logistic regressions were run over acceptability. The most complete converging model had extraction type, partitivity, and their interaction as fixed effects, and random intercepts for subjects and items. A main effect of extraction type was detected ($Est_{interv.vs.no.interv}$=-3.009, $SE$=0.121, $z$=-24.798, $p$<.0001), mirroring the previous studies. Moreover, an effect of partitivity emerged, driven by bare N ($Est_{bare.N.vs.grand.mean}$=0.186, $SE$=0.092, $z$=2.016, $p$=.044), which significantly interacted with intervention (*bare-N:interv.*: $Est$=-0.352, $SE$=0.093, $z$=-3.801, $p$=.0001). *Post-hoc* pairwise comparisons among conditions clarified that partitivity contrasts only reach significance in the no-intervention conditions, i.e., when the *wh*- undergoes licit movement from a *that*-clause **[tab. 2]**. Specifically, *wh*-items with a bare N extract significantly better than both true and adjunct partitives, while no significant contrast between the latter two emerges.

**Table 2** Summary of post-hoc pairwise comparisons among selected conditions via emmeans. We report contrasts mismatching in partitivity values only. Stars mark statistical significance

| ***contrasts*** | ***estimate*** | ***SE*** | ***z-value*** | ***p-value*** |
|---|---|---|---|---|
| no-interv.bare N vs. no-interv.partitive | -0.707 | 0.245 | -2.887 | .0450* |
| no-interv.bare N vs. no-interv.adjunct | -0.907 | 0.244 | -3.711 | .0028* |
| interv.bare N vs. interv.partitive | 0.311 | 0.200 | 1.551 | .6312 |
| interv.bare vs. interv.adjunct | 0.816 | 0.202 | 0.920 | .9416 |
| no-interv.partitive vs. no-interv.adjunct | -0.200 | 0.231 | -0.869 | .9540 |
| interv.partitive vs. interv.adjunct | -0.125 | 0.202 | -0.620 | .9896 |

## 4 Discussion

In sum, none of the contrasts tested resulted in selective ameliorations in the intervention condition, where selectional properties on the lexical restriction were expected to interact with *fRM* in interesting ways. Overall, the effects of D-linking in Italian superiority configurations appear rather modest, despite the alleged advantage with respect to prototypical "*what … who* $_{\text{–what}}$" configurations, commonly assumed in the literature. *Quali* (D-linked *wh*-item) and *quanti* (an allegedly non-D-linked *wh*-item) produce comparable effects (§3.1). The overt presence of the PP partitive, compared with its absence on both *quali* and *quanti* does not lead to significant amelioration in the extraction condition, even though it slightly improves acceptability in the non-intervention conditions (§3.2). Lastly, "of" vs. "among" partitives do not differ significantly, but a mild effect is observed between bare lexical restriction and either partitive under the no-intervention condition (§3.3).

Crucially, Anna's (and Giuliana's) intuition that *of*-partitives only qualify as "true partitives", resulting in PP selection by the outer NP under the *wh*-item (as opposed to *among*-partitives, which behave as adjuncts) allows us to precisely assess the hypothesis that overt selection may be at issue in determining whether a *wh*-determiner qualifies as a featurally richer item, able to escape locality constraints. So far, we can conclude that either realization of the outer NP (in Falco and Zamparelli's terminology), as a phonologically empty PRO or as a full-fledged N, contributes in comparable ways to determining intervention, and neither suffices to save weak island extraction.

## Bibliography

Atkinson, E.; Apple, A.; Rawlins, K.; Omaki, A. (2016). "Similarity of wh-Phrases and Acceptability Variation in wh-Islands". *Frontiers in Psychology*, 6. https://doi.org/10.3389/fpsyg.2015.02048.

Belletti, A.; Rizzi, L. (2013). "Intervention in Grammar and Processing". Caponigro, I.; Cecchetto, C. (eds), *From Grammar to Meaning: The Spontaneous Logicality of Language*. Cambridge: Cambridge University Press, 294-311.

Cardinaletti, A.; Giusti, G. (1992). "Partitive ne and the QP-Hypothesis: A Case Study". Fava, E. (ed), *Proceedings of the XVII Meeting of Generative Grammar, Trieste, February 22-24, 1991: Volume Presented to Giuseppe Francescato on the Occasion of his Seventieth Birthday*. Torino: Rosenberg & Sellier, 121-41.

Cardinaletti, A.; Giusti, G. (2006). "The Syntax of Quantified Phrases and Quantitative Clitics". Everaert, M.; van Riemsdijk, H.C. (eds), *The Blackwell Companion to Syntax*, 5. Oxford: Blackwell, 23-93.

Cardinaletti, A.; Giusti, G. (2017). "Quantified Expressions and Quantitative Clitics". Everaert, M.; van Riemsdijk, H.C. (eds), *The Wiley Blackwell Companion to Syntax, Second Edition*. Hoboken, NJ: Wiley, 1-42. https://doi.org/10.1002/9781118358733.wbsyncom063.

Cecchetto, C.; Donati, C. (2010). "On Labeling: Principle C and Head Movement". *Syntax*, 13(3), 241-78. https://doi.org/10.1111/j.1467-9612.2010.00140.x.

Chesi, C.; Bressan, V.; Belletti, A. (2023). "The Role of D-Linking and Lexical Restriction in Locality Violations". *Quaderni di Linguistica e Studi Orientali*, *9*, 29-43. https://doi.org/10.13128/QULSO-2421-7220-15162.

Chomsky, N. (2001). "Derivation by Phase". Kenstowicz, M. (ed.), *Ken Hale: A Life in Language*, 1-52. Cambridge, MA: MIT Press.

Christensen, R.H.B. (2023). *ordinal—Regression Models for Ordinal Data* (Version R package version 2023.12-4.1) [Computer software]. https://CRAN.R-project.org/package=ordinal.

Comorovski, I. (1989). "Discourse-Linking and the wh-Island Constraint". *North East Linguistics Society*, 19(1), 7.

De Leeuw, J.R. (2015). "jsPsych: A JavaScript Library for Creating Behavioral Experiments in a Web Browser". *Behavior Research Methods*, 47(1), 1-12. https://doi.org/10.3758/s13428-014-0458-y.

Falco, M.; Zamparelli, R. (2019). "Partitives and Partitivity". *Glossa: A Journal of General Linguistics*, 4(1). https://doi.org/10.5334/gjgl.642.

Friedmann, N.; Belletti, A.; Rizzi, L. (2009). "Relativized Relatives: Types of Intervention in the Acquisition of A-Bar Dependencies". *Lingua*, 119(1), 67-88.

Grillo, N. (2008). *Generalized Minimality: Syntactic Underspecification in Broca's Aphasia*. Utrecht: LOT.

Hoeksema, J. (1996). "Floating Quantifiers, Partitives and Distributivity". *Partitives: Studies on the Syntax and Semantics of Partitive and Related Constructions*, 14, 57.

Lenth, R.V. (2023). *emmeans: Estimated Marginal Means, aka Least-Squares Means* (Version R package version 1.9.0) [Computer software].

Munaro, N.; Poletto, C.; Pollock, J.-Y. (2001). "Eppur si muove!: On Comparing French and Bellunese wh-Movement". *Linguistic Variation Yearbook*, 1(1), 147-80. https://doi.org/10.1075/livy.1.07mun.

Pesetsky, D. (1987). "Wh-in-situ: Movement and Unselective Binding". Reuland, E.; ter Meulen, A.G.B. (eds), *The Representation of (In)Definiteness*. Cambridge, MA: MIT Press, 98-129.

Pesetsky, D. (2000). *Phrasal Movement and its Kin*. Cambridge, MA: MIT Press. https://doi.org/10.7551/mitpress/5365.001.0001.

R Core Team. (2023). *R: A Language and Environment for Statistical Computing* [Computer software]. R Foundation for Statistical Computing. https://www.R-project.org/.

Rizzi, L. (2001). "Reconstruction, Weak Island Sensitivity and Agreement". Cecchetto, C.; Chierchia, G.; Guasti, M.T. (eds), *Semantic Interfaces: Reference, Anaphora and Aspect*, 145-76. Stanford, CA: CSLI Publications.

Starke, M. (2001). *Move Dissolves into Merge: A Theory of Locality* [PhD Thesis]. Genève: Université de Genève.

Szabolcsi, A.; Zwarts, F. (1993). "Weak Islands and an Algebraic Semantics for Scope Taking". *Natural Language Semantics*, 1(3). https://doi.org/10.1007/BF00263545.

Villata, S.; Canal, P.; Franck, J.; Moro, A.; Chesi, C. (2015). "Intervention Effects in Wh-Islands: An Eye-Tracking Study". *Architectures and Mechanisms for Language Processing (AMLaP 2015)*, 195.

Villata, S.; Rizzi, L.; Franck, J. (2016). "Intervention Effects and Relativized Minimality: New Experimental Evidence from Graded Judgments". *Lingua*, 179, 76-96. https://doi.org/10.1016/j.lingua.2016.03.004.

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# Variation and Optionality in the Italian Mirative Marking System

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**Abstract** This paper provides a comprehensive overview of most mirative markers resorting to syntactic means available in Italian and in the Italo-Romance varieties of Delia (Sicily) and Lugagnano Val d'Arda (Emilia-Romagna), also considering the two relevant regional Italians. The combinatorial possibilities of different markers and their use in different contexts are considered. The optionality in mirative marking that emerges from this state of affairs is attributed to the absence of a [+MIRATIVE] feature in syntax which leaves room for a more liberal use of the mirative strategies. However, it is shown that optionality is only apparent, as not all combinations are possible (due to structural competition), and not all markers are felicitous in every context.

**Keywords** Mirativity. Variation. Optionality. Italo-Romance. Verbal periphrases.

**Summary** 1 Introduction. – 2 Mirative Strategies in Italian. – 3 Some Dialectal Peculiarities Concerning Mirativity. – 4 Conclusions and Open Questions for Future Research.

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## 1 Introduction

Since the seminal work by Aksu-Koç, Slobin (1986) on Turkish, mirativity has emerged as a central topic in linguistic research, especially with respect to its relationship to evidentiality and exclamativity (DeLancey 1997; 2001; Aikhenvald 2012, a.o.). Following the refinement of DeLancey's (1997) definition in Hengeveld, Olbertz (2012), mirativity is defined as "a linguistic category that characterizes a proposition as newsworthy, unexpected, or surprising", signalling a mismatch between prior expectations and newly asserted content. Crucially, mirative expressions do not affect the truth conditions of a proposition, but rather contribute speaker- or hearer-oriented evaluations at the level of discourse interpretation.[1]

Cross-linguistically, mirativity can be expressed by prosodic means, dedicated morphological markers, syntactic constructions, or lexical strategies. Romance languages are particularly rich in syntactic and discourse-based strategies to convey mirativity. Italian represents a particularly interesting case, as speakers may resort to multiple mirative strategies (henceforth, MSs) that appear, at first glance, optional and freely interchangeable.

Recent work on Italo-Romance has highlighted the richness of the mirative repertoire.[2] While individual mirative strategies have been studied in isolation or in limited combinations, their interaction within a unified system remains underexplored. In particular, little attention has been paid to the structural constraints governing the co-occurrence of different strategies (but see Di Caro et al. 2025a, b).

Moreover, mirativity is inherently dialogic and context-sensitive. The felicity of a given MS depends not only on the propositional content of the utterance, but also on the interactional setting, the degree of involvement of discourse participants, and the communicative goals pursued by the speaker.[3] Different conversational configurations

**1** This paper is the result of joint work by the two authors. For academic purposes, Vincenzo Nicolò Di Caro is responsible for §§ 1, 2.1, 3.1, 3.2, and 4, while Luca Molinari is responsible for §§ 2.2, 2.3, 2.4, and 3.3. We thank two anonymous reviewers for their stimulating remarks. All errors remain our own. Luca Molinari acknowledges current financing by the OPUS 26 grant (2023/51/B/HS2/02217) from the Polish National Science Center (NCN). We wish to dedicate this contribution to Anna Cardinaletti, influential scholar and kind presence during our doctoral and post-doctoral years at Ca' Foscari University of Venice.

**2** See Cruschina 2012; Cruschina, Bianchi 2021; Di Caro, Molinari 2024; Rodríguez Rosique 2025.

**3** Mirativity can also be divided into first-level (where surprise is attributed either to the speaker or to the hearer), and second-level, in which the unexpected reaction is projected onto the grammatical subject (e.g., constructions with *altro che* 'other than' in Italian; see Mauri, Russo 2025). In this paper, we will limit our discussion to the former type.

may therefore license different subsets of MSs, even within the same linguistic variety.

The present paper pursues two main goals. On the descriptive side, it provides a compact overview of the main syntactic strategies used to encode mirativity in Italian, also considering selected Italo-Romance varieties (Sicilian and Emiliano-Romagnol) and the corresponding regional Italians. On the theoretical side, it argues that the optionality observed *prima facie* in the co-occurrence of MSs in Italian is only apparent as it is ruled by structural and pragmatic constraints. Such apparent optionality, however, follows from the absence of a [*u*MIRATIVE] feature in syntax.

The rest of the paper is organized as follows. Section 2 introduces the main syntactic mirative strategies available in Italian and discusses their combinatorial properties. Section 3 examines how the mirative repertoire is restricted and reshaped in selected regional and dialectal varieties. Section 4 summarizes the main findings and outlines directions for future research.

## 2 Mirative Strategies in Italian

Italian displays a rich set of syntactic MSs. For analytical purposes, these strategies can be grouped according to the clausal layer they target. We therefore distinguish between TP-internal strategies, which contribute mirative meaning within the temporal domain of the clause, and CP-internal strategies, which operate in the Left Periphery of the clause (Rizzi 1997). This distinction proves crucial for understanding both stacking possibilities and the limits of apparent optionality.

### 2.1 TP Strategies

In Di Caro et al. (2025a), the merging point of some of the MSs in Italian is located in the TP.[4] All these strategies give rise to conventional implicatures, hence they contribute to the non-at-issue content of the utterance.

One of the most productive MSs in Italian involves the use of grammaticalized GO, which typically occurs either in an Infinitival Construction, or InfCo (featuring an infinitival lexical verb) which is the most common configuration in Standard Italian, or in a Pseudo-Coordination, or PseCo (featuring an inflected lexical verb), which

**4** We refer the interested reader to Di Caro et al. (2025a; 2025b) for a thorough overview of these MSs.

is very common in Sicilian (along with the InfCo) but also attested in Italian (Giusti et al. 2022). Mirative GO may surface in the present tense even when the event is located in the past. This is possible because mirative GO occupies a very high, left peripheral position within the TP domain as a consequence of its semantic bleaching as an andative verb due to the grammaticalization process it underwent.

Another TP-internal strategy involves the use of 1SG and 2SG dative clitics, referred to as Mirative Ethical Datives (MEDs), which anchor the utterance to the speaker's or addressee's evaluative perspective. Following Di Caro et al. (2025a; 2025b) we take MEDs to be merged within the TP domain (but cf. Greco 2025) as they are generally proclitic on the tensed verb, but they can also appear enclitic on the infinitival verb when occurring in an InfCo.

These two strategies can co-occur, as in (2), referring to the context given in (1):[5]

(1) *An office secretary is warned by his boss that there are two customers with the same first and last names and he is repeatedly told which one he should phone. Nevertheless,* ***the office secretary ends up phoning the wrong person****. When the secretary's boss finds out about the mistake, she immediately reproaches him.*

(2) {*Mi* / **ti*} sei andato a chiamare il cliente sbagliato!
1SG.ED 2SG.ED be.2SG gone to call.INF the client wrong
'You called the wrong client!'

A sketched structural representation for GO and MEDs is given in (4) below.

## 2.2 CP Strategies

The first MS known in the literature as being merged in the CP domain is Mirative Focus Fronting (MFF, cf. (3a)), where a constituent is moved from the TP to a CP projection labelled FaiP (Focused Associated Implicature), that activates the typical focus projection immediately dominated by it (Bianchi et al. 2015). The mirative import introduced by Fai$^0$ belongs to the level of conventional implicature rather than to the truth-conditional content of the proposition, and is interpreted at the interface as an evaluative comment on the unexpected nature of the event described (Cruschina 2012; Cruschina, Bianchi 2021).

Another CP strategy involves what Greco (2020 and references therein) calls Surprise Negative Sentences (Snegs, cf. (3b)), i.e.,

**5** Note that in the context in (2), the 2SG MED is ruled out for pragmatic reasons.

sentences featuring a negation (NEG) that does not reverse the truth conditions of the proposition, paired with a prosodic pattern exhibiting a mixed behaviour between a question and an exclamation. In Snegs, NEG is merged in the Left Periphery after the vP phase is closed: in this way, NEG cannot affect its content. NEG is somewhat associated with Focus, as it gives rise to alternatives that are re-ranked in a way that the less expected one is picked out. In this sense, NEG can be thought of as being merged in FaiP (Tsiakmakis, Espinal 2022).

A further CP strategy regards the use of functional TAKE in a PseCo (3c). Syntactically, mirative TAKE is analyzed as being merged directly in a high left-peripheral position associated with contrastive Focus (see Giusti, Cardinaletti 2022 and references therein). TAKE introduces the pragmatically most relevant information, at the same time presupposing the existence of a set of alternatives (associated with Focus) evaluated against the event denoted by the lexical verb. The surprise effect obtains because the alternative that is spelled out is ranked low on a scale of expectedness.[6]

(3) a. *IL CLIENTE SBAGLIATO hai chiamato!*
the wrong client have.2SG called
b. *#Non hai chiamato il cliente sbagliato?!*
NEG has called the client wrong
c. *#Hai preso e hai chiamato il cliente sbagliato!*
have.2SG taken and have.2SG called the client wrong
'You called the wrong client!'

Despite their surface differences, it is clear that these CP strategies can be seen as competing for the same left-peripheral position, while TP strategies do not (4).

(4) $[_{\text{ForceP}}\,[_{\text{FaiP}}\,[_{\text{FocP}}$ MFFi $[_{\text{Foc}^{\circ}}$ {TAKE / NEG}] $[_{\text{CP}}$ (e) $[_{\text{TP}}$ MED=GO $[_{\text{TP}}$ …(ti)…]]]]]]

This structural arrangement proves crucial in accounting for the combinatorial restrictions of these MSs.

**6** Note that Snegs and TAKE PseCo are not felicitous in this context when the boss addresses the secretary directly, but they would be felicitous, if she were telling this story to someone else.

## 2.3 Stacking Possibilities

One of the most striking properties of Italian mirative marking is the possibility of stacking multiple strategies within a single clause. Stacking is, however, not completely free, as shown in Table 1.

**Table 1** Possible combination of MSs. "+" stands for 'possible combination', "-" for 'impossible combination', "?" signals that the combination is perceived as not totally ungrammatical but at least awkward/degraded

| MSs | **MFF** | **TAKE PseCo** | **Snegs** | MED | GO InfCo |
|---|---|---|---|---|---|
| **MFF** | / | - | - | + | + |
| **TAKE PseCo** | / | / | - | + | ? |
| **Snegs** | / | / | / | + | + |
| MED | / | / | / | / | + |
| GO InfCo | / | / | / | / | / |

Table 1 shows that TP strategies can freely combine with each other and can also co-occur with a single CP strategy. By contrast, combinations of multiple CP strategies (in bold) are systematically excluded. This asymmetry easily follows from structural competition: TP strategies are merged in distinct positions within the TP domain and therefore do not interfere with one another. CP strategies, on the other hand, compete for the same projection in the Left Periphery and cannot co-occur.

The possible co-occurrence of multiple TP strategies with one CP strategy leads *prima facie* to optionality in the marking of mirativity. This fact suggests that there can be no syntactic [*u*MIRATIVE] feature to be checked in the structure: if such a feature were present, multiple MSs should either be redundant (due to multiple checking of the same feature) or obligatorily licensed. Instead, as observed by Di Caro et al. (2025a, b), mirativity arises as the pragmatic consequence of the manipulation of the speaker's expectations in syntax.

## 2.4 Optionality Revisited

The possible combinations of co-occurring MSs seem to be optional. Were this the case, however, mirativity would be the only liberal domain to permit such optionality, given the commonly accepted idea that no true synonymy exists (Bloomfield 1933, 145, a.o.).

Looking more closely, we notice that the use of MSs is not optional in any strong theoretical sense. In fact, according to McGregor (2013, 1152), "[a]n element is optional in a given construction iff, in a specifiable set of linguistic circumstances: (a) it may be present

or absent; and (b) its presence or absence does not affect the grammatical structure: the construction remains unchanged as a linguistic sign regardless of whether or not the element is present".

On the one hand, it is true that MSs in Italian are never obligatory, meeting the criterion (a). As for (b), however, their presence or absence does affect the grammatical structure. A neutral sentence arguably differs at an abstract level from one with exclamative intonation in that the former lacks the left peripheral projection that triggers the exclamative contour in the latter. Furthermore, McGregor (2013, 1151) explicitly considers components of meaning other than the propositional one, such as the "social" meanings.

Thus, the non-at-issue level is to be taken into account in this case: a neutral sentence completely lacks the non-at-issue contribution of the exclamative intonation and of MSs. In general, TP and CP strategies alter the syntactic structure of a sentence, hence their presence vs. absence does not qualify as optional. Even MFF differs from an utterance with exclamative intonation only: despite the two sentences seem to be analogous (from the point of view of lexical material, structure, and non-at-issue content), at the level of information organization MFF restricts the *locus* of surprise to the focussed constituent, while exclamative intonation has scope over the whole predicate. Total optionality, then, is to be excluded in this case as well.

## 3 Some Dialectal Peculiarities Concerning Mirativity

In this section we will discuss how the large array of MSs listed in § 2 for Standard Italian is to a certain extent limited in the regional Italians of Sicily (SIt) and Emilia-Romagna (ERIt), plausibly under the influence of the different local Italo-Romance varieties that generally display fewer mirative options. For this reason, in § 3.1 we provide a brief overview of the intricate relationship between Italian and the other Italo-Romance varieties spoken in Italy.

### 3.1 The Sociolinguistic Background

Italy is characterized by an exceptionally dense and complex landscape of linguistic variation. Italo-Romance varieties are not descendants of Italian, but independent continuations of Vulgar Latin, which developed in parallel with Italian itself. As a result, speakers typically navigate between Italian and a local Italo-Romance variety, giving rise to stable bilingual or diglossic repertoires (see Di Caro 2022, ch. 3).

This situation has important consequences for the expression of mirativity. While Standard Italian displays a wide range of MSs, many Italo-Romance varieties exhibit a more restricted inventory. Regional Italians, which emerge from continuous contact between Italian and local varieties, often reflect intermediate systems, selectively adopting or disfavouring specific MSs. Variation in mirative marking is therefore not free, but shaped by the interaction between grammatical architecture and sociolinguistic pressures.

## 3.2 Mirativity in the Regional Italian Spoken in Sicily

In order to try to understand to what extent the mirative repertoire in SIt differs from that of Italian, we must first have a look at what is found in Sicilian. We can capitalize on the existing literature on Sicilian to identify the main MSs available: MFF (Cruschina 2012; 2021), TAKE PseCo (Giusti, Cardinaletti 2022; Di Caro, Molinari 2024), GO PseCo and GO InfCo (Giusti et al. 2022, and references therein). Snegs are a least favourite strategy, while MEDs are very marginal and can be considered the result of a contact effect with Italian. As regards GO PseCo and InfCo, the data from Sicilian tell us that these periphrases represent high frequency MSs and they can be usually found also in combination with functional TAKE (in the fixed order TAKE + GO), more frequently than in Italian.

Let us consider some examples featuring only functional GO in the dialects of Delia (cf. (5a-b)) and Catania (cf. (5c-d)), then some examples with TAKE (6a-c) and, finally, the result of the combination of both (7a-b) in Deliano:

(5) a. ***Va*** ***a*** ***cchjama*** *a* *lu* *clienti* *sbagliatu!*
go.3SG A[1] call.3SG to the client wrong
'He ended up calling the wrong client!' [Delia; GO PseCo]

b. ***Jì*** ***a*** ***cchjamari*** *a* *lu* *clienti* *sbagliatu!*
go.PST.3SG to call.INF to the client wrong
'He ended up calling the wrong client!' [Delia; GO InfCo]

c ***Occhjama*** *ô* *client* *sbagghjatu!*
*o*+*a*+call.3SG to-the client wrong

d. ***Occhjamau*** *ô* *clienti* *sbagghjatu!*
*o*+*a*+call.PST.3SG to-the client wrong
'He ended up calling the wrong client!' [Catania; GO PseCo] [1]

**1** For the status of Sicilian *a* as a pseudo-coordinator, see Cardinaletti, Giusti 2001, 393.

**2** For the interpretation of *occhjama* 'he goes and calls' and the other example in (5) from Catanese as incorporating the invariable GO form *o-* plus a covert *a* as instances of a GO PseCo cf. Di Caro, Menza (2024) and references therein.

(6) a. ***Piglia*** ***e*** ***cchjama*** *a* *lu* *clienti* *sbagliatu!*
take.3SG and call.3SG to the client wrong
b. ***Piglià*** ***e*** ***cchjamà*** *a* *lu* *clienti* *sbagliatu!*
take.PST.3SG and call.PST.3SG to the client wrong
c. ***Piglia*** ***e*** ***cchjamà*** *a* *lu* *clienti* *sbagliatu!*
take.3SG and call.PST.3SG to the client wrong
'He ended up calling the wrong client!' [Delia; TAKE PseCo]

(7) a. ***Piglia*** ***e*** ***bba*** ***a*** ***cchjama*** *a* *lu* *clienti*
take.PRS.3SG and go.PRS.3SG A call.PRS.3SG to the client
*sbagliatu!*
wrong
b. ***Piglià*** ***e*** ***gghjì*** ***a*** ***cchjamari*** *a* *lu* *sbagliatu!*
take.PST.3SG and go.PST.3SG to call.INF to the wrong
'He ended up calling the wrong client!' [Delia; TAKE PseCo + GO PseCo]

Following the same path, SIt tends to resort to the same MSs as Sicilian does, i.e. functional TAKE and GO, with the notable difference that the regional Italian uses the analytic past (*Passato Prossimo*) as in Standard Italian instead of the synthetic one (*Passato Remoto*), widespread in Sicilian (Di Caro 2022, 98-9). The combination of the two functional verbs yields a slightly deviant result, as shown in (8d):

(8) a. ***È*** ***andato*** / ***Va*** ***a*** ***chiamare*** *al* / *il* *cliente*
is gone go.3SG to call.INF to-the the client
*sbagliato!* [1]
wrong
b. ***Prende*** ***e*** ***chiama*** *al* / *il* *cliente* *sbagliato!*
take.3SG and call.3SG to-the the client wrong
c. ***Ha*** ***preso*** ***e*** ***ha*** ***chiamato*** *al* / *il*
has taken and has called to-the the
*cliente* *sbagliato!*
client wrong
d. ??***Ha*** ***preso*** ***ed*** ***è*** ***andato*** ***a*** ***chiamare*** *al* /
has taken and is gone to call.INF to-the
*il* *cliente* *sbagliato!* [1]
the client wrong
'He ended up calling the wrong client!'

**1** Differential Object Marking is a typical feature of Southern Italo-Romance varieties (Ledgeway 2011, a.o.), which is also widespread in the regional Italian spoken in the same areas.

**2** Note that (8d) becomes perfectly acceptable when GO retains its semantics of motion.

As for MFF, while Standard Italian generally realizes informational focus *in situ*, Sicilian clause structure does not tolerate informational focus remaining in its base-generated position within the vP domain (Cruschina 2012). Instead, even neutral or non-contrastive focus must undergo movement to the Left Periphery, giving rise to what appears on the surface as obligatory FF. This structural difference has far-reaching interpretive consequences, since in Sicilian focus movement is the default strategy to mark new information, rather than an exceptional or emphatic one as in Italian.

In the cartographic model adopted for Sicilian, the projection hosting focus (FocP) is systematically activated even in the absence of any contrastive or corrective reading. The focussed constituent, often the verb's internal argument or adjunct, obligatorily moves to the specifier of FocP, leaving behind a gap or a resumptive clitic in the lower clause. The mirative potential of Sicilian FF emerges when it interacts with higher left-peripheral operators. As proposed by Cruschina (2021), Sicilian allows for an additional functional layer above FocP, i.e. FaiP, which introduces the same evaluative or unexpectedness component attested in Italian MFF.

The difference lies then in the division of labour: while in Italian, fronting itself is marked and therefore available for mirative interpretation whenever licensed by Fai$^0$[mir], in Sicilian, fronting is structurally required for focus, so the mirative reading surfaces only when the Fai$^0$ head is independently activated, producing an additional expressive layer on top of the regular informational-focus movement. This means that sentences like (9a) and (9b) in Sicilian do not necessarily entail mirativity and can be generally also feature a GO InfCo to force the mirative reading:[7]

(9) a. ***A*** ***LU*** ***CLIENTI*** ***SBAGLIATU*** *chjamasti /* *jisti*
to the client wrong call.PST.2SG go.PST.2SG
*a* *cchjamari!*
to call.INF
'You called the wrong client!' [Delia; PST / GO InfCo]

b. ***A*** ***LU*** ***CLIENTI*** ***SBAGLIATU*** *chjamà /* *jì*
to the client wrong call.PST.3SG go.PST.3SG
*a* *cchjamari!*
to call.INF
'He ended up calling the wrong client!' [Delia; PST / GO InfCo]

**7** Note, again, that, in this respect, GO InfCo and PseCo (where available) display the same mirative function. In the Deliano examples in (5b) and (7b), the InfCo is forced by the nature of the lexical V2, which does not allow for an inflected form to occur. If, on the other hand, a suitable V2 were present, such as *scrìviri* 'write, e-mail', as in *A LU CLIENTI SBAGLIATU jì a scrissi!* 'He wrote to / e-mailed the wrong client!', PseCo is preferred.

This is also found in SIt where, again, the GO InfCo just forces the mirative reading. This, however, is more acceptable in the unload/gossip setting:

(10) a. ***AL*** */* ***IL*** ***CLIENTE*** ***SBAGLIATO*** *hai* *chiamato /*
to-the the client wrong have.2SG called
*sei* *andato* *a* *chiamare!*
be.2SG gone to call.INF
'You called the wrong client!' [SIt]

b. ***AL*** */* ***IL*** ***CLIENTE*** ***SBAGLIATO*** *ha* *chiamato /*
to-the the client wrong has called
*è* *andato* *a* *chiamare!*
is gone to call.INF
'He ended up calling the wrong client!' [SIt]

As for the Snegs, our preliminary fieldwork suggests that it is not a favourite strategy itself but becomes more acceptable, once again, in combination with the GO InfCo:

(11) a. ??*Non* *chiama /* *ha* *chiamato* *al /* *il* *cliente* *sbagliato?!*
NEG call.3SG has called to-the the client wrong
'Doesn't / Didn't he call the wrong client?!' [SIt]

b. *Non* *va /* *è* *andato* *a* *chiamare* *al /*
NEG go.3SG is gone to call.INF to-the
*il* *cliente* *sbagliato?!*
the client wrong
'Doesn't / Didn't he go and calls the wrong client?!' [SIt]

Finally, as for MEDs, our fieldwork data in Delia confirm what was found in the eastern area of Catania (cf. Di Caro, Menza 2025) about the 'unpopularity' of this MS in Sicily (for both Sicilian and regional Italian). We know from Di Caro (2023) that Sicilian resorts to Ethical Datives with certain verbs (including consumption verbs), such as 'eat', 'drink', 'buy' and 'sell' as their unmarked, default version. This leaves no place for other EDs used as MSs. Wherever MEDs do not occur regularly with some types of verbs, as in the northern varieties of Emilia-Romagna, they are perfectly fine as mirative markers (cf. § 3.3).

### 3.3 Mirativity in the Regional Italian Spoken in Emilia-Romagna

We turn to the repertoire of MSs available in ERIt. Before doing so, it is important to have a look at the Gallo-Italic varieties spoken in this region. The array of mirative markers at their disposal has not

received the same attention as the one in the varieties of Sicilian in § 3.2. For this reason, this section presents a general overview of the strategies, taking examples from Lugagnanese, a variety spoken in the town of Lugagnano Val d'Arda, in the westmost Emilian province of Piacenza.

It seems that Lugagnanese displays only a subset of the mirative repertoire presented in § 2. The most common ways of expressing mirativity in Lugagnanese are MEDs (12a), GO InfCo (12b), Snegs (12c) and a combination of the three (12d). MFF is rather marginal (13a), while TAKE PseCo is instead totally impossible (13b).[8]

(12) a. *Al* ***m'*** *ha ciamè al client asbaglièl*
3SG= MED= has called the client wrong

b. *L' é* ***andè*** ***a ciamè*** *al client asbaglièl*
3SG= is went to call.INF the client wrong

c. *L' ha* ***mia*** *ciamè al client asbaglièl?*
3SG= has NEG called the client wrong

d. *Al* ***m'*** *é* ***mia andè*** *a ciamè al client asbaglièl*
3SG= MED= is NEG gone to call.INF the client wrong
'He ended up calling the wrong client!' [Lugagnano]

(13) a. ??*AL* ***CLIENT*** ***ASBAGLIÈ*** *l' ha ciamèl*
the client wrong 3SG= has called
'He ended up calling the wrong client!' [Lugagnano]

b. **L' ha {****töt*** */* ***ciapè****} e (l') ha ciamè*
3SG= has taken caught and 3SG= has called
*al client asbaglièl*
the client wrong
Intended: 'He took and called the wrong client!' [Lugagnano]

Lugagnanese confirms the popularity of GO InfCo as a MS, but unlike Sicilian, it also relies on MEDs. This probably stems from the fact that Lugagnanese EDs are not used in benefactive contexts, thus they are not "overloaded" with too many functions and are available to express mirativity.

The biggest difference between Lugagnanese and Deliano is the awkwardness of MFF and the total absence of TAKE PseCo in the former variety. While the presence, although very marginal, of MFF

**8** TAKE in Lugagnanese can be rendered either by *tö* or *ciapè*. The former is mostly associated with the meaning of 'buy', while the latter is used in situations of grabbing/catching something, also in an abstract sense (e.g., *ho {ciapè / *töt} 'l fardur* lit. have.1SG caught the cold 'I caught a cold').

can be explained by the independent availability of the underlying movement mechanism, the absence of TAKE PseCo can only be justified by a low degree of grammaticalization of this functional verb (but see fn. 12). The lack of mirative TAKE is thus an intriguing issue that we shall leave for future research.

Given the picture presented in (12)-(13), one would expect ERIt to display the same strategies while disfavouring MFF and TAKE PseCo. This seems to be only partially true.[9] On the one hand, the most frequent strategies seem to be the TP ones, i.e., MED and GO InfCo. They seem to be more acceptable when appearing alone, but their co-occurrence is also quite productive. Snegs alone is not popular, although, interestingly, it surfaces in combination mainly with GO InfCo, but also with either MED alone or with MED and GO InfCo together. The acceptability of Snegs is thus boosted when paired with other MSs.

Turning to MFF, its status in ERIt resembles the one it has in Lugagnanese, i.e., it is available, but speakers reluctantly resort to it. The situation is different for the TAKE PseCo, since this MS seems to be commonly used by speakers of ERIt. This is not surprising, considering that the speakers of this region are predominantly in contact with Italian, which translates into a neat differentiation between the two grammars.[10]

## 4 Conclusions and Open Questions for Future Research

In this study we have provided a contribution to the understanding of how variation and optionality can apparently emerge in a specific domain within Italo-Romance varieties, i.e. the expression of mirativity by means of syntactic strategies. By discussing new cases of multiple mirative markers stacking that arise from that scenario, we were able to achieve some important goals, summarized as follows:

1. We have given an overview of the most widespread mirative markers in Italian (§ 2), showing that the current syntactic analyses in the literature can account for the impossibility of co-occurrence (at least in Italian) of multiple CP-strategies, as they compete for the same position.

**9** The judgments for ERIt are based on consultation with 19 native speakers from different provinces of the region.

**10** This is particularly true for the younger generation, whose local variety grammar displays a great convergence towards the Italian system (given the pressure of the latter) even in highly functional domains (e.g., in the use of indefinite determiners; Molinari 2022).

2. We have shown that the great variation and (apparent) optionality in the use of several mirative markers (and combinations thereof) is a consequence of the absence of a [+MIRATIVE] feature in syntax (§ 2.3.2). This in turn goes in the direction of Di Caro et al.'s (2025a, b) idea that mirativity should be placed in the pragmatic domain (see also Cruschina, Bianchi 2021, a.o.), while stemming from the manipulation of the speaker's expectations in syntax.
3. The focus on the mirative repertoire in the Italo-Romance varieties and regional Italians spoken in Sicily and Emilia-Romagna (§ 3) has allowed us to observe the complex interactions between the two linguistic systems and their mutual influence. This opens the way for a future more fine-grained study of mirativity in other Italo-Romance varieties, a field that up to now remains mostly unexplored.

Naturally, this contribution leaves many unsolved questions which should be addressed by future research. First and foremost, the contribution of each mirative marker (in isolation and in combination with other strategies) needs to be clarified, both in terms of its semantic import and of the conversational contexts it can occur in.

Furthermore, this paper has scratched the surface of the prominent dimension of variation in the mirative repertoire in Italo-Romance varieties and regional Italian, dimension that is still understudied. Filling this gap will inevitably lead to further intriguing questions. Some of these have been briefly mentioned in § 3.2 and § 3.3, e.g., the factors fostering the popularity of MFF and the unpopularity of MEDs in Deliano, or the reasons behind the unavailability of the TAKE PseCo in Lugagnanese.

All in all, what emerges is the complexity of the phenomenon of mirativity, which has ramifications in different modules of language and raises new questions that will hopefully fuel future research.

## Bibliography

Aikhenvald, A. (2012). "The Essence of Mirativity". *Linguistic Typology*, 16, 435-85. https://doi.org/10.1515/lity-2012-0017.

Aksu-Koç, A.; Slobin, D.I. (1986). "A Psychological Account of the Development and Use of Evidentials in Turkish". Chafe, W.; Nichols, J. (eds), *Evidentiality: The Linguistic Coding of Epistemology*, 159-67. Norwood: Ablex.

Bloomfield, L. (1933). *Language*. New York: Holt.

Bianchi, V.; Bocci, G.; Cruschina, S. (2015). "Focus Fronting and its Implicatures". Aboh, E.; Schaeffer, J.; Sleeman, P. (eds), *Romance Languages and Linguistic Theory 2013: Selected Papers from Going Romance*, 3-20. Amsterdam; Philadelphia: John Benjamins. https://doi.org/10.1075/rllt.8.01bia.

Cardinaletti, A.; Giusti, G. (2001). "'Semi-Lexical' Motion Verbs in Romance and Germanic". Corver, N.; Van Riemsdijk, H. (eds), *Semi-Lexical Categories*, 371-414. Berlin: De Gruyter. https://doi.org/10.1515/9783110874006.371.

Cruschina, S. (2012). *Discourse-Related Features and Functional Projections*. New York: Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199759613.001.0001.

Cruschina, S. (2021). "The Greater the Contrast, the Greater the Potential: On the Effects of Focus in Syntax". *Glossa* 6(1), 3. 1-30. https://doi.org/10.5334/gjgl.1100.

Cruschina, S.; Bianchi, V. (2021). "Mirative Implicatures at the Syntax-Semantics Interface: A Surprising Association and an Unexpected Move". Trotzke, A.; Villalba, X. (eds), *Expressive Meaning Across Linguistic Levels and Frameworks*. https://doi.org/10.1093/oso/9780198871217.003.0005.

DeLancey, S. (1997). "Mirativity: The Grammatical Marking of Unexpected Information". *Linguistic Typology*, 1, 33-52. https://doi.org/10.1515/lity.1997.1.1.33.

DeLancey, S. (2001). "The Mirative and Evidentiality". *Journal of Pragmatics*, 33, 369-82. https://doi.org/10.1016/S0378-2166(01)80001-1.

Di Caro, V.N. (2022). *Il bilinguismo italiano-dialetto in Sicilia. Profilo socio-linguistico, nuove realtà comunicative e prospettive didattiche*. Venezia: Edizioni Ca' Foscari. http://doi.org/10.30687/978-88-6969-649-7.

Di Caro, V.N. (2023). "Strategies of Indefiniteness Marking in Central Sicilian. Evidence from the Dialect of Delia". *Languages,* 8, 227. https://doi.org/10.3390/languages8040227.

Di Caro, V.N.; Molinari, L. (2024). "Inchoativity and Mirativity in Italo-Romance and Balkan Slavic Verbal Periphrases. The Cases of Functional GO and TAKE". Gavarró, A.; Mateu, J.; Mendia, J.A.; Torres-Tamarit, F. (eds), *RLLT22. Special Issue of Isogloss. Open Journal of Romance Linguistics*, 10(3)/8, 1-35. https://doi.org/10.5565/rev/isogloss.333.

Di Caro, V.N.; Massaro, A.; Molinari, L. (2025a). "Ethical Dative, Pseudo-Expletive Negation, and Mirative GO in Italian. A Preliminary Analysis of Stackable Markers of Mirativity". *Revue Roumaine de linguistique* LXX(1-2), 89-123. https://doi.org/10.59277/RRL.2025.1-2.04.

Di Caro, V.N.; Massaro, A.; Molinari, L. (2025b). "On the Interaction of Some Mirative Markers in Italian". *Linguistica Brunensia*, 73(1), 71-92. https://doi.org/10.5817/lb2025-38530.

Di Caro, V.N.; Menza, S. (2024). "On Pseudo-Coordination in the Province of Catania". Armstrong, G.; D'Alessandro, R.; Parafita Couto, M.C. (eds), *Special Issue of Isogloss. Open Journal of Romance Linguistics* 10(2)/6, 1-22. https://doi.org/10.5565/rev/isogloss.289.

Giusti, G.; Cardinaletti, A. (2022). "Theory-Driven Approaches and Empirical Advances: A Protocol for Pseudo-Coordinations and Multiple Agreement Constructions in Italo-Romance". Giusti, G.; Di Caro, V.N.; Ross, D. (eds), *Pseudo-Coordination and Multiple Agreement Constructions*, 35-64. https://doi.org/10.1075/la.274.02giu.

Giusti, G.; Di Caro, V.N.; Ross, D. (2022). *Pseudo-Coordination and Multiple Agreement Constructions*. Amsterdam: John Benjamins. https://doi.org/10.1075/la.274.

Greco, M. (2020). *The Syntax of Surprise: Expletive Negation and the Left Periphery*. Newcastle upon Tyne: Cambridge Scholar Publishing.

Greco, M. (2025). "The Expletive Interpretation of the Ethical Dative: a Syntactic Approach to a Non-Argumental Clitic". *Linguistics*. https://doi.org/10.1515/ling-2024-0121.

Hengeveld, K.; Olbertz, H. (2012). "Didn't You Know? Mirativity Does Exist!". *Linguistic Typology*, 16, 487-503. https://doi.org/10.1515/lity-2012-0018.

Mauri, C.; Russo, A. (2025). "The Mirative Values of Italian altro che". Rodríguez Rosique, S. (2025), *Expressing Surprise at the Crossroads. Mirativity, Exclamativity and Cooptation in Romance Languages*, 143-78. https://doi.org/10.1515/9783111386683-007.

McGregor, W.B. (2013). "Optionality in Grammar and Language Use". *Linguistics*, 51(6), 1147-204. https://doi.org/10.1515/ling-2013-0047.

Molinari, L. (2022). "Optionality in the Expression of Indefiniteness: A Pilot Study on Piacentine". *Languages*, 7, 99. https://doi.org/10.3390/languages7020099.

Rizzi, L. (1997). "On the Fine Structure of the Left Periphery". Haegeman, L. (ed.), *Elements of Grammar*, 147-61. Dordrecht: Kluwer. https://doi.org/10.1007/978-94-011-5420-8_7.

Roberge, Y.; Troberg, M. (2009). "The High Applicative Syntax of the Dativus Commodi/Incommodi in Romance". *Probus*, 21, 249-89. https://doi.org/10.1515/prbs.2009.008.

Rodríguez Rosique, S. (ed.) (2025). *Expressing Surprise at the Crossroads. Mirativity, Exclamativity and Cooptation in Romance Languages*. Berlin; Boston: De Gruyter Mouton. https://doi.org/10.1515/9783111386683.

Tsiakmakis, E.; Espinal, M.T. (2022). "Expletiveness in Grammar and Beyond". *Glossa: A Journal of General Linguistics*, 7(1), 1-36. https://doi.org/10.16995/glossa.5807.

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# Enclisis/Proclisis in Italian: Preferences and Restrictions
## Some Considerations from the Written Italian of University Students

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**Abstract** In this work, we examine the distribution of two clitic pronouns – *ci* and *si* – in restructuring sentences. The relevant data are taken from the corpus Univers-ITA, which collects written texts elicited from university students. In previous work on the same dataset, we examined the distribution of *mi*, *ti*, *vi*, *lo*, *la*, *le*, *li*, *gli*, and *ne*. The present analysis thus completes the picture, allowing the formulation of two independent but related generalizations, relevant for the whole peninsula, with no significant differences among the North, the Centre and the South. The first one suggests that the preference for enclisis is significantly more robust for clitics endowed with a P(erson) feature. The second singles out IMP(ersonal) *si* – which almost always occurs in proclisis – from the other clitics. A proposal to account for these generalizations is finally sketched.

**Keywords** Enclisis. Proclisis. Written Italian. Ci. Si. Person. Subjecthood.

**Summary** 1 Introduction: Enclisis vs. Proclisis in Restructuring Sentences. – 2 The Present Study. – 3 Summary and Discussion. – 4 Conclusions.

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## 1 Introduction: Enclisis vs. Proclisis in Restructuring Sentences

It is a well-known feature of Italian that in complex sentences containing a main clause and an infinitive, clitics may occur either as proclitic to the finite verb or as enclitic to the infinitive, provided that the verb in the main clause belongs to a specific class of verbs, as shown in (1):[1]

| | | | | | |
|---|---|---|---|---|---|
| (1) | a. | Lo= | voglio | fare | |
| | | 3.S.ACC= | want.P.1.S | do.INF | |
| | | 'I want to do it.' | | | |
| | b. | Voglio | far=lo | | |
| | | want.P.1.S | do.INF.= 3.S.ACC | | |
| | | 'I want to do it.' | | | |
| | c. | *Lo= | penso | di | fare |
| | | 3.S.ACC= | think. P.1.S. | of | do.INF |
| | | 'I think I'll do it.' | | | |
| | d. | Penso | di | far=lo | |
| | | think.P.1.S | of | do.INF=3.S.ACC | |
| | | 'I think I'll do it.' | | | |

Following much current literature, we will label these verbs 'restructuring verbs', and the complex sentences as in (1a) and (1b) 'restructuring sentences'.[2] The choice between proclisis and enclisis appears as a genuine instance of optionality, although various proposals have been advanced along the years, suggesting for instance a preference for enclisis in the Northern varieties of Italian, a preference for proclisis in the Southern varieties of Italian, and true optionality only in the Central varieties (Benincà 1986), a preference which becomes a norm in the dialects (Egerland 2009). A more recent analysis on bilectal speakers (Cardinaletti, Giusti, Lebani 2025), however, shows that enclisis is accepted also in the South and that optionality is attested also in the dialects. Rohlfs (1968) assumes that enclisis is typical of literary Italian, and proclisis characterizes oral varieties, while Berretta (1986) suggests that the choice might be

**1** We thank two anonymous reviewers for their careful and insightful comments on a previous version of this paper. This paper is dedicated to Anna Cardinaletti, a constant source of inspiration along the years: not only for her outstanding work, but also for her personal character, where strength and kindness are tightly and smoothly intertwined.

**2** The term goes back to Rizzi's (1976) proposal claiming that proclisis is possible whenever a rule called 'RISTR' (restructuring) applies. The rule in question transforms a complex sentence in a simple one, creating a unique complex predicate formed by the matrix and the infinitive verb.

tied to Information Structure reasons. Adult L2 speakers of Italian tend to avoid proclisis (Bennati, Matteini 2006), which is instead preferred by children (Bernardini, van der Weijer 2018), who are also more accurate with proclisis than with enclisis (Cardinaletti, Cerutti, Volpato 2024). In previous work (Di Domenico 2025) we examined the distribution of different clitics (*mi*, *ti*, *vi*, *lo*, *la*, *le*, *li*, *gli* and *ne*) in a written corpus (Grandi et al. 2023). Results revealed a general strong preference for enclisis (78%) throughout Italy, with no significant differences when considering the North (77%), the Centre (77%) or the South (79%) of the territory.[3] This general preference for enclisis could in part be due to the written and formal nature of the texts that make up the corpus, as discussed in Di Domenico (2025). Some differences were, however, observed when examining each clitic. Specifically, we observed that the preference for enclisis is significantly lower for *ne* (64%) when compared to the total (78%). In addition, contrary to all the other clitics examined, in the case of *vi*, proclisis is preferred to enclisis (63% vs. 37% respectively). Further scrutiny revealed that the preference for proclisis is specific for the locative/existential use of *vi*, while the preference disappears when *vi* functions as a 2nd person plural marker. That the specific value of a clitic should be considered when examining its distribution is already known since Berretta (1986), who observed that impersonal *si* only occurs in proclisis.

In addition, if one assumes that (partitive) *ne* lacks a person feature, as first proposed by Cardinaletti, Giusti (1992), the data on *vi* and *ne* could be taken as suggestive of the fact that the preference for enclisis is stronger for clitics that encode a person feature.[4]

The occurrences of *vi* in restructuring sentences in the corpus, however, were very few ($N$=27), and almost the same holds for *ne* ($N$= 66). Therefore, we will now proceed with the examination of the (much more numerous) occurrences of *ci* ($N$= 327) and *si* ($N$= 1765) in the same corpus.

**3** It is worth noticing, however, that the labels North, Centre and South are referred to the university site, and this may not coincide with the geographical origin of the participants. The background survey contained in Grandi et al. (2023) allows to establish the place of birth of the participants but not of their previous/family residence. Therefore, unfortunately, the present study does not allow reliable considerations concerning the distribution of the preferences in different geographical varieties of Italian.

**4** We postpone a discussion on the proper characterization of this feature to Section 2.3.

## 2 The Present Study

### 2.1 Materials and Procedure

The corpus Univers-ITA (Grandi et al. 2023) is a collection of 2160 elicited written texts produced by university students from different universities/faculties throughout Italy on a specific topic. Participants were asked to produce a written composition (between 250 and 500 words) using a style as formal and correct as possible. The topic concerned the advantages and disadvantages of online teaching during the SARS-COV-2 pandemics. The time allotted was 60 minutes.

For the identification of the relevant data, we first used an automatic procedure extracting the relevant clitic (*ci*, *si*) from the texts produced in three different areas of Italy: North, Centre, South (Step 1). In a second step, we manually extracted the cases in which the clitic occurred in a restructuring sentence. We then separated the cases of proclisis from those of enclisis, finally distinguishing the specific use of each clitic.[5]

### 2.2 Overall Analysis (Step1 and Step 2)

The automatic procedure extracted a total of 3879 occurrences of *ci* and 10658 occurrences of *si*. Some instances had to be excluded for various reasons, leaving a 'cleaned' data base of 3726 occurrences for *ci* and 10123 occurrences for *si*, as shown in Table 1 and Table 2.[6] Occurrences of *ci* in restructuring sentences are 327 in total, while for *si* we have a total of 1765.

**Table 1** Occurrences of *ci* in the corpus

| ci | Total occurrences | In restructuring sentences |
|---|---|---|
| North | 1300 | 117 |
| Centre | 1171 | 103 |
| South | 1255 | 107 |
| Total | **3726** | **327** |

**5** Additional analyses, as we shall see, considered whether the clitic occurred in a cluster and whether the restructuring verb was *riuscire*.

**6** The system generated some empty strings and some strings not containing the clitic. In addition, the system does not distinguish accented from non-accented vowels, hence some instances of 'si' were indeed instances of *sì* (yes), and not of the clitic *si*.

**Table 2** Occurrences of *si* in the corpus

| si | Total occurrences | In restructuring sentences |
|---|---|---|
| North | 4452 | 756 |
| Centre | 2977 | 547 |
| South | 2693 | 462 |
| Total | **10122** | **1765** |

In Table 3 and Table 4 we report the enclisis/proclisis distinction.

**Table 3** Enclisis/proclisis distribution for *ci*

| *ci* | Enclisis | Proclisis | Total |
|---|---|---|---|
| North | 55 (47%) | 62 (53%) | 117 |
| Centre | 64 (62.13%) | 39 (37.86%) | 103 |
| South | 60 (56.07%) | 47 (43.92%) | 107 |
| Total | **179** (54.74%) | **148** (45.25%) | **327** |

**Table 4** Enclisis/proclisis distribution for *si*

| *si* | Enclisis | Proclisis | Total |
|---|---|---|---|
| North | 173 (22.88%) | 583 (77.11%) | 756 |
| Centre | 154 (28.15%) | 393 (71.84%) | 547 |
| South | 133 (28.78%) | 329 (71.21%) | 462 |
| Total | **460** (26.06%) | **1305** (73.94%) | **1765** |

As shown in Table 3, for *ci*, we observe a slight overall preference for enclisis. When examining the different areas, however, the picture changes in the North, where we have more occurrences of *ci* in proclisis than in enclisis. A closer inspection, however, reveals that what differentiates the North from the Centre/South is in fact the number of occurrences of *ci* in cluster with *si*, as shown in Table 5:

**Table 5** Instances of *ci* in cluster with *si*

| | Proclisis | Cluster with *si* |
|---|---|---|
| North | 62 | 41 |
| Centre | 39 | 21 |
| South | 47 | 17 |
| Total | 148 | 79 |

As is well known, the sequence *ci si*, as in (2) below, is an opaque form, with *ci* being in fact an instance of reflexive *si* (Wanner 1977; Bonet 1995):

(2) Bonet 1995, 609 (**si si*)
Ci= si= lava
*ci*= *si*= washes
'One washes oneself.'

These instances, therefore, should be excluded from the analysis of *ci*.[7] Excluding the instances of *ci* in cluster with *si*, we derive the following revised version of Table 3:

**Table 3'** Enclisis/proclisis distribution for ci revised

| ***ci*** | **Enclisis** | **Proclisis** | **Total** |
|---|---|---|---|
| North | 55 (72.36%) | 21 (27.63%) | 76 |
| Centre | 64 (78.04%) | 18 (21.95%) | 82 |
| South | 60 (66.66%) | 30 (33.33%) | 90 |
| North+Centre+South | **179** (72.17%) | **69** (27.82%) | **248** |

The preference for enclisis is now clear in the case of *ci* (72.17%), with no significant differences when examining the data from the North, the Centre and the South, and almost in line with the general trend observed in Di Domenico (2025) for the other clitics.

As an anonymous reviewer notes, the question is why we have more '*ci si*' clusters in the North: this is an interesting question that the present study cannot answer, also for the reasons outlined in fn. 2 above.

As far as *si* is concerned, the data in Table 4 show instead a preference for proclisis in general, and in each of the three areas considered.

**7** Note that the 'clustering' ('*ci si*') strings are replicated in the *si* corpus. Interestingly, we found a few cases (5 in the entire corpus) in which we observed no *ci si* clustering, but two instances of *si* in the same string: one in proclisis (IMP) and one in enclisis (REFL). An example is given below:

(i) [568 South] Si può subito dopo mettersi a studiare
si.IMP can soon after put.siREFL to study
'One can immediately after start studying.'

In addition, we found one case of reduplication, i.e two REFL *si*, one in proclisis and one in enclisis:

(ii) Non è detto che una famiglia […] si
Not is said that a family si.REFL
possa permettersi la strumentazione tecnica adeguata
can afford.si.REFL the instrumentation technical adequate
'It is not to be taken for granted that a family can afford the adequate technical tools.'

## 2.3 Refining the Picture (Step 3)

As we said, this work aims to see whether we observe any differences in the preference for enclisis or proclisis according to the specific value that *ci* and *si* express, and if these possible differences within each of the two clitics can be treated similarly. A comparison with the data concerning *vi* and *ne* in Di Domenico (2025) will also be undertaken, to verify whether a preference for either enclisis or proclisis is tied to the presence/absence of a Person feature.

Different values of *ci* have been distinguished in the relevant literature.

For the present analysis, and in the spirit of Manzini, Savoia (2004; 2007), we will distinguish the cases in which *ci* encodes a first-person plural feature (which may also be reciprocal) from the cases in which it does not (locative, existential, comitative, instrumental, demonstrative). We will label the first 'P' and the latter 'non-P'.

As for *si*, although there is consensus in the relevant literature in recognizing a reflexive, benefactive, inherent, impersonal, middle, passive *si*, different criteria have been proposed to characterize these distinctions (see Pescarini 2015 a.o. for a review and a proposal). Some examples are given in (3) below:[8]

| | | | | | |
|---|---|---|---|---|---|
| (3) | a. | Durante | le | feste | impersonal |
| | | During | the | feasts | |
| | | si= | mangia | troppo | |
| | | *si*= | eat.P.3.S | too much | |
| | | 'During holidays we eat/one eats too much.' | | | |
| | b. | Questo | concetto | si= | middle |
| | | This | concept | *si*= | |
| | | definisce | facilmente | | |
| | | define.P.3.S | easily | | |
| | | 'This concept can be easily defined.' | | | |
| | c. | Le | patate | si= | passive |
| | | The | potatoes | *si*= | |
| | | mangeranno | domani | | |
| | | eat.Fut.3.Pl. | tomorrow | | |
| | | 'Potatoes will be eaten tomorrow.' | | | |
| | d. | Giulia | si= | lava | reflexive |
| | | G. | *si*= | wash.P.3.S | |
| | | 'Giulia washes herself.' | | | |

**8** Of course, the choice of the examples cannot be theory-neutral. As for middle *si* in particular, we adopt, as Pescarini (2015), Cinque's (1988) idea that middle *si* expresses a property of the subject rather than an event, and, as such, it is incompatible with a specific time reference.

| | | | | |
|---|---|---|---|---|
| e. | Giulia | si= | beve | benefactive |
| | G. | *si*= | drink.P.3.S | |
| | un | caffè | | |
| | a | coffee | | |
| | 'Giulia drinks a coffee.' | | | |
| f. | Giulia | si= | è | inherent |
| | G. | *si*= | is | |
| | arrabbiata | | | |
| | angry | | | |
| | 'Giulia got angry.' | | | |

Following a tradition that has recognized the passive value of some impersonal constructions (Belletti 1982, 2), the present analysis distinguishes, on one hand, an IMP *si* (with an impersonal, middle or passive reading according to the specific case, i.e. as in (3a), (3b), and (3c), respectively). On the other hand, we distinguish a REFL *si* (with a reflexive, inherent or benefactive reading depending on the specific case, i.e. as in (3d)-(3f), respectively). As first proposed by Manzini (1986), we assume that IMP *si* is interpreted as a free variable, while REFL *si* is anaphoric.

### 2.3.1 On *ci*

In the following lines, we analyze the enclisis/proclisis distribution of the instances of *ci* according to their P or non-P value. This analysis does not consider the cases in which *ci* clusters with *si* **[tab. 5]** for the reasons discussed above: note, by the way, that in all those cases *ci* (=*si*) occurs in proclisis and has a reflexive value.

The data concerning the remaining cases are reported in Table 6:

**Table 6** Distribution for different uses of *ci*

| **ci** | | | |
|---|---|---|---|
| **North** | non-P | P | Total |
| enclisis | 18 (72%) | 37 (72.54%) | 55 |
| proclisis | 7 (28%) | 14 (27.45%) | 21 |
| Total | **25** | **51** | **76** |
| **Centre** | | | |
| enclisis | 14 (53.84%) | 50 (89.28%) | 64 |
| proclisis | 12 (46.15%) | 6 (10.71%) | 18 |
| Total | **26** | **56** | **82** |

| | | | |
|---|---|---|---|
| **South** | | | |
| enclisis | 14 (56%) | 46 (70.76%) | 60 |
| proclisis | 11 (44%) | 19 (29.23%) | 30 |
| Total | **25** | **65** | **90** |
| **North+Centre+South** | | | |
| enclisis | 46 (60.52%) | 133 (77.32%) | 179 |
| proclisis | 30 (39.47%) | 39 (22.67%) | 69 |
| Total | **76** | **172** | **248** |

Personal instances of *ci* are more numerous than non-personal ones in all the three geographical areas considered. The preference for enclisis is significantly higher for P(ersonal) *ci* than for non-P(ersonal) *ci*. This trend is particularly clear in the Centre. It is also attested in the South and in the whole peninsula, but not in the North.[9] Even in the case of P(ersonal) *ci*, in the Centre, in the South and in the whole country, however, we can see that the preference for enclisis is a preference, i.e. an optional phenomenon, since there is a substantial number of occurrences also in proclisis.

### 2.3.2 On *si*

A different picture emerges with *si*, as shown in Table 7 below:

**Table 7** Distribution for different uses of si

| **si** | | | |
|---|---|---|---|
| **North** | **IMP** | **REFL** | **Total** |
| enclisis | 11 (2.14%) | 162 (66.66%) | 173 |
| proclisis | 502 (97.85%) | 81 (33.33%) | 583 |
| Total | **513** | **243** | **756** |
| **Centre** | | | |
| enclisis | 12 (3.48%) | 142 (69.95%) | 154 |
| proclisis | 332 (96.51%) | 61 (30.04%) | 393 |
| Total | **344** | **203** | **547** |
| **South** | | | |
| enclisis | 5 (1.67%) | 128 (78.53%) | 133 |
| proclisis | 294 (98.32%) | 35 (21.47%) | 329 |
| Total | **299** | **163** | **462** |

**9** To highlight possible statistically significant differences we used Pearson's Chi-Squared Test.

| **North+Centre+South** | | | |
|---|---|---|---|
| enclisis | 28 (2.42%) | 432 (70.93%) | 460 |
| proclisis | 1128 (97.57%) | 177 (29.06%) | 1305 |
| Total | **1156** | **609** | **1765** |

With REFL *si*, we observe a clear preference for enclisis (North 66.66%; Centre 69.95%; South 78.53%; the whole country 70.93%). We also observe, however, that REFL *si* is well attested also in proclisis.

In the much more numerous cases of IMP *si*, instead, we observe that almost all occurrences are in proclisis (North 97.85%; Centre 96.51%; South 98.32%; the whole country 97.57%).

A closer inspection, furthermore, reveals that in the rare cases in which an IMP *si* occurs in enclisis, it always takes a passive reading, as in the example below:

| | | | | | |
|---|---|---|---|---|---|
| (4) [1259 Centre] | In | questa | didattica | a | distanza |
| | In | this | teaching | at | distance |
| | potrebbero | anche | veder=si | dei | vantaggi |
| | could | also | see.INF.=IMP | some | advantages |

'In this online teaching some advantages could also be seen.'

Some cases are ambiguous between a REFL interpretation and an IMP-passive one, although they have been classified as IMP not to underestimate this possibility:

| | | | | | |
|---|---|---|---|---|---|
| (5) [1754 Centre] | […] affinché | la | DAD | possa | svolger=si |
| | so that | the | OT | could | take-place.INF.=*si* |
| | senza | problemi | | | |
| | without | problems | | | |

'So that OT can proceed/be realized without problems.'

## 3 Summary and Discussion

The data presented so far highlight that, as far as *ci* is concerned, a clear preference for enclisis is observed when the pronoun is endowed with a P feature, while for non-P *ci* the preference for enclisis is not clear. As we mentioned, an exception to this generalization is found in the North **[tab. 6]**, where the preference for enclisis is strong also for non-P *ci*.

The data on *ci* partly differ from those on *vi* (Di Domenico 2025), where for non-P *vi* we observed a preference for proclisis.[10] However, the data on *ci* reveal a trend, also when compared to the data on *ne* of Di Domenico (2025), which revealed for this clitic a preference for enclisis significantly lower than the total preference (64% vs 78%). Assuming, with Cardinaletti and Giusti (1992; 2017), that *ne* lacks a person feature, the generalization can be drawn that in clitics endowed with a P(erson) feature, the preference for enclisis is stronger.

Additional data coming from Di Domenico (2025) go in the same direction. In specific, we observed that the preference for enclisis was significantly stronger for *mi* with respect to the total (87% vs 78%).

This raises the issue of what we mean by P. Manzini and Savoia (2004; 2007) clearly distinguish 1st and 2nd person clitics (P in their frame) from 3rd person clitics (N in their frame, a category in which also *ne* is included), Loc (*ci* in its non-personal use) and Q (*si*, variable).[11] With respect to the enclisis/ proclisis preference, the relevant distinction, instead, seems to single out clitics that refer to individuals from clitics referring to places, things, events or parts. The preference rates reported in Di Domenico (2025) for accusative and dative 3rdperson clitics, indeed, do not differ significantly from the total.

With this in mind, let us now consider the data concerning *si*. As shown in Table 7, a clear divide emerges between REFL *si* and IMP *si*. As for REFL *si*, we basically observed a proclisis/enclisis alternation, with a significant preference for enclisis.

A comparison with the data from Di Domenico (2025) reveals that the preference rate does not differ from that of *ne*, while it is significantly lower (p=.05) than the overall rate. In other words, REFL *si* can be grouped with non-P clitics.[12]

**10** The data are reported here below (adapted from Di Domenico 2025, Table 4):

| **vi** | **non-P** | **P** | **Total** |
|---|---|---|---|
| enclisis | 5 | 5 | 10 |
| proclisis | 13 (72.22%) | 4 (44.44%) | 17 |
| Total | 18 | 9 | 27 |

As the table shows, the data on *vi* are very few. In addition, as discussed in Di Domenico (2025, 146), the use of locative *vi* is limited to a very formal variety of Italian, a variety that the participants do not seem to master entirely.

**11** The labels, which also include D (for subject clitics) and R (which has specificity properties, and can host all clitics when they precede *si*), are ordered [D R Q P Loc N] in a clitic 'string' which repeats itself before V, I, and C in the clausal spine, accounting for ordering restrictions in a number of Romance varieties.

**12** Both IMP and REFL *si* are assumed to have a 3rd person feature (see e.g. Manzini 1986), although a 1st person plural interpretation may be associated with IMP *si*. To this end, we believe that the person feature of *si* is the one of the element it is interpreted in coreference with.

The generalisation that comes from the data is thus the following:

(6) Clitics endowed with a P feature preferably occupy a lower position (enclisis), while other clitics (referring to places, things, events, parts, or having a dependent variable interpretation) alternate more freely between proclisis and enclisis.

Assuming a monoclausal structure for restructuring sentences (Cinque 2004, 2006) and Cardinaletti, Shlonsky's (2004) proposal that there are two clitic positions in the clausal architecture to which clitics move (Kayne 1975; 1991), the generalization in (6) can be interpreted as follows: clitics endowed with a P feature tend to match the first available probe.[13] This in turn could be due to a sort of 'Earliness Principle', as the one proposed in Manzini (2022) for a different range of phenomena, which concerns the P feature only.[14] Clitics not endowed with a P feature, indeed, can more freely alternate between the two positions.

Let us now move to the data concerning IMP *si*. As we saw, a completely different picture emerges, summarized in (7):

(7) a. IMP *si* almost always occurs in proclisis
b. In the rare cases in which it does not, it entails a passive interpretation.

We may partially explain (7b) as the result of a 'default' interpretation. As Manzini (1986) noted, REFL *si* cannot be interpreted as co-referential with a derived subject. Whenever a derived interpretation of the subject is forced (as in (4) above), a REFL *si* interpretation is excluded. In the enclitic position, furthermore, *si* cannot be assigned nominative case, hence its passive interpretation.[15]

The a) part of (7) confirms what was observed by Berretta (1986). Instances of IMP *si* in the corpus are quite numerous, as we saw, so we may conclude that this observation is quite robust and reliable.

Two additional facts support it. The first one comes from the analysis of this same corpus and concerns the strings containing

**13** There are indeed alternative proposals on each of these issues, as the idea that restructuring sentences are bi-clausal (e.g. Manzini, Savoia 2004; 2007), that there are more than two clitic positions in the clause (e.g. Cinque 2006; Benincà, Cinque 2024), and that clitics are base-generated in the position where they surface (e.g. Manzini, Savoia 2004; 2007). For reasons of time and space, we will not review those proposals, nor justify our choices in the present lines.

**14** Earliness: Complete operations as early as possible in the derivation (Manzini 2022, 8).

**15** Along the lines of Belletti (1982), the active and passive impersonal constructions can be characterized in terms of the different case features (nominative and objective, respectively) of *si*.

the verb *riuscire* ('can, be able to, succeed'), which we analyse as an aspectual predicate (of the 'accomplishment' sub-class of Vendler 1967). Considering its distribution in the entire corpus, proclisis is always observed in sentences with 'riuscire' and IMP *si* (75 sentences), while there are only two occurrences in proclisis when considering clitics different from IMP *si*, in one case with *le* (8) and in one case with REFL *si* (9):[16]

| | | | | | |
|---|---|---|---|---|---|
| (8) [South 2070] | Le= | riusciamo | a | sfruttare | meglio |
| | 3.S.ACC= | be able.P.1.Pl | to | take advantage.INF | better |

'We are able to take advantage of them in a better way.'

| | | | | | | |
|---|---|---|---|---|---|---|
| (9) [North 589] | Si= | è | riuscito | a | creare | un |
| | 3.REFL= | is | be able.PsP.M.S. | to | create.INF | a |
| | rapporto | umano | tra | professore | e | studente |
| | relation | human | between | professor | and | student |

'A good relation between a student and a professor could establish itself.'

The other fact that supports the generalization that IMP *si* occurs (only) in proclisis comes from those varieties with (optional) clitic reduplication in restructuring sentences, which show a sharp dissociation in this respect: IMP *si* is the only clitic that cannot reduplicate. One such case is Perugino, a Central Italian dialect:[17]

(10) [Adapted from Di Domenico 2022, 6]

a.

| | | | |
|---|---|---|---|
| M= | eva | da | di=mme |
| 1.S.DAT= | have.PS.3.S | to | tell.INF.=1.S.DAT |
| na | cosa | | |
| a | thing | | |

'(S)he had to tell me something.'

b.

| | | | |
|---|---|---|---|
| Te= | voleo | chiede=te | questo |
| 2.S.DAT= | want.PS.1.S | ask.INF.=1.S.DAT | this |

'I wanted to ask you this.'

**16** In (9), *si* is analyzed as REFL because of the agreement on the participle, masculine singular as *un rapporto umano*. If *si* were IMP, the agreement on the participle would be *riusciti*, an instance of default masculine plural, unspecified for number/gender according to Manzini (1986, 242).

**17** However, other varieties (e.g. Cairese, Parry 1995) with object clitic reduplication allow reduplication also with IMP *si*. However, to our knowledge, they do not allow a single occurrence of IMP *si* in enclisis.

| | | | | |
|---|---|---|---|---|
| c. | Alora | j= | ebbe | da |
| | So | 3.S.DAT= | have.PS.3.S | to |
| | pia=je | n | colpo | |
| | take. INF.=3.DAT | a | stroke | |
| | 'So (s)he was going to collapse.' | | | |
| d. | Se= | volea | riposa=sse | |
| | 3.REFL= | want.PS.3.S | rest.INF.=3.REFL | |
| | '(S)he wanted to have a rest.' | | | |
| e. | N | ne= | posso | fa=nne |
| | Not | PART= | can.P.1.S | do.INF.=PART |
| | tante | | | |
| | many.F | | | |
| | 'I can't do many of them/I can't do many things.' | | | |
| f. | C= | evo | da | gi=cce |
| | LOC= | have.PS.1.S | to | go.INF.=LOC |
| | 'I had to go there.' | | | |
| g. | * S= | a | da | fa=sse |
| | IMP= | have.P.3.S | to | do.INF.=IMP |
| | 'One must do it.' | | | |
| h. | * A | da | fa=sse | |
| | have.P.3.S | to | do.INF.=IMP | |
| | 'One must do it.' | | | |
| i. | S= | a | da | fa |
| | IMP= | have.P.3.S | to | do.INF |
| | 'One must do it.' | | | |

IMP *si*, thus, seems to be tied in a special way to the sentential subject position. We may characterize this special linking assuming a [Subjecthood] feature for IMP *si*. This feature should also be part of the higher clitic position/string, differentiating it from the post-infinitival one. The two strings/positions, thus, cannot be identical (see fn. 10 above). When *si* is in enclisis, the only possible interpretation is passive, *si* bearing objective case.[18]

**18** Of course, a passive reading of *si* is also possible when *si* is not in enclisis:

(i) Le patate si dovranno mangiare domani
'Potatoes shall be eaten tomorrow'

We assume that also in this case passive *si* bears objective case, following Belletti's (1982) proposal for non-restructuring impersonal constructions.

## 4 Conclusions

In this work, we have examined the occurrences of *ci* and *si* in restructuring sentences in a corpus containing written texts produced by Italian university students in different areas of the country. The data on *ci* and *si* have been compared to previously collected data (Di Domenico 2025) concerning *vi* and *ne*, as well as accusative and dative 3rd person clitics. The question addressed here is whether the preference for enclisis or proclisis would differ depending on the kind of clitic involved, in its specific value. The present analysis, thus, adds a novel factor (kind of clitic, in its specific value) to the debated issue of the preference for enclisis or proclisis and of the factors related to it. To this end, we have distinguished a *ci* endowed with a P feature from a *ci* not endowed with it. In the case of *si* we have distinguished an IMP(ersonal) *si* (subsuming also its middle and passive value) and a REFL(exive) *si* (subsuming also its benefactive and inherent value). The data analysis has highlighted two independent (but related) generalizations. The first one suggests a distinction between clitics endowed with a P feature and clitics not endowed with it. Clitics endowed with a P feature show a consistent preference for enclisis, while for the clitics not endowed with a P feature the preference for enclisis is less consistent or absent. We have interpreted this observation as suggesting that clitics endowed with a P feature tend to match the first available probe.

The other generalization concerns IMP(ersonal) *si*. Besides confirming, on a more robust data base, Berretta's (1986) observation that impersonal *si* almost always occurs in proclisis, it highlights that whenever IMP *si* does not occur in proclisis (few cases in the corpus, indeed) it invariably entails a passive reading. We have proposed therefore that IMP *si* is endowed with a [Subjecthood] feature that must be checked/valued in the sentential subject position to which IMP *si* is forced to move, or to be in chain with, the latter case driving its passive interpretation. The two generalizations highlight, on the one hand, some preferences within an essentially optional phenomenon (enclisis vs. proclisis) and, on the other hand, the sharp restriction concerning IMP *si*.

## Bibliography

Belletti, A. (1982). "'Morphological' Passive and Pro-Drop: The Impersonal Construction in Italian". *Journal of Linguistic Research,* 2, 1-34.

Benincà, P. (1986). "Punti di sintassi comparata dei dialetti italiani settentrionali". Holtus, G.; Ringger, K. (eds), *Raetia Antiqua et Moderna: W. Theodor Elwert zum 80. Geburtstag*. Tübingen: Niemeyer, 457-79.

Benincà, P.; Cinque, G. (2024). "The Syntax of Romance Clitics and Selective Clitic Climbing". Bocci, et al. (eds), *Rich Descriptions and Simple Explanations in Morphosyntax and Language Acquisition.* Oxford: Oxford University Press, 305-33.

Bennati, E.; Matteini, S. (2006). "Object Clitic Climbing in L2 Learners of Italian". Belletti, A. et al. (eds), *Language Acquisition and Development. Proceedings of GALA 2005*. Newcastle upon Tyne: Cambridge Scholars Press, 35-48.

Bernardini, P.; van der Weijer, J. (2018). "On the Direction of Cross-Linguistic Influence in the Acquisition of Object Clitics in French and Italian". *Language, Interaction and Acquisition*, 8(2), 204-33. https://doi.org/10.1075/lia.16005.ber.

Berretta, M. (1986). "Struttura informativa e sintassi dei pronomi atoni: Condizioni che favoriscono la 'risalita'". Stammerjohan, H. (ed.), *Tema/Rema in italiano*. Tübingen: Narr, 71-83.

Bonet, E. (1995). "Feature Structure of Romance Clitics". *Natural Language and Linguistic Theory* 13, 607- 47. https://doi.org/10.1007/BF00992853.

Cardinaletti, A.; Cerutti, S.; Volpato, F. (2024). "On the Acquisition of Clitic Placement in Restructuring: A Study on Monolingual Italian Children". *Isogloss*, 10(4), 1-30. https://doi.org/10.5565/rev/isogloss.312.

Cardinaletti, A.; Giusti, G. (1992). "Partitive *ne* and the QP- Hypothesis". Fava, E. (ed.), *Proceedings of the XVII Meeting of Generative Grammar.* Torino: Rosemberg & Sellier, 121-41.

Cardinaletti, A.; Giusti, G. (2017). "Quantified Expressions and Quantitative Clitics". Everaert, M. and van Riemsdijk, H. (eds), *The Wiley Companion to Syntax*. London: John Wiley & Sons, 1-61. https://doi.org/10.1002/9781118358733.wbsyncom063.

Cardinaletti, A.; Giusti, G.; Lebani, G. (2025). "Clitic Climbing across Italy. Variation, Optionality, and the Role of Bilectalism". *Linguistic Variation*, 26(1), 76-96. https://doi.org/10.1075/lv.24065.car.

Cardinaletti, A.; Shlonsky, U. (2004). "Clitic Positions and Restructuring in Italian". *Linguistic Inquiry*, 35, 519-57. https://doi.org/10.1162/0024389042350523.

Cinque, G. (1988). "On Si Constructions and the Theory of Arb". *Linguistic Inquiry*, 19, 521-81.

Cinque, G. (2004). "Restructuring' and Functional Structure". Rizzi, L. (ed.), *The Structure of CP and IP.* New York: Oxford University Press, 132-91. https://doi.org/10.1093/oso/9780195171976.003.0005.

Cinque, G. (2006). *Restructuring and Functional Heads: The Cartography of Syntactic Structures vol. 4.* New York: Oxford University Press. https://doi.org/10.1093/oso/9780195179545.001.0001.

Di Domenico, E. (2022). "Object Clitic Reduplication in Perugino". *Languages*, 7, 262. https://doi.org/10.3390/languages7040262.

Di Domenico, E. (2025). "Preferenze per enclisi o proclisi nelle frasi complesse con verbi a ristrutturazione". Grandi, N. (ed.), *L'italiano scritto degli studenti universitari. Quadro sociolinguistico, tendenze tipologiche, implicazioni didattiche*. Milano: FrancoAngeli, 133-50.

Egerland, V. (2009). "La doppia base della ristrutturazione". Cardinaletti, A.; Munaro, N. (a cura di), *Italiano, italiani regionali e dialetti.* Milano: FrancoAngeli, 99-114.

Grandi, N.; Ballarè, S.; Chiusaroli, F.; Gallina, F.; Pascoli, M.; Pistolesi, E. (2023). *Corpus Univers-ITA.* https://doi.org/10.60760/unibo/univers-ita.

Kayne, R. (1975). *French Syntax: The Transformational Cycle.* Cambridge, MA: The MIT Press.

Kayne, R. (1991). "Romance clitics, verb movement and PRO". *Linguistic Inquiry*, 22, 647-86.

Manzini, M.R. (1986). "On Italian *Si*". Borer, H. (ed.), *Syntax and Semantics 19: The syntax of pronominal clitics*. New York: Academic Press, 241-62. https://doi.org/10.1163/9789004373150_011.

Manzini, M.R. (2022). "Romance Pronominal Clitics as Pure Heads". *Journal of Linguistics*, 1-31. https://doi.org/10.1017/S0022226722000159.

Manzini, M.R.; Savoia, L. (2004). "Clitics: Cooccurrence and Mutual Exclusion Patterns". Rizzi, L. (ed.), *The Structure of CP and IP*. Oxford: Oxford University Press, 211-50. https://doi.org/10.1093/oso/9780195159486.003.0008.

Manzini, M.R.; Savoia, L. (2007). *A Unification of Morphology and Syntax: Investigations into Romance and Albanian Dialects.* London; New York: Routledge. https://doi.org/10.4324/9780203968154.

Parry, M. Mair (1995). "Some Observations on the Syntax of Clitic Pronouns in Piedmontese". Maiden, M.; Smith, J.C. (eds), *Linguistic Theory and the Romance Languages: Current Issues in Linguistic Theory*. Amsterdam: John Benjamins, 133-60. https://doi.org/10.1075/cilt.122.06par.

Pescarini, D. (2015). *Le costruzioni con 'si'. Italiano, dialetti e lingue romanze.* Roma: Carocci.

Rizzi, L. (1976). "Ristrutturazione". *Rivista di Grammatica Generativa*, 1, 1-54.

Rohlfs, G. (1968). *Grammatica storica dell'italiano e dei suoi dialetti. Morfologia.* Torino: Einaudi.

Vendler, Z. (1967). "Verbs as Times". *Linguistics and Philosophy.* Ithaca: Cornell University Press.

Wanner, D. (1977). "On the order of clitics in Italian". *Lingua*, 43, 101-28. https://doi.org/10.1016/0024-3841(77)90007-9.

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# The Definite Articles of Vocatives

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**Abstract** This paper discusses the internal structure of vocative phrases in Romanian by focusing on the status of definite articles. The main observation: the option for a vocative noun with or without a definite article is not free but depends on the speaker's assessment of his/her relations with the interlocutor: (in)formality, social or physical distance, authority, disapprobation and so on. The proposal is that, in certain vocative phrases, the definite article becomes a spell-out for an interpersonal feature encoding (in)formality, and this property arises from an upward reanalysis of the article which merges in Voc instead of D.

**Keywords** Vocatives. Definite articles. Romanian. Interpersonal relations. Addressee.

**Summary** 1 Introduction. – 2 Background. – 3 Vocative Case Endings. – 4 Definite Articles. – 5 Formal Approach. – 6 Conclusions.

## 1 Introduction

Many formal studies have acknowledged the impact of the discourse on the syntactic derivation of sentences.[1] In particular, it has been shown that particles expressing speaker's intentions, injunctions, ostensivity or modality qualify as syntactic items that indicate the mapping of conversational pragmatic features to syntax (Cardinaletti 2007; 2011; Coniglio 2007; Haegeman 2014; Hill 2007; 2014 a.o.).

**1** I have always considered Anna a model of professionalism and integrity, and I am so grateful for her friendship. Her important research work will continue to inspire new generations of linguists.

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Vocatives also belong to this set, and have been used for diagnostic tests in conjunction with the above particles to establish the type of pragmatic features converted to formal features and the location of such features on the clausal spine (Haegeman, Hill 2013; Miyagawa 2012 a.o.). However, when it comes to vocatives, questions were raised not only regarding their location on the clausal spine, but also their internal structure: how does a noun become a direct address?

Several studies considered this question, and the general consensus is that the noun projects a functional extra-layer, and the address effect arises from the mapping of an addressee-like feature in this functional field (Espinal 2013; Hill 2010; Stavrou 2014). However, although the addressee feature proved to be a necessary condition for deriving vocatives cross-linguistically, it was not sufficient to account for variations in the morpho-syntax of vocative phrases that could be related to the social standing of the interlocutors. In this respect, some studies also argued for the mapping of features relevant to the social ground, in addition to the addressee (Hill 2014; Kumari, Wiltschko 2023 a.o.).

This paper contributes information that confirms the syntactic encoding of the social standing of the interlocutors, in addition to the addressee feature. Empirical evidence comes from the possibility of having definite articles with vocative nouns in Romanian, as in (1a, b): in the address in (1a) the bare vocative noun refers to the speaker's mother, whereas in (1b), with the addition of the definite article, the vocative is identificational and refers to the mother of the baby, not of the speaker.

(1) a. Mamă, plec imediat.
mother leave.1SG immediately
'Mother, I'm leaving right away.'

b. Mam**a**, ia bebeluşul.
mother.the take.IMP.2SG baby.the
'Mother, pick up your baby.'

Briefly, this paper shows that the option for definite articles with vocative nouns depends on the established interpersonal relation between speaker and addressee, or the family ranking. The distribution of definite articles in such contexts is syntactically constrained, showing restrictions on coordination, phrase complexity and the type of movement. The syntactic behavior indicates the upward re-analysis of the definite article and its use as the spell-out of the interpersonal feature, after being stripped of the 3rd person feature (i.e., the definite article becomes a pragmatic particle).

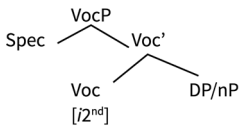
The discussion developed along these lines establishes two derivational patterns that transcend the semantic classification of

vocatives (e.g., as identificational, expressive, bonding etc.): one pattern in which the definite article is used as a D element, and one in which the definite article is reanalyzed as a dedicated vocative morpheme. Each pattern pairs systematically with interpretive effects that indicate the type of social relations rather than the semantic type of vocative phrases.

## 2 Background

Previous formal studies on the structure of vocatives agree that the vocative reading arises from the projection of an extra-layer at the left periphery of DP > nP. That is where an interpretable formal feature is introduced to map the collocutor. For convenience, this feature is labeled as 2nd person, since it conveys the engagement of the addressee; the domain in which the feature is introduced has the label VocP in Hill (2013), Espinal (2013), Stavrou (2014), among others, as shown in (2). Different labels and representations have also been proposed (a third DP layer in Bernstein 2023; Ground-addr layer in Kumari, Wiltschko 2022), but the basic idea remains.

(2)




For the configuration in (2), some studies propose only head-to-head movement by the noun to Voc (Espinal 2013 a.o.) to derive constructions as in (3).[2] Alternatively, other studies (Hill 2014 a.o.) show that DP-to-Spec,VocP movement is also possible, in constructions as in (4), with the same interpretive effect.

(3) Waiter! versus *The waiter!

(4) [The students from France], please fill out the form.

The obligatory deletion of the definite article with vocatives as in (3) is considered evidence for N-to-Voc, whereby the definite article *the* in D would be an intervener (Bernstein 2008 a.o.). However, if the

**2** For Espinal (2013), phrasal movement as supposed in (4) derives 'fake vocatives' as opposed to 'true vocatives' which arise from head-to-head movement. For Hill (2014), all vocatives are equal, as forms of address, the derivational variation depending on phrasal complexity.

entire DP moves to Spec, VocP, as in (4), the article can stay in place within the moved DP.

Accordingly, the prediction is that languages in which the definite article is not a prenominal free morpheme, and hence, not an intervener, should display it with vocatives. A number of Balkan languages (including Romanian) would fall under this prediction, since their definite articles are post-nominal bound morphemes. Along these lines, the vocative form in (1b) is unexceptional.

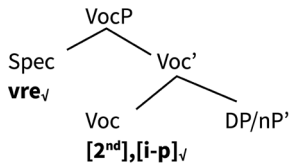
However, by the same rationale, Romanian vocatives should systematically display definite articles when N-to-Voc takes place, since vocatives are inherently specific (Hill 2007) and definite articles are not interveners. From this perspective, (1a) should be the anomaly, not (1b), contrary to the fact. Furthermore, a cursory look at the use of vocatives in Romanian shows that the use of the definite article seems aleatory with these forms (Croitor, Hill 2013), which creates annoyance for second language learners.

Why is the definite article not systematic with Romanian vocatives? The answer provided in this paper is that the definite article should be included in the class of particles that encode, within the VocP, the interpersonal relation between speaker and addressee; hence, it is used according to the speaker's intention to resort to informality. More precisely, previous studies argued for a formal feature that encodes the interpersonal relation between speaker and addressee, in addition to the [2nd p] on the Voc head in (2). Such feature is labelled [i-p] in Hill (2013) or Ground-speaker in Kumari, Wiltschko (2022). Evidence came especially from particles that establish the degree of familiarity, such as Gr. *vre*, Bulg. *be* or Rom. *bre* in (5), and which were shown in constituency tests to belong to the VocP, not to the clausal spine (Hill 2014). The relevant nouns are interpreted as vocatives with or without the particle of address; however, the type of familiarity would be missed.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| (5) | a. | Vre | jaja, | ti | kanis | eki? | Greek |
| | | PRT | grandma | what | do | there | |
| | | 'Grandma, what are you doing there?' | | | | | |
| | b. | Stefane**be**, | | dai | mi | go. | Bulgarian |
| | | Steven.VOC.PRT | | give.2SG.IMP | to.me | it | |
| | | 'Steven, give it to me.' | | | | | |
| | c. | **Bre** | mamaie, | un'te | duci? | | Romanian |
| | | PRT | grandma.VOC | where-REFL.2SG | go.2SG | | |
| | | 'Grandma, where are you going?' | | | | | |

The context of use and the morpho-syntax of such particles cross-linguistically led to the revision of (3) as shown in (6).

(6)




Considering (6), the task is to demonstrate that the definite article may also check (and value) [i-p], on a par or in conjunction with the dedicated vocative particles such as *vre*.

It would not be for the first time that the presence of a definite article with vocatives is related to the type of social relations between the interlocutors, since it has been already signaled not only for Romanian, but also for French (Coene et al 2019) and for Bedouin Jordanian (Jaradat et al. 2022). The task of this paper is to show that the relation between the definite article and the social context has a syntactic impact. That is, one may suppose that the option in (1), between a bare vocative noun and a vocative with definite article, concerns only a lexical option (i.e., inflected or non-inflected noun) and that the ensuing interpretation arises from the principle of compositionality. This paper will show, however, that syntax is involved, and that the option for definite articles with vocative nouns has an impact on the derivational pattern.

## 3 Vocative Case Endings

The use of definite articles often involves vocative forms with case inflection. Hence, this section presents the morpho-syntactic properties and the context of use for nouns with vocative case inflection.

All languages have vocatives, but only some may also have vocative case inflection or marking through dedicated morphemes. Cross-linguistically, when such marking is not compulsory, the option for having or not having it depends on the speaker's intention to qualify the interpersonal relation, as shown in (7) for Fuyang Wu (a Chinese language) with the name *Amin* and for Romanian in (8) with the name *Dan*.

| | | | | |
|---|---|---|---|---|
| (7) | a. | /aʔ.miŋ/ | Zero marker | = social distal: cold, unfriendly |
| | b. | /aʔ.miɛŋ/ | Rhyme-change marker | = neutral, friendly |
| | c. | /aʔ.miŋ.ue/ | Suffix marker | = physical distance, informal |

(from Tanaka 2020)

| | | | | | |
|---|---|---|---|---|---|
| (8) | a. | Dan, | vino | azi. | = neutral |
| | | Dan | come.IMP.2SG | today | |
| | | 'Dan, come today.' | | | |
| | b. | Dan**e**, | vino | azi. | = informal |
| | | Dan.VOC | come.IMP.2SG | today | |
| | | 'Dan, come today.' | | | |

In (7), the dedicated vocative markers are coupled with certain interpretations of the social standing of the collocutors. The vocative case ending in (8) has a similar effect: the unmarked form *Dan* in (8a) is sufficient to check the 2nd person of Voc, but gives no information w.r.t the interpersonal relation – only the intonation and the context may fill out that gap. Conversely, the marked form *Dane* in (8b) forces informality, irrespective of intonation (see also Bucci 2018).

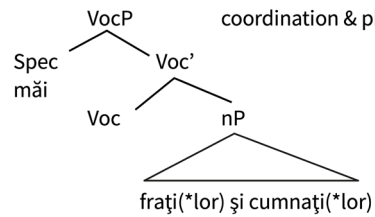
Acknowledging that vocative case endings produce a change in the interpretation of the interpersonal relation does not necessarily mean that syntax is involved: this could be just a matter of selection of (un)inflected forms from the lexicon. In this respect, syntactic tests are in order, as in (9) to (12).

A coordination test as in (9) shows restrictions that indicate syntactic processing (see also Croitor, Giurgea 2024).

| | | | | | | |
|---|---|---|---|---|---|---|
| (9) | a. | măi | fraţi | şi | (*măi) | cumnaţi, … |
| | | PRT | brothers | and | PRT | brothers-in-law |
| | b. | *? măi | fraţilor | şi | cumnaţilor | |
| | | PRT | brothers.the.voc | and | brothers-in-law.the voc | |
| | c. | fraţilor, …/ | | cumnaţilor,… | | |
| | | brothers.the.voc | | brothers-in-law.the.voc | | |

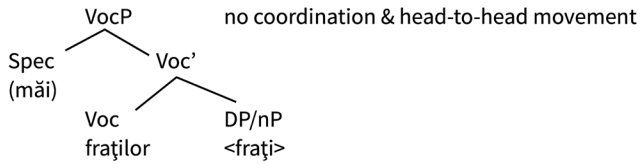
In (9a), the vocative particle *măi* is in Spec, VocP (tested in Hill 2014). The coordination cannot be between two VocPs, because the repetition of the particle is disallowed. So, it has to be a coordination of two nouns under a coordination phrasal structure, and as such, it cannot move to the head Voc. Crucially, the coordinated nouns have to be bare stems as long as the addressees are brothers of the speaker. Inflecting these nouns for vocative case, as in (9b) does not work. If they are inflected for case, they are recursive not conjoined, as in (9c). Hence, this is syntax: lack of inflection signals, generally, less informality unless *măi* is present, the nouns may be coordinated and the phrasal construct checks the features of Voc through long distance agree as in (10).

(10)




Presence of inflection signals social proximity, the vocatives can be inflected and head-to-head movement applies as in (11).

(11)




Another test for the syntactic impact of the pairing between vocative case inflection and the interpersonal reading comes from adjectival modification. As shown in (12), adjectives force a phrasal analysis of the vocative, on the pattern in (10), but with movement.

(12) a. Prieten bun, ne cunoaştem de-o viaţă… = more formal
friend good REFL.1PL know.1PL of-a life
'My good friend, we've known each other for a life time…'
b. *Prietene bun,….
friend.VOC good
c. Prietene, ne cunoaştem…. = informal
friend.VOC REFL.1PL know.1PL

In (12a), the vocative *prieten bun* 'friend good' moves as a phrase to Spec, VocP. The same cannot take place in (12b), where the vocative case ending is added to the noun: phrasal movement prevents the contact between the noun and the Voc head (where case is spelled out), hence the ungrammaticality of (12b). On the other hand, omission of the adjective in (12c) goes hand in hand with head-to-head movement, and the spell-out of the vocative case is allowed. When it comes to the interpretation, (12a) has a degree of formality and is appropriate as an address in letters or written messages, whereas (12c) entails informality and physical proximity.

To conclude this section, the option for a noun inflected for vocative case has an impact not only on the interpretation of the interpersonal

relations but also on the syntactic behavior of the relevant form by restricting the type of movement. The addition of a definite article to the inflected forms is thus expected to also conform to the syntactic conditions that restrict the internal organization of vocative phrases.

## 4 Definite Articles

According to previous studies, in languages with prenominal articles, such as English or Italian, vocative nouns cannot be preceded by definite articles for two reasons (Bernstein 2008): (i) as a free morpheme in D, the article blocks N-to-D, which is obligatory for the derivation to converge; and (ii) the article comes with an intrinsic 3rd person feature that clashes with the 2nd person feature required for a vocative reading, so it has to be deleted.[3] According to condition (i), Romanian vocatives should always exhibit definite articles, since they cause no interference with N-to-D. Nevertheless, condition (ii) rules out the definite article on a systematic basis and independently of N-to-D/Voc. Crucially, Romanian vocatives challenge both predictions since they may or may not display definite articles even when N-to-Voc takes place (vs DP to Spec, VocP). Consider (13) where all four forms of the noun qualify as vocatives, irrespective of whether the noun displays a bare form (13a), a vocative case ending (13b), a definite article (13c) or a combination of all the above (13d). Notably, each form infers different degrees of familiarity and social expectations.

| | | | | |
|---|---|---|---|---|
| (13) | a. | măi | băiat | unmarked noun |
| | | PRT | boy | |
| | b. | băiet**e** | | noun + vocative case |
| | | boy.voc | | |
| | c. | băiat**u**’ | | noun + def. article |
| | | boy.the | | |
| | d. | băiat**ule** | | noun + def. article + vocative case |
| | | boy.the.voc | | |

Table 1 sums up the general relations between vocative forms and interpretation.

**3** Ledgeway (2012) points out that definite articles in Romance languages descend from demonstratives and preserve the 3rd person feature. See similar remarks for English *the* in Bernstein 2008.

**Table 1** Romanian vocative forms

| Form | Interpretation |
|---|---|
| Bare noun | formal, neutral, unfamiliar |
| Noun stem + vocative case | informal, familiarity |
| Noun stem + definite article | distance (social, spatial), familiar calls |
| Noun stem + definite article + vocative case | very familiar, disapprobation |

Not every vocative noun can occur with all the forms in Table 1, although some do. This is a fluid situation that depends a lot on diachronic changes and regional variations. Also, there are tendencies for some forms to be used rather for calls than for addresses, or for certain types of vocatives, but there is no systematic pattern in this respect. In other words, there is a weak correlation between the nominal form and the vocative type it conveys. For example, in (14), the same vocative form is compatible with a call function (14a), a familiar address (14b) or a bonding effect (14c). In a call, the vocative identifies the referent that becomes the speaker's addressee. For attention drawing calls, the identification is not necessary, the addressee is only reactivated. Bonding vocatives cover all other types of address for persuasion, evaluation, disapprobation and so on, and may surface in any position in the clause.[4]

(14) a. Fetele, treceţi la dreapta. = identification call
girls.the go.IMP.2PL to right
'Girls, go on the right.'

b. Fetelor, treceţi la dreapta. = attention drawing call
girls.the.VOC go.IMP.2PL to right
'Girls, go on the right.'

c. Bine, hai, la treabă, fetele/ fetelor. = bonding
good PRT to work girls.the/ girls.the.VOC
'Ok, to work now, girls.'

On the other hand, the same type of vocative, e.g. an identification call, could be expressed by three noun forms, as in (15).

(15) a. [Domnişoară], reveniţi, nu puteţi trece. = neutral, polite
miss return.IMP.2PL not can.2PL pass
'Miss, turn back, you cannot pass.'

**4** For an ample discussion of semantic types of vocatives in Romanian see Croitor, Giurgea 2024.

b. [Domnişoara], reveniţi, nu puteţi trece. = formal, authority
miss.the return.IMP.2PL not can.2PL pass
'Miss, turn back, you cannot pass.'

c. [Domnişoaro], nu vezi, nu poţi să treci. = disapprobation
miss.the/VOC not see.2SG not can.2SG SBJV pass.2SG
'Miss, can't you see, you can't pass.'

The bare noun in (15a) signals a polite address; the definite article on the same stem in (15b) signals a call from a position of authority, diminishing the status of the addressee; whereas the fused definite article with the vocative case ending in (15c) indicates a condescending address to a female whom, by her aspect, the guard does not consider worth of respect, or worth to be called 'miss'. Hence, the verbs display the politeness 2nd plural in (15a, b), but the singular in (15c).

## 5 Formal Approach

The main question arising from these data concerns the compatibility of the definite article with the vocative, considering that the article has an intrinsic 3rd person feature whereas vocatives entail a 2nd person feature associated with the noun. Furthermore, articles are generally irrelevant to the interpretation of the proposition beyond contributing specificity, whereas in vocative phrases they determine the interpretation of the social relation in addition to the specific reading.

The approach to this issue relies on the observation that Voc may subsume the function of D when it comes to licensing the noun as a syntactic object. That is, VocP is the functional field that ensures argument-hood to the noun, by merging with a head of the clausal spine that assigns it a role (i.e. the pragmatic role of addressee) and a structural case (Hill 2014). The mechanics of VocP licensing by merging on the clausal spine fall beyond the foregoing discussion, but the point is that, when deriving the vocative phrase, it is possible to skip the projection of a DP layer, so a VocP > nP hierarchy is possible. This hierarchy has been argued for independently in Espinal (2013), Hill (2014), Stavrou (2014) among others for constructions with simple vocatives.

In a VocP > nP hierarchy, the definite article necessarily merges directly in Voc. The inference is that in such contexts the article does not come with its inherent 3rd person feature. In other words, the article is reanalyzed upwards in the nominal hierarchy as a marker for the [i-p] feature of Voc after being stripped of the person feature. Confirmation comes from data as in (16) and (17).

| | | | | | | |
|---|---|---|---|---|---|---|
| (16) | a. | (*Măi) | fete**le**, | treceţi | la dreapta. | DP-to-Spec,VocP |
| | | PRT | girls.the | go.IMP.2PL | to right | |
| | | 'Girls, go on the right.' | | | | |
| | b. | (Măi) | fete**lor**, | treceţi | la dreapta. | N-to-Voc |
| | | PRT | girls.the.VOC | go.IMP.2PL | to right | |
| | | 'Girls, go on the right.' | | | | |
| | c. | [Fetele din spate], | | treceţi | la dreapta. | DP-to-Spec,VocP |
| | | girls.the from back | | go.IMP.2PL | to right | |
| | | 'The girls from the back (of the room), go on the right.' | | | | |
| | d. | *[Fetelor din spate], | | treceţi | la dreapta. | *N-to-Voc |
| | | girls.the.VOC from back | | go.IMP.2PL | to right | |

In (16a), the vocative noun *fetele* 'girls' displays the definite article and cannot cooccur with the vocative particle *măi*. However (16b) shows that the particle is semantically compatible with this noun, only that the noun inflection must be different. In the hierarchy in (6), *măi* occupies the Spec, VocP position. Accordingly, the grammaticality contrast between (16a) and (16b) arises from a competition between *măi* and 'the girls' for the Spec, VocP position in (16a), in this particular case, whereas in (16b) 'girls' undergoes head-to-head movement and allows the particle in the Spec. So, for (16a), the article is in D and the movement must be phrasal, as DP to Spec, VocP. On the other hand, in (16b), the article merges directly in Voc, and n-to-Voc occurs. Consequently, (16c) aligns with (16a) insofar as phrasal movement applies in the absence of *măi*, whereas the form with the reanalyzed article in (16d) is incompatible with phrasal movement.

Note, however, that the complementary distribution between *măi* and a DP in addresses (vs calls) is a general but not a strict rule, and exceptions may be found. That is, some speakers may allow for co-occurrence in some contexts (e.g., *măi flăcău' tatii* 'PRT young-man. the father.GEN'/'father's young man,…'). In these constructions, *măi* merges in Spec, VocP and agrees with the DP in situ (no DP to Spec, VocP movement). However, the intonation contour differs from the examples in (16), introducing an admonishing tone.

Another source of evidence for the direct merging of the definite article in Voc comes from the names of persons used as vocatives, as in (17b).

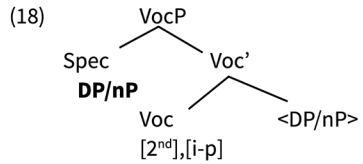
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| (17) | a. | Ionel(*ul) | a | venit | repede. | | |
| | | Ionel.the | has | come | fast | | |
| | | 'Ionel came right away.' | | | | | |
| | b. | Ionel, | Ionelule, | ce | mai | faci | băiatule? |
| | | Ionel | Ionel.the.VOC | what | more | do.2SG | boy.the.VOC |
| | | 'Ionel, Ionel, how are you, my boy?' | | | | | |

Romanian names disallow articles in all environments except for vocatives, as shown in (17a) versus (17b). (17a) shows that when names qualify as DPs (vs VocPs), they disallow articles. The definite article on the name in (17b) indicates that the name meets with the article somewhere else, not in D, and the Voc head is the alternative. Even the philological studies suggest analyses to that effect for the vocatives of the Balkan languages. Schnelzer (2024) reports that some studies argue that these endings on vocative names did not even originate from the article, but from the reanalysis of some complaint particle (e.g. Bulg. *lele*). The point is that, intuitively, the properties associated with the definite articles on names were felt to be different from the properties expected from a regular definite article. The formal account proposed here makes sense of that suggestion since upward reanalysis to Voc (with the elimination of D) has the feature stripping effect.

This discussion leads to a refinement of the hierarchy in (6), as it distinguishes between two patterns that match structure and interpretation, and both rely on the status of the definite article as either D or Voc. When the article merges in D, the vocatives display phrasal movement or distance agree by which the DP checks the features of Voc, as in (18). Generally, the [i-p] feature in these configurations is underspecified, as in (4), although a familiarity reading may arise contextually (e.g., lexical selection as in *fetele* 'girls.the' vs *domnii* 'gentlemen.the' used in calls). On the other hand, when the definite article merges in Voc, where it combines with the vocative case ending, head-to-head movement or distance agree ensues, as in (19), and the reading is obligatorily informal irrespective of the lexical selection.

➢ Phrasal movement

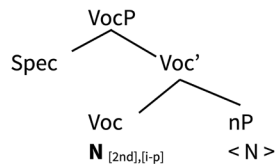
(18)




[i-p] is underspecified

➢ Head-to-head movement

(19)




[i-p] specified as informal

→ no DP field

Crucially, in the presence of definite articles on the vocative noun, the option for the derivational pattern in (18) or (19) depends on the value of the [i-p] feature: an underspecified [i-p] may select a DP (the article in D) with phrasal movement (irrespective of whether the noun is or is not modified); whereas an [i-p] specified for informality triggers a derivation without a DP field, where the article is in Voc and the noun cannot be modified. Notably, the readings predicted by these syntactic patterns may be trumped by lexical choices and contextual grounding, which allow for variation in the interpretation of the [i-p] feature. However, the syntactic patterns that underlie any vocative phrase remain constant, constraining the derivations as either in (18) or in (19).

## 6 Conclusions

The objective of this paper was to account for the use of definite articles with vocative nouns in Romanian, and to show that such use confirms the presence of a formal interpersonal feature in the bundle of formal features associated with Voc. The evidence for that came not only from variations in the noun inflection but also from syntactic restrictions on coordinating structures, modifiers and types of movement. I used the [i-p] label for that feature; other researchers may have their own proposals. The predictable question is whether the effects of [i-p] are limited to Romanian or may be generalized cross-linguistically. The analysis in (18)/(19) allows for a cross-linguistic extension of the [i-p] on Voc, with variation arising from the (under)specified value of this feature. This is the point where culture and language meet: some languages provide more explicit morpho-syntactic encoding of the type of interpersonal relations, and the underlying syntactic structure allows for typological changes in this respect.

## Bibliography

Bernstein, J. (2008). "English *th-* forms". Klinge, A.; Müller, H.H. (eds), *Essays on Nominal Determination*: *From Morphology to Discourse Management*. Amsterdam: John Benjamins, 213-32.

Bucci, G. (2018). *Il fenomeno del nominativo pro vocativo in greco, latino, ittita e rumeno* [tesi di dottorato]. Roma: Sapienza University of Rome.

Cardinaletti, A. (2007). "Für eine syntaktische Analyse von Modalpartikeln". Thüne, E.M.; Ortu, F. (Hrsgg.), *Gesprochene Sprache und Partikeln*. Frankfurt: Peter Lang, 89-101.

Cardinaletti, A. (2011). "German and Italian Modal Particles and Clause Structure". *The Linguistic Review,* 28, 493-531.

Coene, M.; D'Hulst, Y.; Tasmowski, L. (2019). "*Allez, (mon) chou, on y va!* Twenty Years Later: Revisiting the Puzzle of French Vocatives". *Bucharest Working Papers in Linguistics*, 21(2), 101-20. https://doi.org/10.31178/BWPL.21.2.5.

Croitor, B.; Hill, V. (2013). "Vocative Phrases". Dobrovie-Sorin, C.; Giurgea, I. (eds), *The Essential Grammar of the Romanian Language (volume 1: DPs)*. Amsterdam: John Benjamins, 657-78.

Croitor, B.; Giurgea, I. (2024). "On Definiteness and Person in Romanian Vocatives". *Glossa: A Journal of General Linguistics*, 9(1), 1-41. https://doi.org/10.16995/glossa.15522.

Espinal, M.T. (2013). "On the Structure of Vocatives". Sonnenhauser, B.; Noel Aziz Hanna, P. (eds), *Vocatives! Addressing between System and Performance*. Berlin: Mouton de Gruyter, 109-32.

Haegeman, L.; Hill, V. (2013). "The Syntacticization of Discourse". Trueswell, R.; Folli, R.; Sevdali, C. (eds), *Syntax and Its Limits*. Oxford: Oxford University Press, 370-90.

Hill, V. (2007). "Vocatives and the Pragmatics-Syntax Interface". *Lingua*, 117, 2077-2105.

Hill, V. (2014). *Vocatives. How Syntax Meets with Pragmatics*. Leiden: Brill.

Hill, V. (2022). "The Syntactization of Kinship in Vocative Phrases". *Glossa*, 7(1). https://doi.org/10.16995/glossa.6557.

Jaradat, A.; Hunety, A.; Mashaqba, B. (2022). "On Pragmatics-Syntax Interface: The Case of Vocative Nominals in Jordanian Arabic". *Jordan Journal of Modern Languages and Literature,* 14(2), 351-70.

Kumari, P.; Wiltschko, M. (2023). "Against a Uniform Treatment of Allocutives and Vocatives". *Talk Presented at the Workshop on Charting honorific and addressee morphosyntactic processes* (University College London, 20 January 2023).

Ledgeway, A. (2012). *From Latin to Romance. Morphosyntactic Typology and Change*. Oxford: Oxford University Press.

Schnelzer, K.O. (2024). *Torna, torna, *soro! Der rumänische Vokativ im Balkansprachbund* [PhD Dissertation]. Frankfurt am Maine: Goethe Universität.

Stavrou, M. (2014). "About the Vocative Phrase". Schürcks, L.; Giannakidou, A.; Etxeberria, U. (eds), *Nominal structure in Slavic and beyond*. Berlin: Mouton de Gruyter, 299-342.

Tanaka, K. (2020). *The Discourse Functions and Syntax of Vocative Markers in Fuyang Wu* [MA Thesis]. New Haven: Yale University.

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# Notes on 'Numeral Classifiers'

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**Abstract** At least some of the properties that we associate with 'numeral classifiers' are just spinoffs from the interaction of singular nouns with quantity-related determiners.

**Keywords** Numeral. Classifier. French. Time. One. Singular. Quantity.

**Summary** 1 Some Basic Facts. – 2 The Silent Noun TIME (Capitals Will Indicate Silence). – 3 Classifiers are Monomorphemic. – 4 Years are Special Lengths of Time. – 5 Definite Articles and Silent UN ('one'). – 6 Silent ONE. – 7 Singular year. – 8 Singular *an*. – 9 Other Romance. – 10 *De* and *of*. – 11 Back to *several*. – 12 Two Sides of 'Numeral Classifiers'. – 13 Conclusion.

## 1 Some Basic Facts

In certain classifier languages such as Japanese,[1] classifiers are restricted to cooccurring with numerals. I will use the term 'numeral classifier' for such classifiers and only for those. Somewhat surprisingly, this restriction has a counterpart in French, in the case of *an* ('year'), which is readily found with numerals, as in:

(1) Ils ont passé un an/trois ans à Paris.
('they have spent one year/three years in P')

**1** As discussed by Watanabe (2006, 244, 253, 258, 267, 273, 280, 284), and as opposed to the much wider distribution of classifiers in Cantonese, as discussed by Cheng and Sybesma (1999), who, however (p. 530), do take overt classifiers in Mandarin to require a possibly silent numeral. For relevant discussion of classifiers in Bulgarian, see Cinque, Krapova 2007.

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but not with other quantity-related determiners:

(2) *Ils ont passé des/quelques/plusieurs ans à Paris.
('they have spent some/a few/several years in P')

The restriction illustrated in (2) is also found with quantity-related determiners that are followed by *de* ('of'), e.g.:

(3) *Ils ont passé peu/pas mal/beaucoup d'ans à Paris.
('…few/quite a few/a great deal of years…')

In all of (2)-(3), French can achieve an acceptable sentence by replacing *ans* with *années*, which is also translatable as *years*:

(4) Ils ont passé des/quelques/plusieurs années à Paris.
(5) Ils ont passé peu/pas mal/beaucoup d'années à Paris.

## 2 The Silent Noun TIME (Capitals Will Indicate Silence)

Taking *an* (but evidently not *année*) to be, in the light of (1)-(5), a numeral classifier might at first glance seem odd, insofar as numeral classifiers (as in Japanese) usually go with an additional noun, which is apparently not the case in (1). The natural proposal, then, is that in (1) there is a noun present beyond *an(s)* itself,[2] although that additional noun is silent, and more specifically is a silent counterpart of *time*, as shown in:

(6) un an TIME
(7) trois ans TIME

Of interest is the fact that silent TIME is called for elsewhere. For example, English has both of the following:

(8) We'll be there in a week.
(9) We'll be there in a week's time.

**2** In the spirit of Kayne (2008), classifiers must themselves be a subtype of noun (assuming there is little plausibility to taking them to be a subtype of verb).

which suggests that (8), too, contains an instance of TIME,[3] with the presence of TIME arguably forced in all of (6)-(8) by Decompositionality,[4] essentially the idea that a single morpheme cannot be more than minimally complex, interpretively speaking.

What that idea amounts to in this case is the specific claim that no single morpheme could simultaneously introduce the notion of time and specify the length of a time interval. Thus in (6)-(8) *week* and *an* specify the length of the interval, but the interpretive content of time itself must be introduced separately, either by TIME as in (6)-(8) or by overt *time* as in (9).

A second case in English that calls for TIME arises from consideration of:

(10) C'mon, that'll take you all *(of) two minutes.

with *of* surprisingly obligatory, in all likelihood because there's an antecedentless silent noun TIME present, as in:

(11) all TIME of two minutes

with this TIME forcing *of* to appear.

A third rests on the very close relation between *twice* and *two times*, especially striking in:

(12) That box is at least twice as heavy as this one.
(13) That box is at least two times as heavy as this one.

with the natural conclusion being that *twice* must be accompanied by TIME.[5] A fourth can be seen in the following pair:

(14) You haven't been waiting long.
(15) You haven't been waiting a long time.

with TIME not only present in (14), but in addition arguably responsible for the polarity behavior of *long* there (as opposed to the non-polarity behavior of *a long time*).[6]

**3** As Zamparelli (2004) had in fact suggested for *every two days*; cf. Tsoulas 2013 on *before* being followed by TIME.

**4** See Kayne 2005a, Appendix. The formulation there was: "UG imposes a maximum of one interpretable syntactic feature per lexical item".

**5** Cf. Kayne 2014; also the pair *often*, *oftentimes*, as well as the pair *noon*, *noontime*.

**6** For discussion, see Kayne 2021.

Additionally we can quickly note the plausibility of taking *a while ago* to be as in:[7]

(16) a while OF TIME ago

and of taking *next* in:

(17) When will you next be in town?

to be as in:

(18) …next TIME…

as well, finally, as the notable case of:

(19) We'll be home at three o'clock or thereabouts.

to be analyzed as:

(20) …or there TIME abouts

in which TIME cooccurs with (non-locative)[8] *there*.

## 3 Classifiers are Monomorphemic

The contrast between (1)-(3) with *an(s)* and (4)-(5) with *années*, i.e. between *an* as a numeral classifier and *année* not as one, calls for further discussion. In particular, we can and must ask why it is *an* that is, of the two, the numeral classifier. Why is it not the reverse, i.e. why did French not choose *année* to play the numeral classifier role?

Part of the answer must have to do with the fact that *année* contains a suffix that *an* does not. *Année* is decomposable as *an(n)+ée*, with the suffix *-ée* that is also seen in:

(21) soirée ('evening+-ée'); matinée ('morning+-ée'); journée ('day+-ée')

**7** In the context of the game of baseball, we have:
i) In his last at bat he hit a triple. with the analysis:
ii) …TIME at bat…
One might also consider taking *oversleep* to be:
iii) overTIME sleep

**8** On the non-locative status of *there*, cf. Kayne 2019.

which are related to *soir*, *matin* and *jour*, respectively.[9] The other part of the answer may come from the following conjecture:

(22) Classifiers are necessarily monomorphemic.

Possibly, this conjecture should be limited to numeral classifiers. In either case, one would want an account of this restriction to monomorphemicity. Possibly, it is that the interpretive contribution of a (numeral) classifier is, assuming there to be no true interpretively invisible expletives,[10] too minimal[11] to be expressed by more than one morpheme.

## 4 Years are Special Lengths of Time

A second kind of question raised by the numeral classifier status of French *an* concerns the contrast between *an* and other elements that pick out lengths of time in French, such as *minute* ('minute'), *heure* ('hour'), *jour* ('day'), *semaine* ('week'), *mois* ('month'), *décennie* ('decade') and *siècle* ('century'). The fact is that none of these show the numeral classifier behavior of *an*, as can be seen from their cooccurring with non-numeral quantity-related determiners, e.g.:

(23) Ils ont passé quelques minutes/heures/semaines/décennies/siècles à Paris.

Why is it *an* ('year') of all these that alone has the status of a numeral classifier?

An initial answer might be that we're looking at the same fact that Kayne (2003) discussed for English,[12] not primarily for overt *year*, but for silent YEAR, in well-formed sentences like:

(24) At the age of six, Mary could already speak three languages.
(25) Their daughter is now six.

In each of these, YEAR is present. (The second of these may well also contain AGE, in a way that's not relevant to what follows. Important to what follows, on the other hand, is the fact that this YEAR is singular.)

**9** The root for 'day' in French may well be *journ-*, given *journalier* ('daily'); cf. also *ajourner* ('to-postpone'), *séjourner* ('to-stay').

**10** For relevant discussion, cf. Kayne 2023.

**11** It's not clear that all the classifiers discussed by Matthews and Yip (1994, 124) are interpretively minimal; on the other hand, Cantonese classifiers are not numeral classifiers.

**12** Cf. Simpson 2005 on Thai; also Cinque 2006 and references cited there.

Of direct relevance to (23) is the deviance of (24)-(25) when (24)-(25) are taken to contain DAY, WEEK, MONTH…, as can be seen by considering the interpretively anomalous status of:

(26) *At the age of six, their infant daughter could already…
(27) *Their infant daughter is now six.

A way to understand these English facts is to say that the silent element following the numeral *six* in (24)-(27) must be a numeral classifier and that, of the various time interval elements, only silent YEAR can have that status.

A similar point can be made for YEAR vs. DECADE:

(28) Mary's grandparents are planning a party for her sixth birthday.
(29) Mary's grandchildren are planning a party for her sixth birthday.

While (28), with YEAR following *sixth*, is perfectly ordinary, (29) with YEAR following *sixth* is anomalous, since a six-year-old child cannot have grandchildren. But in addition (29) tells us something more important for the present discussion, namely that DECADE following *sixth* is not available at all since if it were (29) would be able to have the ordinary status of (28).

The next question is, why should YEAR in English and *an* in French be singled out in this way, as numeral classifiers? An informal answer might be that *year* and *an* (and similarly for other (similar) languages) correspond to the 'least marked' time interval element, and that therefore only they can be taken, at least in English and in French, to be numeral classifiers.

Before proceeding further, let us note quickly that, unlike French *an*, English overt *year* can in some cases readily not have numeral classifier status and in that way can act like French *année*, as indicated by the well-formed English counterparts of sentences like (3), e.g.:

(30) They've spent many/a few/several years in Paris.

Although arguably a necessary condition for numeral classifier status, 'least marked' is clearly not a sufficient condition.

Returning to the main point, the informal notion of 'least marked' here could be made more precise if we recast it in terms of syntactic simplicity by associating *year* with less syntactic structure. For example, *decade* might itself necessarily be accompanied by YEAR, i.e. a sentence like:

(31) The past decade has been a difficult one.

might be as in:

(32) the past TEN YEAR decade…

and similarly for *century*:

(33) the past HUNDRED YEAR century…

while *month* might be as in:[13]

(34) the past month YEAR PART…

If so, then the interpretive properties of (24)-(27) might (with further work) be traceable back to the licensability in that context of the silence of YEAR vs. the non-licensability of the silence of the more complex 'TEN YEAR DECADE', 'MONTH YEAR PART', etc.

## 5 Definite Articles and Silent UN ('one')

Though incompatible with the various quantity-related elements seen in (2)-(3), French *an* is compatible with the definite article in:

(35) Ils y vont tous les trois ans.
('they there go all the three years' = 'they go there every three years')

That numeral classifier *an* is possible in (35) is not surprising, given the presence of the numeral *trois*. Somewhat surprising, though, is the closely related:

(36) Ils y vont tous les ans. ('…every year')

given the absence in (36) of any overt numeral.

Taking into account the interpretation of (36), as indicated in the English translation, a proposal that comes to mind is:[14]

**13** Possibly, this proposal could be extended to *day*.

**14** The unacceptability of:
i) *Ils y vont tous les quelques ans. ('they there go all the few years') indicates that, in this context involving *quelques…*, silent UN is not available, as opposed to overt *un(s)* with indefinites as in:
ii) J'ai vu quelqu'un. ('I have seen someone')
iii) J'en ai vu quelques-uns. ('I of-them have seen some-ones') And in part similarly for:
iv) *Ils y vont chaque an'. ('they there go each year') with UN not available, despite: Ils ont mis chacun dans un tiroir différent. ('they have put each-one in a drawer different') needs 'v'

(37) …tous les UN ans

with UN a silent counterpart of the numeral *un* ('one'). While satisfying the numeral requirement of *an*, this proposal leads directly to a question concerning the discrepancy in number in (37) between singular UN and plural *les…ans*.

Thinking of the fact that the *-s* of *ans* is not pronounced, and in particular of Bernstein's (1991) interpretation of that fact, an initial step toward understanding (37) is to take it to actually be:

(38) …tous les UN an

with singular *an*, in which case the number discrepancy in question reduces to that between *les* and 'UN an', which in turn recalls French allowing:[15]

(39) vers les une heure ('toward the one hour' = 'around one o'clock')

in which plural *les* is followed by singular *une heure*, in a way that increases the plausibility of (38).

As for the number discrepancy itself, a clue is provided by Italian, which has:

(40) Sono le una. ('are the one' = 'it's one o'clock')

with a discrepancy between the plural definite article *le* and singular numeral *una*, combined with the fact that Italian also allows:

(41) Sono le ore una. ('are the hours one')

in which a plural noun *ore* occurs, to which plural *le* is transparently related, in such a way as to suggest that French (39) contains a comparable, though silent, plural noun:

(42) vers les HEURES une heure ('toward the hours one hour')

By extension, we can now take (38) to contain a silent plural noun, too:[16]

**15** As noted by Martinon (1927, 200).

**16** If PERIODES is the correct silent noun, following a suggestion by Isabelle Haïk (p.c.), there is a discrepancy in grammatical gender between it (feminine gender) and the masculine gender of tous. For differing relevant views on French, see Gouet 1976 and Morin 1977.

(43) …tous les PERIODES (DE) UN an

with (43) now a more complete answer, with silent UN still the central piece, to why (36) is compatible with numeral classifier *an*.

## 6 Silent ONE

The silent UN that played a key role in the preceding section has a counterpart in English in more than one context, in a way that indirectly supports the postulation of UN itself, in French. Perlmutter (1970) noted in essence the following contrast (which is very sharp if the demonstrative is given primary stress):

(44) These two books are interesting, at least.
(45) *This one book is interesting, at least.

for which he proposed deletion of unstressed *one*, with the possibility then arising that the following (again with a stressed demonstrative):

(46) This book is interesting, at least.

is now to be understood as

(47) this ONE book is…

Some other cases in English that come similarly to the fore are (again with *one* unstressed):[17]

(48) Why are you reading the same two books/*one book again?
(49) We'd like another two books/*one book, please.
(50) The most interesting two books/*one book on the list should be read first.

which lead to the following series of proposals

(51) the same ONE book
(52) another ONE book
(53) the most interesting ONE book

Further indirect support for UN is provided by:

**17** For discussion of the fact that unstressed one becomes possible if the following noun is deleted/silent, as in, e.g.:
i) the only one; the same one; another one; the most interesting one
see Kayne 2017.

(54) *Mary is the first most interesting student in the class.
(55) John is the second/third… most interesting student in the class.

suggesting that superlative sentences such as:

(56) Mary is the most interesting student in the class.

must be understood as in:

(57) …the FIRST most interesting…

Comparable indirect support for silent UN in French comes from:

(58) John's height is twice/*once that of his brother.
(59) John can run twice/*once as fast as his brother.

which leads to the following proposals:

(60) …is (exactly) ONCE that of…
(61) …run ONCE as fast as his brother…

with FIRST and ONCE both clearly related to ONE.[18]

## 7 Singular *year*

Although English plural *years* does not, as shown by (30), repeated here:

(62) They've spent many/a few/several years in Paris.

exhibit numeral classifier behavior, singular *year* does, in the specific case of:

(63) They have a seven-year-old to take care of

which contrasts with the non-numeral examples given in:

(64) *They have a several-year-old to take care of.
(65) *They have a (quite a) few-year-old to take care of.
(66) *?They have a many-year-old to take care of.
(67) *They have a small large/number of-year-old to take care of.

**18** On *once*, cf. Kayne 2014; on *first*, cf. Kayne 2024.

We can note immediately that, although silent YEAR differs from silent DAY, WEEK… in that only (singular) YEAR, of all these, showed numeral classifier behavior in (24)-(29), all those other time interval nouns do show numeral classifier behavior in the environment of (63), as can be seen in the following, with *day*:

(68) They now have a three-day-old to take care of.
(69) *They now have a several-day-old to take care of.
(70) *?They now have a many-day-old to take care of.
(71) *They now have a small number of-day-old to take care of.

and similarly for *week* and *month*.

## 8 Singular *an*

The fact that singular *year*, *day* in (63)-(71) show numeral classifier behavior in a way that plural *years* (and similarly for *days*) does not in (62) appears to conflict with the fact that French *an*, in its numeral classifier behavior, appears to be compatible with plural *ans*, as for example in:

(72) Ils ont passé trois ans à Paris. ('…three years…')

Thinking back, though, to the discussion starting with (36), and to the proposal that *tous les ans* ('all the years') is actually better understood as in (38), also repeated:

(73) …tous les UN an

in which *an* is singular despite the orthography, we now arrive at the proposal that the same holds of (72), i.e. that the key part of (72) is, again despite the orthography, to be understood as containing, not plural *ans*, but rather singular *an*:

(74) …trois an…

That French numeral classifier *an* is systematically singular despite orthographic *ans* (as in (72)) is in part to be tied to the basic fact that the *-s* of orthographic *ans* is not pronounced. There is in addition a consideration that goes beyond French, namely that classifiers are in general not pluralizable,[19] a generalization into which (74) now fits naturally.

**19** For some apparent exceptions, see Aikhenvald 2000, 249n.

A second cross-linguistic generalization that supports taking French *an* to be a classifier lies in a restriction to the effect that classifiers (as opposed to 'massifiers' in the sense of Cheng and Sybesma (1999, 515)), are by and large not modifiable, as discussed by Cinque (2006, 120), Cinque and Krapova (2007, 3) and Watanabe (2006, 265).

That French *an* is in this respect similar to classifiers was in effect already noted in Littré's 19th century dictionary.[20] In writing about French *an* and *année*, Littré observed that "…quand on veut qualifier l'année à l'aide d'une épithète, on se sert non de *an, mais d'année*. On ne dira pas *un bon an, un an abondant, un an heureux, mais une bonne année, une année abondante, une année heureuse*" (when one wants to modify 'year', one uses not *an*, but *année*. One doesn't say 'a good *an*', 'a *an* abundant', 'a *an* happy', but rather 'a good *année*', 'a *année* abundant', 'a *année* happy').

Although Littré's observation appears to be readily testable and to carry over to contemporary French, there is another notable observation about an earlier stage of ('popular') French that is less readily testable. I have in mind Bauche (1928, 97), who gives, on the topic of combining a numeral with an/*année*, the following facts. The French in question has, with no plural *z*:[21]

(75) huitt ans ('eight years'), centt ans ('hundred years')

whereas with *année* it has:

(76) hui z années, cen z années

with a plural *z* that recalls Bernstein (1991) on French and Walloon. It may be the case that the absence of this plural *z* with *ans* in (75) reflects an incompatibility in that French between overt number, in the form of plural *z*, and an overt classifier.

## 9 Other Romance

The French distinction between *an* and *année* has at first glance a counterpart in Italian between *anno* and *annata*,[22] though *annata*

**20** See https://www.littre.org/definition/an.

**21** Though Isabelle Haïk (p.c.) does have differential judgments that go in the direction of Bauche's, insofar as she finds that *?(?)après huiz années de pourparlers* is not as bad as it would be with *ans* in place of *années*. As a reviewer suggests, looking into further intra-French variation is called for.

**22** Spanish and Catalan lack a counterpart of *année* (Carolina Fraga and Núria Bosch, respectively (p.c.)), for reasons that need to be looked into

is less widely used than *année* and *anno* more widely used than *an*. Important to the present discussion is the more specific fact that Italian *anno* is compatible with non-numerals in a way that distinguishes it from French *an*. An example is:

(77) *plusieurs ans (French 'several years')
(78) parecchi anni (Italian – same)

French disallows *an(s)* with non-numeral *plusieurs* because (singular) *an* is a numeral classifier. The well-formedness of (78), in which *anni* has the pronounced plural suffix *-i*, clearly shows that Italian *ann-* is not a numeral classifier.[23]

A question that now comes to mind is this. Could there be a variety of Italian in which (singular) *anno* would display numeral classifier behavior in the way that French *an* does? If there could be, that variety of Italian would have singular *anno* combining with numerals, as in:

(79) *tre anno

If no variety of Italian could possibly allow (79), we need to ask why. (Possibly, it's due to the presence of the pronounced suffix *-o* – cf. (22) above.)

## 10 *De* and *of*

Although the following does not constitute a perfectly minimal pair:

(80) cent ans ('hundred years')
(81) des centaines d'années/*ans ('some hundreds of years')

we can see illustrated here an exceptionless fact about French, namely that *an(s)* is incompatible with any determiner that calls for the preposition *d(e)*, even when, as in (81), the determiner, here *centaines*, is related to a numeral (*cent*). Another example with *d(e)* is:

(82) *peu d'ans ('few of year(s)')

**23** At least not here. Cinque (2006) takes *ann-* to be a classifier in certain cases where it's not modifiable (despite its being plural); the question is whether or not the non-modifiability in question is related to that seen (in French) in:
i) Elle a agi avec courage (*extraordinaire) ('she has acted with courage extraordinary') with non-classifier courage – cf. Gross (1986, 24).

and exactly the same holds with **combien d'ans* ('how many…'), **suffisamment d'ans* ('sufficiently…'), **un grand nombre d'ans* ('a large number…'). And the same holds even for the quasi-minimal pair:

(83) mille ans ('thousand…')
(84) *un million d'ans ('a million…')

in which the *d(e)* that follows *million* makes *an(s)* impossible, in contrast to *mille*, as well as for the even more minimal pair:

(85) cinq cents mille ans ('five hundred thousand…')
(86) *un demi-million d'ans ('a half-million…')

with the same numerical value, yet with differential behavior keyed to *d(e)*.

That *de* plays an important role is also suggested by dislocation facts. Even with a simple numeral, the introduction of *de* via right-dislocation leads to ill-formedness:

(87) les trois ans qu'on a passés à Paris ('the three years that we have spent in P')
(88) *les trois, d'ans, qu'on a passés à Paris[24]

In English, one can find facts indicating the parallel importance of *of*:

(89) That's a many-sided argument/polygon.
(90) *That's a large number of sided argument/polygon.

with singular *side* here being classifier-like in combination with normally plural-taking *many*:

(91) That argument has many side*(s) to it.

As for the question why (*de* and) *of* would interact in this way with classifier-like elements, let me bring into the picture the proposal made in Kayne (1993; 1994, chap. 8) for phrases like:

(92) two pictures of John's

according to which *two pictures* reaches Spec,*of* via internal merge. Extending this to phrases like:[25]

**24** It may be that dislocated 'de-NP' is preceded by TANT ('much'). On this kind of right-dislocation, cf. Vinet 1977.

**25** Following a suggestion of Juan Uriagereka's (p.c.). For recent discussion of partitives and pseudo-partitives, see Kayne 2026.

(93) a large number of sides

we would have *a large number* in Spec,*of*. Now in (92), *John* is in a possessor/subject-like position with respect to (the trace/silent copy of) *two pictures*, and so now must *sides* be in (93) relative to *a large number*, i.e. prior to the raising of *a large number* to Spec,*of*, we have:

(94) of [ sides [ H [ a large number ] ] ]

Whereas in (90) this would lead, at a comparably early stage of the derivation, to:

(95) of [ side [ H [ a large number ] ] ]

with singular *side*, rather than plural *sides*, now in possessor/subject-like position. This allows us to relate (93) vs. (90) to the more general property of English according to which bare plurals (and mass nouns) are possible as subjects, but bare singulars are not. Put another way, the deviance of (90) is related to the following contrast:

(96) Sides are something that every polygon has.
(97) *Side is something that every polygon has.

Furthermore, just as bare singulars in English are not possible subjects, it may be that they cannot be modified (cf. the discussion above of Littré's observation). If so, we have an account of the following contrast:

(98) ?John Smith is sixty painful years old.
(99) John Smith is a sixty (*painful) year-old man.

Taking this tack about bare singulars requires saying that (89), with *many-sided*, is not associated with a structure parallel to (95). What the exact structure of (89) is needs to be discovered, but the following:

(100) That's a beautiful many/*?few-sided polygon you've drawn there.

suggests a link to:

(101) You've drawn many/*few a polygon in your time, haven't you?

perhaps via the presence in (89) of a silent indefinite article:

(102) a many A sided polygon

## 11 Back to *several*

The following English and French pairs highlight a sharp difference between numerals and *several*:

(103) They have a seven/*several-year old to take care of.
(104) Elle a sept/*plusieurs ans. ('she has seven/several years')

The term 'numeral classifier behavior' can readily characterize these facts, but one wonders why numerals should be so privileged.

What I'd like to suggest is that such facts reflect the relative simplicity of syntactic structure associated with numerals, as compared with elements like *several/plusieurs*. Thinking of the discussion of the previous section, consider the following way of executing the idea of simplicity of structure:

(105) Elements like *several/plusieurs* are necessarily associated with (a silent counterpart of) *of/de*.

If (105) holds, then we would necessarily have:

(106) a several OF year old
(107) plusieurs DE ans

in which case the unacceptability of (103) with *several* (and now also with OF, as in (106)), reduces to that of (90), with *a large number* (and *of*), repeated here:

(108) *That's a large number of sided argument/polygon.

Similarly, the unacceptability of (104) with *plusieurs* (and now also with DE, as in (107)) reduces to that of (84), with *un million* (and *d(e)*), also repeated:

(109) *un million d'ans ('a million…')

(To be noted is that numerals such as *seven/sept*, from this perspective, can, and in (103)/(104), must fail to cooccur with *of*/OF/*de*/DE; on the other hand, some numerals, in some languages, need *of*/OF/*de*/DE, as is true of *million* in French in (109).)

As for why *several*, *few*, *many* should differ from numerals in this way (apart from the special case of (102)), the first step toward a solution is to see that the obligatory cooccurrence of *several*, *few*, *many* with OF is essentially akin to the obligatory cooccurrence with *of* seen in English in:

(110) a small/large number *(of) years/books/people

This similarity between (106) and (110) can be sharpened if, following Kayne (2005a; 2007), we take *several*, *few*, *many* to each be associated with NUMBER, as in, e.g.:

(111) few NUMBER books

This will be so even though NUMBER and *number* differ in English with respect to the pronunciation of *of*/OF, if we compare (110) with:

(112) a few (*of) years/books/people

In essence, then, the existence of numeral classifiers is a side effect of numerals, unlike *several*, *few*, *many*, not having to cooccur with NUMBER.[26]

## 12 Two Sides of 'Numeral Classifiers'

We can readily state that the contrast seen in:

(113) Now the school has even more three/*few-year olds to take care of.

is due to *year* in this context being a numeral classifier. But there is a bit more to it. Like (113) to my ear is:

(114) There are even more three/*few-teacher schoolhouses over in the next county

Yet to call *teacher*, even in just this context, a numeral classifier would seem bizarre (and would go against the restriction to monomorphemic numeral classifiers discussed at (22)).

In addition, there is a discrepancy between (113) and (114) seen in:

(115) How many (one) day-old babies can that nurse take care of?
(116) How many *?(one) teacher schoolhouses are there in the next county?

Although both *day* and *teacher* are incompatible with *few* in this context, *day* in (115) can have ONE in place of *one* (as in the earlier discussion starting at (44)); that does not seem possible in (116).

**26** Numerals can (but needn't) themselves cooccur with number, in a very different way:
i) You're number two on the list.
Further consideration of (i) falls outside the scope of this paper.

## 13 Conclusion

What all this suggests is not that we should abandon the convenient informal term 'numeral classifier', but rather that we should recognize that at least some of the properties that we associate with 'numeral classifiers' are just spinoffs from the interaction of singular nouns with quantity-related determiners in the ways discussed.

## Bibliography

Aikhenvald, A.Y. (2000). *Classifiers. A Typology of Noun Categorization Devices*. New York: Oxford University Press. https://doi.org/10.1093/oso/9780198238867.003.0003.

Bauche, H. (1928). *Le langage populaire. Grammaire, syntaxe et dictionnaire du français tel qu'on le parle dans le peuple de Paris, avec tous les termes d'argot usuel*. Paris: Payot. https://doi.org/10.2307/409582.

Bernstein, J. (1991). "DP's in French and Walloon: Evidence for Parametric Variation in Nominal Head Movement". *Probus*, 3, 101-26. https://doi.org/10.1515/prbs.1991.3.2.101.

Cheng, L.L.-S.; Sybesma, R. (1999). "Bare and Not-So-Bare Nouns and the Structure of NP". *Linguistic Inquiry*, 30, 509-42. https://doi.org/10.1162/002438999554192.

Cinque, G. (2006). "Are All Languages 'Numeral Classifier Languages'?". *Rivista di Grammatica Generativa*, 31, 119-22.

Cinque, G.; Krapova, I. (2007). "A Note on Bulgarian Numeral Classifiers". Alboiu, G.; Avram, A.A.; Avram, L.; Isac, D. (eds), *Pitar Moş. A Building with a View. Papers in Honour of Alexandra Cornilescu*. Bucharest: Editura Universităţii din Bucureşti, 45-51.

Gouet, M. (1976). "On a Class of Circumstantial Deletion Rules". *Linguistic Inquiry*, 7, 693-7.

Gross, M. (1986). *Grammaire transformationnelle du français*. Vol. 3, *Syntaxe de l'adverbe*. Paris: ASSTRIL.

Kayne, R.S. (1993). "Toward a Modular Theory of Auxiliary Selection". *Studia Linguistica*, 47, 3-31. https://doi.org/10.1111/j.1467–9582.1993.tb00837.x.

Kayne, R.S. (1994). *The Antisymmetry of Syntax*. Cambridge, MA: MIT Press.

Kayne, R.S. (2003). "Silent Years, Silent Hours". Delsing, L.-O. et al. (eds), *Grammar in Focus. Festschrift for Christer Platzack*. Vol. 2. Lund: Wallin and Dalholm, 209-26. https://doi.org/10.1093/acprof:oso/9780195179163.003.0010.

Kayne, R.S. (2005a). "A Note on the Syntax of Quantity in English". In Kayne R.S. (2005b). *Movement and Silence*. New York: Oxford University Press, 173-211. https://doi.org/10.1093/acprof:oso/9780195179163.003.0008.

Kayne, R.S. (2007). "Several, Few and Many". *Lingua*, 117, 832-58. https://doi.org/10.1016/j.lingua.2006.03.005.

Kayne, R.S. (2008). "Antisymmetry and the Lexicon". *Linguistic Variation Yearbook*, 8, 1-31. https://doi.org/10.1075/livy.8.01kay.

Kayne, R.S. (2014). "*Once* and *Twice*". Contemori, C.; Dal Pozzo, L. (eds), *Inquiries into Linguistic Theory and Language Acquisition. Papers Offered to Adriana Belletti*. Siena: CISCL Press.

Kayne, R.S. (2017). "English *One* and *Ones* as Complex Determiners". Sengupta, G.; Sircar, S.; Raman, M.G.; Balusu, R. (eds), *Perspectives on the Architecture and Acquisition of Syntax. Essays in Honor of R. Amritavalli*. Singapore: Springer Nature, 77-114. https://doi.org/10.1007/978-981-10-4295-9_4.

Kayne, R.S. (2019). "The Unicity of *There* and the Definiteness Effect". Gonçalves, E. (ed.), *Existential Constructions in Focus*. Brazil: Editora da Universidade Federal da Bahia.

Kayne, R.S. (2021). "A Short Note on English *Long* and the Why of Negative Polarity". *English Linguistics*, 37, 151-60. https://doi.org/10.9793/elsj.37.2_151.

Kayne, R.S. (2023). "Hypercomplex Inversion and the Status of Expletive Pronouns". *Probus*, 35, 127-49. https://doi.org/10.1515/probus-2022-0014.

Kayne, R.S. (2024). "English Superlatives and Comparatives". *Lingbuzz*, 008370. https://lingbuzz.net/lingbuzz/008370.

Kayne, R.S. (2026). "Antihomophony and English *Of*". *Catalan Journal of Linguistics*, 25(1), 103-15. https://doi.org/10.5565/rev/catjl.528.

Littré, E. (1863-73). *Dictionnaire de la langue française*. https://www.littre.org/.

Martinon, P. (1927). *Comment on parle en français*. Paris: Larousse.

Matthews, S.; Yip, V. (1994). *Cantonese. A Comprehensive Grammar*. London: Routledge. https://doi.org/10.4324/9780203835012.

Morin, Y.-C. (1977). "Re: On a Class of Circumstantial Deletion Rules". *Linguistic Inquiry*, 8, 747-51.

Perlmutter, D.M. (1970). "On the Article in English". Bierwisch, M.; Heidolph, K.E. (eds), *Progress in Linguistics*. The Hague: Mouton, 233-48. https://doi.org/10.1515/9783111350219.233.

Simpson, A. (2005). "Classifiers and DP Structure in Southeast Asia". Cinque, G.; Kayne, R. (eds), *The Oxford Handbook of Comparative Syntax*. New York: Oxford University Press. https://doi.org/10.1093/oxfordhb/9780195136517.013.0018.

Tsoulas, G. (unpublished). "Before-Clauses and the Syntax-Semantics Interface". Paper presented at the University of Stuttgart, 2013.

Vinet, M.-T. (1977). *Études sur le syntagme nominal : la dislocation, l'adjectif 'propre'* [thèse de doctorat]. Paris: Université Paris VIII.

Watanabe, A. (2006). "Functional Projections of Nominals in Japanese: Syntax of Classifiers". *Natural Language and Linguistic Theory*, 24, 241-306. https://doi.org/10.1007/s11049-005-3042-4.

Zamparelli, R. (2004). "Every Two Days". *Snippets*, 9, 19-20.

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# Different Interpretations of a Turkish Evidential Marker and Different Speaker Judgments

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**Abstract** Turkish has a suffix, *-mIş*, which is interpreted differently, depending on its position in a verb: It can be an evidential, a marker of past tense/perfectivity, or both. We take those positions as reflective of the clausal architecture. Root clauses with simple versus complex verbal predicates and with non-verbal predicates are considered, as well as embedded nominalized versus tensed clauses. All facts are covered by analyzing *-mIş* as a *single* morpheme whose interpretations are dictated by its position in the clausal spine, i.e. whether it is in a lower functional projection or, under a cartographic approach, in a higher (and, we claim, copular) projection. The traditional descriptions that differentiate between two morphemes, *-mIş* and *-ImIş*, are rejected. Two surveys, conducted to check different interpretations of this morpheme, support the analyses proposed in this paper.

**Keywords** Evidentiality. Perfectivity. Inflected copula. Participial verb stems. Evidential morphemes in the clausal architecture.

**Summary** 1 Introduction: *-mış* as a Verbal Marker of Evidentiality. – 2 Proposed Account of These Facts. – 3 Can Evidential Clauses be Embedded in Turkish? – 4 Conclusions.

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# 1 Introduction: *-mış* as a Verbal Marker of Evidentiality

## 1.1 Summary, and Basic Facts: *-mIş* on Simple Versus Complex Verbs

Turkish has a suffix, *-mIş*, which is interpreted differently, depending on its position in a verb: It can be an evidential, a marker of past tense/perfectivity, or both. This paper takes those positions as reflective of the clausal architecture. Root clauses with simple versus complex verbal predicates and with non-verbal predicates are considered, as well as embedded nominalized versus tensed clauses. All facts are covered by analyzing *-mIş* as a *single* morpheme whose interpretations are dictated by its position in the clausal spine, i.e. whether it is in a lower functional projection or, under a cartographic approach, in a higher (and, as it is claimed here, a copular) projection. The traditional descriptions that differentiate between two morphemes, *-mIş* and *-ImIş*, are rejected. Two surveys, conducted to check different interpretations of this morpheme, support the analyses proposed in this paper. However, a relatively small amount of variation was observed with respect to the intuitions of the native consultants; this variation was somewhat larger in the second survey that addressed embedded non-nominalized clauses, compared to the first survey, which addressed complex verbs with inflected copulas in simple clauses. The apparent optionality of the positions of *-mIş* in a verb, as well as the variation in native speaker judgments observed in the surveys, motivates this paper as a contribution to a volume which includes studies on optionality and variation.[1]

Let us start with illustrating *-mIş* in a *simple* verb, where it has evidential and reportative meanings:

(1) Oya iş-e erken git-miş.
Oya work-DAT early go-mIş
Reportative: 'Oya went to work early (so I am told)).'
Evidential: 'Oya (apparently) went to work early.' (I see that her breakfast things are lying around.)

Note that the verb, in addition to its evidential ('apparently, as concluded from the evidence available', or 'as reported by others')

**1** The comments of two anonymous reviewers and of the editors are gratefully acknowledged. I am also grateful to Anna Cardinaletti, for her friendship as well as her work, which offered me very strong motivation to pursue the study reported on here. Special thanks are due to Atilla Kocabalcıoğlu, who formatted the paper.

connotations, also has a past tense or perfective interpretation in these examples.

Let us now look at complex verbs. Under 'complex verbs', I mean verbal morphology that exhibits more than one Tense/Aspect/Mood (TAM) morpheme. The examples in (2) illustrate such combinations of two TAM morphemes, with *–mIş* as the second such morpheme. In these combinations, the first TAM morpheme is a tense and/or aspect marker. The combination of the verbal stem and this first TAM marker is a participle. In order to become a finite verbal predicate, this participle needs a copula which is inflected with a second TAM marker. This analysis of 'complex verbs' with more than one TAM marker as consisting of a participle, followed by an inflected copula, is found in most traditional as well as generative scholarship on the Turkish verb (see, for example, the articles in Erguvanlı Taylan (2001) and their references).

The interpretation of *-mIş* as the second TAM marker is similar to the interpretation of *-mIş* in simple verbs as in (1), insofar as it has reportative or evidential interpretations. However, it does not have the past tense/perfective interpretation illustrated in (1). This is illustrated in the examples (2a), (2b), and (2c), whose temporal interpretations are dictated by the first TAM morpheme:

(2) a. Oya iş-e erken gid-ecek-miş.
Oya work- DAT early go- FUT-mIş
Oya will go to work early (so I am told).'

b. Oya iş-e otobüs-le gid-iyor-muş.
Oya work- DAT bus-with go- PROG -mIş
Oya goes to work by bus (so I am told).'

c. Oya iş-e otobüs-le gid-er-miş.
Oya work- DAT bus-with go- AOR -mIş
'Oya (habitually) goes to work by bus (so I am told).'

One rather remarkable property of *-mIş* is the fact that it can occur more than once in the morphology of a verb, i.e. it can be part of complex verbal morphology, whereby the first instance fulfils the function of any such first instance of TAM morphology as in (2), in having tense/aspect connotations, and where the second instance has evidential/reportative interpretations:

(3) Oya iş-e otobüs-le git-miş-miş.
Oya work-DAT early go- PERF -mIş.
'Oya has gone to work by bus (so I am told).'

It is (3) which is particularly interesting, due to the repetition of *-mIş*. The nature of such sequences will become clear later in the paper.

Let us now turn to another property of first versus second instances of TAM morphemes, and especially of *–mIş* as a first versus second instance, namely with respect to stress:

(4) Geçen akşam Oya opera-ya git-**miş**-ti; bu akşam sinema-ya
recent evening Oya opera- DAT go-**mIş**-PST this evening cinema- DAT
gid-**ecek**-miş.
go-FUT-mIş
'The other evening, Oya went to the opera (lit.: had gone to the opera); this evening, she will (reportedly) go to the movies.'

The boldfaced morphemes are stressed. Note that in both verbs, it is the penultimate morpheme (and syllable) which are stressed. Given that the usual word-level stress in Turkish is word-final, this means that the word-final morphemes are clitics, because they cannot bear stress, despite their word-final position. What kind of clitics can they be?

They must be inflected copulas, as mentioned at the beginning of this section; indeed, there are alternative constructions where these morphemes are not cliticized, but where the bound root copula *i-* shows up with the same inflections:

(5) Geçen akşam Oya opera-ya git-**miş** i-di; bu akşam sinema-ya
recent evening Oya opera- DAT go-**mIş** COP-PST this evening cinema- DAT
gid-**ecek** i-miş.
go-FUT COP-mIş
Same translation as in (4).

## 1.2 Preliminary Observations and Some Discussion of a 'Traditional' Proposal

In complex verbs, we observe two losses of interpretation of *-mIş* with respect to its occurrence in simple verbs: 1. The lower *-mIş* in a complex verb construction loses its evidential interpretation and can only be interpreted as a perfective; 2. The higher *-mIş* in such a complex verb construction loses its tense/aspect interpretation as past tense/perfective, and can only be interpreted as an evidential. We shall return to both observations and attempt to offer an account for them.

A traditional analysis of the *-mIş* which is the 'second TAM marker' in complex verb constructions is to say that it is a related, but different

morpheme, namely *-ImIş*, which shares with *-mIş* the 'indirectivity'[2] component, but not the past tense connotation (Comrie 2000, Csató 2000, Johanson 1971 and 2000, among others). But this would mean that for the regular past, *-DI* (as in (4)), there should also be a second, related but separate morpheme *–IdI* (as in (5)) – clearly not a welcome overall description. Obviously, it would be more economical and explanatory to say that in both instances, we are dealing with the copula, and that the copula can bear 'tense' morphemes, or more exactly, morphemes of the TAM type. In (5), we see that the copula *i-* can carry either the 'regular past' suffix *-DI*, or the evidential *-mIş*, and in (4), those combinations of the copula and TAM suffixes are cliticized to the verbal stem.[3]

An advantage of the copula-based analysis of the 'outer *-mIş*' (with the proviso that an account of the loss of a tense interpretation when used with a copula will be given) is its interpretation as not past tense (as the -inner *-mIş*'), but as non-future in general with respect to tense, given that this is the interpretation one gets with the copula when used with non-verbal predicates such as nouns and adjectives:

(6) a. Oya çok güzel bir kadın-mış /kadın i-miş.
Oya very beautiful a woman-mIş /woman COP -mIş
'Oya is said **to be**/**to have been** a very beautiful woman.'[1]

b. Oya çok hasta -y -mış/hasta i-miş
Oya very sick -cop -mIş/sick COP -mIş
'Oya is said to be/to have been very sick.'

**1** The ('outer') future tense suffix *–(y)AcAK* must attach to a different copular or auxiliary element, namely *ol-*. This paper will not address the variation between these two copular (or auxiliary) elements, namely *i/-I* and *ol-*; this is why (6) does not include examples with the future tense.

The literature mentioned above, where the copula inflected with *-mIş* is viewed as a morpheme separate from *-mIş*, namely *-ImIş*, claims that *-ImIş* differs from *-mIş* in a number of additional respects: it attaches only to non-verbal stems such as predicate nouns or adjectives, as in (6), or to 'non-finite' verbal forms such as participles, as in (4) and (5). This would mean that in (4) and (5), the stems inflected with TAM morphemes, such as the 'inner *–mIş*' and the future tense '*-yAcAK*' in these examples are participles and thus not 'finite'. Under that approach, *-mIş* would attach only to 'finite' verbs, and the putative

**2** "Indirectivity" is the terminology used in the above-mentioned works and corresponds to what I have been referring to as 'evidentiality'.

**3** I refer to the copula as *i*, and to its cliticized form as *-I*, to signal the fact that the cliticized (inflected) form undergoes vowel harmony as determined by the stem's last vowel, as illustrated in (6); the non-cliticized copula does not undergo vowel harmony.

*-ImIş* would attach to 'non-finite predicates'. This would further mean that where 'complex verbs' are concerned, the stems with a lower TAM morpheme are participles and thus are 'non-finite'. Two main pieces of empirical evidence for that analysis are two facts mentioned earlier: 1.*-mIş* is not exceptional with respect to word-level stress, while the (putative) *-ImIş* is: it is pre-stressing; 2. *-mIş*, as mentioned earlier, has, simultaneously, evidential as well as past/perfect interpretations, while the (putative) *-ImIş* has only evidential interpretations. Please note that while agree with this traditional analysis of the verb stem and the first TAM morphemes as participles, I do not agree with the claim that *-ImIş* is a different morpheme from *-mIş*. I now turn to a discussion of the reasons for my disagreement.

## 1.3 Critique and Other Explanatory Options

While this paper agrees with the analysis of these verbal stem forms with a first layer of TAM morphemes as participles, this analysis does not force us to characterize the sequence of the copula and its inflection for *-mIş* as a morpheme which is totally different and independent from the ('inner') *-mIş*. Instead, this paper claims that there is no suffix *-ImIş* at all, but only a single suffix *-mIş*, which can attach either to a lexical main verbal stem, as in (1), or to a copula, as in (4) through (6), as well as in the examples in (2). To repeat for clarity, the paper claims that *-ImIş* is nothing other than *-(I)-mIş*, with *-I*, the cliticized copula, surfacing as a palatal glide after vowels as in (6b), or getting deleted after consonants, as in (6a). What I referred to earlier as 'complex verbs' would thus consist of a participle and a copula, the latter carrying *-mIş* (or other TAM inflections), and, ultimately, agreement inflections, as well.

The fact that what this paper analyzes as an inflected copula is pre-stressing (while 'lower' TAM morphology is not) does not constitute a problem for this approach: what is pre-stressing is not the (higher) TAM morphology, but rather the copula itself; this stress-related behavior is exactly what is expected from a cliticized item (cf. Kornfilt 1996 for a detailed discussion of this point).

As for the loss of the past tense/perfective interpretation of the 'higher' *-mIş*, we shall return to that point, as promised. For the time being, let us just say that the lack of past tense interpretation of the copular *-mIş* is not a property inherent in this suffix, but rather a consequence of its position in a higher layer of the clausal architecture. Let us now look at the sequence of participle and inflected copula and observe additional properties.

The complex verbs behave like compounds rather than simple words in a number of respects; e.g. the polar question particle *-mI* precedes the 'outer' *-mIş-*, but follows the -'inner' *-mIş-*, i.e. the participle:

Inner *-mIş* with a simple verb, *followed* by *-mI*:

(7) a. Oya dün opera-ya git-**miş-mi**?
Oya yesterday opera- DAT go-**mIş-Q**
'(Is it said that) Oya went to the opera yesterday?'

Reversing this order leads to ill-formedness:

(7) b. *Oya dün opera-ya git **-mi-miş**?
Oya yesterday opera- DAT go-Q- mIş
Intended: Same translation as in (7a).

Outer *-mIş* (i.e. copular *-mIş*) with a complex verb, *preceded* by *-mI*:

(8) a. Oya yarın opera-ya gid-ecek-**mi-y-miş**?
Oya tomorrow opera- DAT go- FUT -Q- COP -mIş
'Will Oya supposedly go to the opera tomorrow?'

Reversing the order, yielding the order in (7a), results in ill-formedness:

(8) b. *Oya yarın opera-ya gid-ecek-**miş-mi**?
Oya tomorrow opera- DAT go- FUT -mIş-Q
Intended: 'Will Oya supposedly go to the opera tomorrow?'

Note that in (8b), as elsewhere, the cliticized copula (which, as mentioned earlier, is the palatal glide, the result of *i* cliticizing to the phonological host) is deleted after a consonant (as, for example, in (6a), as well).

'Outer' *-mIş* (i.e. copular *-mIş*), with a non-verbal predicate, *preceded* by *-mI*:

(9) a. Oya güzel mi-y-miş?
Oya beautiful Q- COP -mIş
'Is/was Oya supposed to be/ to have been beautiful?'

Here, too, the question particle and *-mIş* can't invert:

(9) b. *Oya güzel miş-mi?
Oya beautiful mIş-Q
'Is/was Oya supposed to be/ to have been beautiful?'

Assumption: The Q-particle *-mI* attaches to the lowest TAM morphology of a verbal predicate, i.e. to a participle, or it attaches to an inherently non-verbal predicate, such as a nominal or adjectival one, rather than to the inflected copula. (This phenomenon, as well as additional evidence for analyzing 'complex verbs' as consisting of a sequence of participle and inflected copula, is discussed in Kornfilt 1996).

Interim summary: The evidential reading for *-mIş* is the only (for some speakers, the much stronger) one if the suffix is an 'outer' instance of *-mIş*, i.e. if it is in the higher regions of the phrasal architecture. When there are two instances of *–mIş*, namely one attached to the main verb, and one attached to the copula (or to the auxiliary *ol-*, which this paper won't address, as mentioned earlier), there is a division of labor, descriptively speaking: the lower instance can only be the perfective; it can't be an evidential; in contrast, the higher instance of *-mIş* expresses evidentiality, and not aspect or temporality. One can say that, descriptively speaking, their functions are in complementary distribution.

### 1.4 Survey Addressing the Interim Summary

These observations were checked via a preliminary survey, involving 22 native speakers of Turkish, all of whom had at least a first university degree; their ages varied between 30 and 80. The survey was conducted via email. A questionnaire with examples involving simple tensed verbs with the regular (*-DI*) and 'evidential' (*-mIş*) past, as well as with examples involving 'complex verbs' with both tense forms as the inner and outer TAM morphology was devised; a third series of examples involved non-verbal predicates (i.e. nominal and adjectival predicates) marked with either one of the past tenses. For each construction, three examples were given. The survey was sent out with questions directed towards interpretations of evidentiality of the lower versus higher instances of *–mIş* and *–DI*; e.g. for simple verbal predicates: 'Did Oya definitely go to the opera, or did people claim that she did?'; for 'complex' verbal predicates involving lower *–mIş* and higher *–DI*: "Did Oya go to the opera while Ali went to the movies, or did people report that Oya went to the opera while Ali went to the movies?"; for 'complex' verbal predicates involving lower progressive or aorist/habitual aspects and higher *–mIş* and higher *–DI*: 'Do or did people report that Oya is/was going to/is or was in the habit of going to the opera?'

The results of this survey were overwhelmingly homogeneous; the observations this paper (and most of the literature) has reported so far were (by and large) confirmed: when *–mIş* is high, i.e. when it is the 'outer' TAM morpheme, it expresses evidentiality; but when it is the *only* TAM morpheme, it *also* expresses past tense/perfective aspect. It expresses *only* the latter, when it is the lower

TAM morpheme in a 'complex' verb; in other words, when it is part of a *participle*, it does not express evidentiality, but *only* perfectivity. (The first observation was somewhat more heterogeneous than the others; for three speakers out of the twenty two, this was the much stronger, but not the only interpretation, i.e. those speakers could get the perfectivity/past interpretation for the 'outer' -mIş, but as a much weaker, secondary meaning. I will not attempt to explain the reports of this minority group, other than hypothesizing that this may be a new tendency, apparently expanding perfectivity from a low functional domain to a higher one, because these speakers might treat the copula as a main verb which can be inflected with lower functional categories, such as aspect; the existence of such speakers deserves further study with a much larger group of participants.)

## 2 Proposed Account of These Facts

Why should the facts reported under the interim summary, confirmed (by and large) via the survey, hold?

As we have seen, one part of the proposed account is to claim that evidentiality is housed high. It is important to note that Cinque (2001) made a similar claim, within a general cartographic approach, which places aspect in the lower regions of the clausal architecture, and evidentiality in higher regions of the clausal spine.[4] I propose that the reported observations and judgments offer some motivation to split

**4** Cinque (2001) addresses suffixes in Turkish whose orderings in verbs seems to be optional, in the sense of being able to appear in different positions in the word. The study shows that different meanings go along with those different positions. While the paper focuses on the ability suffix *-(y)Abil*, which has ability and permission interpretations when it is low, and possibility interpretations when it is high, the study also mentions, in passing, *-mAlI*, which has obligation interpretations when it is low, and epistemic interpretations when it is high, as well as *-mIş*, whose different interpretations, linked to low versus high placements we have seen in the current study – interpretations which, as was mentioned earlier, have been described in older, traditional literature, as well. If Cinque (2001) is correct with respect to a general cartographic approach to a number of different suffixes, rather than only one, this is an important argument not only against the traditional analysis of *-ImIş* as a separate morpheme from *-mIş*, but also against more recent, generative claims of the same nature. For example, Ótott-Kovács (2021) claims that the lower *-mIş* is an evidential marker, while the higher *-mIş* is a separate morpheme, which she calls a "dubitative". While the main difference between the low *-mIş* and the high *-mIş* is not one between evidential and dubitative interpretations, and rather between an aspectual versus an evidential interpretation of *–mIş* in these positions, as I hope to have shown in this paper, my main criticism of Ótott-Kovács (2021) goes beyond this: Clearly, it cannot be the case that at least three, and possibly more than three suffixes have homophones that have different positions and different semantics by coincidence. Rather, different areas of the verbal morphology, reflecting the functional projection architecture of the clause, have different functions; the suffixes that are positioned within those areas have the semantics that correspond to those cartographic areas.

up TAM and have T(ense) and A(spect) together, and M(ood) separate and higher, whereby evidentiality is analyzed as Mood.

When there is only one instance of the combined TAM options, as in a 'simple' verb, and when this is *-mIş*, the account proposes that it will occupy that high M position, and that any T or A features will combine with it, by moving from T/A to the immediately dominating M node, under locality. This results in this single *–mIş* morpheme to have both tense/aspect and (evidential) mood interpretations. When the main verb and its functional features project only up to T/A, as is the case with participles, there is no space for evidentiality, and *-mIş*, which would be housed in the T/A-headed projection, would be able to express *only* the features of tense and aspect; this is why such participles with *-mIş* can only be interpreted as perfectives and not as evidentials.

However, when T/A is the highest head in a participle construction, and when there is a copula or auxiliary that continues the spine of the construction, the M(ood)-head can be housed by the copula, and *-mIş* in that higher position does express evidentiality (but not past tense/perfectivity) for a large majority of speakers, as we have seen.

The idea that a morpheme such as *–mIş* that can express evidentiality in general loses that ability in certain constructions when the syntax of those constructions doesn't project as high as Mood was expressed in Kornfilt (1997) and related work in passing, and it is independently discussed in detail in Korotkova (2021), mainly in the context of embedded clauses, to which the paper turns in the next section, namely to the question of whether clauses marked with *–mIş* can be embedded in Turkish, and still preserve an evidential interpretation.

This paper proposes that in 'complex verbs', the features of the T/A-head of the participial stem cannot raise to the copular M-head, since now, the T/A head and the M-head are not local with respect to each other, given that the M-head is part of a higher, separate (copular) layer in the clausal architecture. The T/A-head is in the lower, lexical (participial) layer, and thus any movement of the T/A features to the M-head in the higher, copular layer is blocked.

The question arises here why the copular layer cannot have its own T/A head, where features such as past tense/perfectivity can be housed.

The answer to this question is that this higher layer *can* indeed have its own T/A head, with its own features; however, that higher layer can either have a T/A-head, or an M-head; this layer is less detailed in its options for functional features and their projections. Thus, the 'regular' past tense morpheme *–DI* can occupy the T/A-head in the copular layer and be interpreted as the past tense, without

having any evidential features,[5] and *–mIş* can occupy the M-head in that higher copular layer, but either the T/A-head or the M-head can host the relevant features; both cannot do so simultaneously, in contrast to the situation with simple 'finite' verbs, where both heads can host the respective features.[6]

## 3 Can Evidential Clauses be Embedded in Turkish?

### 3.1 Evidentiality and Clause Size

Korotkova (2021) claims that cross-linguistically, evidential clauses can be embedded only if their syntactic structure has sufficient 'space' for them. In particular, if the clause does not project high enough for Mood to find a place, the clause will not express evidentiality; if, on the other hand, there is a place for Mood, evidentiality can be accommodated. Thus, the main factor of the ability for an embedded clause to host evidentiality and its markers is not semantics, but rather formal factors with respect to the size of a clause, and whether the clause has space to host evidentiality features or not.

This is a claim which is quite similar to what this paper has proposed in the previous section for root clauses and their predicates, when the latter have fully verbal, lexical versus copular predicates. With respect to embedded clauses, the most general embedding pattern in Turkish involves nominalized clauses; one might thus expect that such clauses would not be able to accommodate *–mIş* as a mood marker; this is indeed what Korotkova finds.

**5** One could object here that the 'regular past' *–DI* does express evidentiality in the copular layer, and that it expresses a 'confirmative' mood, in contrast with the evidential mood. However, this paper agrees with Comrie (2000) that in Turkish, the 'confirmative' is a *default* interpretation wherever it appears, whether in the lower or higher layer of the clause, while the 'evidential' is marked; in contrast, in other languages with a morphological evidential, such as some Balkan languages, the situation is reversed, i.e. the evidential is default and the 'confirmative' is marked; see the discussion of this point in Comrie (2000).

**6** This proposal aligns with ongoing work by Antonio Fábregas and Phoevos Panagiotidis; one of their proposals is that "the granularity of the concept 'encoded' by a feature correlates with the domain it is interpreted in: the higher the domain, the more coarse-grained the concept". (Panagiotidis, personal communication.)

## 3.2 Nominalized Embedded Clauses

(10) [Beste-nin ağac-ı dik-**tiğ**-in] **-i** duy-du-m.
Beste- GEN tree- ACC plant- INDNOM - POSS3SG - ACC hear- PST -1SG
'I heard that Beste planted the tree.' (Adapted from example 17 in Korotkova 2021.)

*-mIş* can't be accommodated anywhere in this nominalized embedded clause, i.e. in the nominalized verbal predicate of the clause, as pointed out by Korotkova:

However, as also pointed out by Korotkova, the *-mIş* as a perfective marker *can* show up in a nominalized clause, when it is followed by a copula which bears the nominalization marker; from this point of view, the embedded nominalized clause is like a root clause with a complex verb: the main verb is a perfective participle under an inflected (in this instance, nominalized) copula:

(12) [Beste-**nin** ağac-ı dik – miş ol-**duğ**-un]**-u** duy-du-m.
Beste- GEN tree- ACC plant- mIş be-INDNOM-POSS3SG-ACC hear- PST -1SG
'I heard that Beste has planted the tree.'

Here, *-mIş* delimits a participle (given that it is followed by the copula *ol-*) and therefore has *only* a *perfective* interpretation; just like in a root clause with complex verb morphology, the participle projects only up to T/A and has no space for a mood feature such as evidentiality.

## 3.3 Non-Nominalized, i.e. Tensed Embedded Clauses

Turkish also has a strategy of embedding tensed clauses. These are more restricted than nominalized embeddings with respect to the matrix verbs that allow them. There are three or four types of those, depending on the analysis:

A. Embedded tensed clauses with a complementizer-like element: *diye*, which is derived from the verb *de* 'say':

(13) [[Beste ağac-ı dik – **miş**] diye] duy-du-m.
Beste tree- ACC plant-**mIş** DIYE hear- PST -1SG
'I heard that Beste planted the tree.' (Similar to example 13 in Korotkova 2021).

B. Embedded tensed clauses without such a 'complementizer', typically taken as the complement of matrix verbs of knowledge:

(14) [Beste ağac-ı dik – **miş**] san-ıyor-um.
Beste tree- ACC plant-**mIş** think- PROG -1SG
'I think/believe that Beste planted the tree.'

C. Embedded tensed clauses with an accusative subject (which has presumably undergone SOR (Subject-to-Object Raising) (= ECM (Exceptional Case Marking)):

(15) [Beste-**yi** ağac-ı dik – **miş**] san-ıyor-um.
Beste- ACC tree- ACC plant-**mIş** think- PROG -1SG
'I think/believe that Beste planted the tree.'

In these constructions, the tensed verb of the embedded clause is typically missing its subject agreement morphology (although many speakers also accept versions with agreement). To see this, we need an example with a non-third-person subject (because the agreement for a third person singular subject in the fully tensed paradigm is null):

(16) [Sen-**i** ağac-ı dik – **miş** (-***sin***)] san-ıyor-um.
you- ACC tree- ACC plant- **mIş** (-2SG) think- PROG -1SG
'I think/believe you to have planted the tree.'

With sensory perception verbs, the construction with accusative subjects and missing subject agreement on the embedded verb is obligatory; i.e. the version with a nominative subject and full agreement is rejected by many or most speakers, and *-mIş* is not possible:

(17) [Sen-*(i) yer-de yat-ıyor(*-sun)/ *yat-mış-sın] gör-dü-m.
you- ACC floor- LOC lie- PROG -2SG / lie-mIş-2SG see- PST -1SG
'I saw you lying on the floor.'

Korotkova (2021) claims that non-nominalized embedded clauses such as those illustrated above, i.e. embedded clauses which have verbs carrying morphological tense as predicates, are able to project to a higher level and thus to host *–mIş* as an evidential marker. In other words, her translations of the tensed embedded clauses in examples similar to (13) through (16) above are different from those given here: they all include expressions of evidentiality, such as 'allegedly'. For me, such readings are ruled out.

Schroeder (2000) addresses similar examples; e.g.

(18) Boyn-un-da koyu leke-ler ol-ma-sa, kitap oku-r-ken
neck-POSS3SG-LOC dark spot-PL be-NEG-COND book read-AOR-while
uyu-ya kal-**mış** zanned-il-ir-di
sleep-DAT remain-**mIş** believe-PASS-AOR-PST
'If it wasn't for the dark spots on her neck, (she) would have been taken to have fallen asleep while reading.' (Schroeder's example 32; with slightly different glosses and translation.)[1]

**1** This is an example involving passivization of the matrix clause, with the accusative subject of the embedded clause having been promoted to subject at the matrix level; that derived subject is not overt here, Turkish being a null subject language.

Schroeder reports that what he calls the "resultative meaning", i.e. what this paper has been calling the perfective interpretation, 'prevails' in such *-mIş*-embeddings, although he also says that "with verbs of perception there may also be an inferential nuance added to the resultative meaning". Given that while Schroeder's report supports my translations rather than Korotkova's for tensed embedded clauses as in (13) through (18), the question arises here whether other native speakers of Turkish agree with the interpretation of "evidentiality" in Korotkova (2021) for such examples.

A survey very similar to the first survey reported earlier for 'complex verbs' was conducted, with similar questions testing the participants' interpretations – this time, of the embedded clauses rather than of complex verbs in root clauses, as to whether they included evidentiality. Just as in the first survey, for each construction tested, three examples were given. The result was rather similar, but more heterogenous: Out of the same 22 participants, five did find something like an 'inferential nuance' of the type Schroeder mentions, but only as a weak, secondary meaning, while all of the participants reported perfective interpretations, in accordance with the translations of the examples (13) through (16), all of which have non-nominalized embedded clauses.

We therefore conclude that while size of the clause does matter for the evidentiality interpretation to be possible, it is not the case that the presence of tense is sufficient to ensure that this size is present and available. Transparency of the (embedded) clause, at least in part made possible by lack of agreement, is important, too. Such transparency leads to a union of sorts between the transparent embedded clause and the root clause, resulting in the two predicates forming a verbal compound: In such constructions, the matrix verbs are treated like auxiliaries in a sense, especially where the tensed embedded clause is impoverished by the missing agreement and by the accusative subject. This makes the embedded main verb with

*-mIş* into a part of a verbal compound,[7] whose head is the inflected matrix verb, thus treating the matrix verb in a similar way as the copula in 'complex verbs'. This is exactly the configuration where *-mIş* is interpreted as a perfective. This makes such constructions that exhibit tensed embedded clauses similar to nominalized clauses, despite the fact that they are tensed.

Informally, this paper proposes that among the non-nominalized embedded clauses, the 'diye'-clauses are most root-like, in that the evidentiality interpretation of *-mIş* is strongest there, and the weakest in the constructions with accusative subjects and lack of subject agreement, which is not surprising, given that these are properties of transparent clauses in general, and most likely to give rise to clause union

How is the perfective reading possible in such examples?

With respect to speakers who report a secondary reading of evidentiality for embedded tensed clauses, as well as with respect to speakers whom Korotkova has consulted and who do apparently report evidentiality as the only reading in embedded tensed clauses, we hypothesize that no clause union of the kind mentioned above takes place, and that such embedded clauses are treated similar to root clauses with respect to evidentiality. In other words, for such speakers and for the evidential reading they report, we hypothesize that there is no shortening of the clausal spine, and that a Mood marker that can host an evidentiality feature is present for such speakers, at least as a secondary option for the speakers that were consulted by me, and as the only reading for Korotkova's consultants.

## 4 Conclusions

The Turkish suffix *–mIş* is interpreted differently, depending on its position in the spine of a clause: If it is attached to a verbal predicate in a simple root clause, it is interpreted as an evidential as well as a past tense/perfective marker. When it is attached to a participle, it has only the perfective interpretation, while when it is attached to a copula (above either a non-verbal or a participial lexical verbal stem), it has only an evidential interpretation. This suffix has only

**7** One diagnostic for the formation of a (verbal) compound is the fact that the non-nominalized predicate of these 'transparent' embedded clauses cannot be separated from the matrix verb. This is a noteworthy fact in a language which is very word-order free; indeed, the individual parts of compounds in Turkish cannot be separated from each other in general. In contrast, the nominalized predicates of nominalized embedded clauses can easily be separated from the matrix verb, via movement, or via insertion of some other matrix constituent. Due to space constraints, I am unable to offer such contrastive examples.

the perfective interpretation in nominalized embedded clauses, while in tensed embedded clauses, while that perfective interpretation is the main one, an evidential interpretation is reported by some speakers as a secondary, weak reading. We mentioned that according to Korotkova 2021, her consultants report an evidential reading for such tensed embeddings as the only interpretation; this may be a generational phenomenon and should be examined with larger groups of native speakers.

All of the facts reported here are covered by analyzing *–mIş* as a *single* morpheme whose interpretations are dictated by its position in the spine of a clause, i.e. whether it is in a lower functional projection or in a higher, copular projection. Thus, the analysis of this suffix proposed in this paper is in accordance with a cartographic approach to the clausal architecture. The size of a clause plays an obvious role in these observations. The traditional description that differentiates between two morphemes, i.e. *–mIş* and *–ImIş*, is rejected, as well as any more recent approaches that claim that the two occurrences of *–mIş* are two different morphemes. Two surveys, conducted to check interpretations of this morpheme in these different positions, support the analyses proposed in this paper.

## Abbreviations

1SG = first person singular
2SG = second person singular
ACC = accusative
AOR = aorist
COND = conditional
COP = copula
ECM = exceptional case marking
GEN = genitive
INDNOM = indicative nominalization
LOC = locative
M = mood
NEG = negation
PL = plural
POSS3SG = possessive third person singular
PROG = progressive
PST = past
SOR = subject-to-object raising
T/A = tense/aspect
TAM = tense-aspect-mood

## Bibliography

Cinque, G. (2001). "A Note on Mood, Modality, Tense and Aspect Affixes in Turkish". Erguvanlı Taylan, E. (ed.), *The Verb in Turkish*. Amsterdam; Philadelphia: John Benjamins, 47-59. https://doi.org/10.1075/la.44.03cin.

Comrie, B. (2000). "Evidentials: Semantics and History". Johanson, L; Utas, B. (eds), *Evidentials: Turkic, Iranian and Neighbouring Languages*. Berlin; New York: Mouton de Gruyter, 1-14.

Csató, É.Á. (2000). "Turkish MIŞ- and IMIŞ-Items. Dimensions of a Functional Analysis". Johanson, L; Utas, B. (eds), *Evidentials: Turkic, Iranian and Neighbouring Languages*. Berlin; New York: Mouton de Gruyter, 29-44.

Erguvanlı Taylan, E. (ed.) (2001). *The Verb in Turkish*. Amsterdam; Philadelphia: John Benjamins.
https://doi.org/10.1075/la.44

Johanson, L. (1971). *Aspekt im Türkischen. Vorstudien zu einer Beschreibung des türkeitürkischen Aspektsystems*. Uppsala: Almqvist & Wiksell.

Johanson, L. (2000). "Turkic Indirectives". Johanson, L; Utas, B. (eds), *Evidentials: Turkic, Iranian and Neighbouring Languages*. Berlin; New York: Mouton de Gruyter, 61-88.

Kornfilt, J. (1996). "On Copular Clitic Corms in Turkish". Alexiadou, A.; Fuhrhop, N.; Law, P.; Löhken, S. (eds), *ZAS Papers in Linguistics*. Berlin: ZAS, 6, 96-114. https://doi.org/10.21248/zaspil.6.1996.762.

Kornfilt, J. (1997). *Turkish*. London: Routledge.

Korotkova, N. (2021). The Embedding Puzzle: Constraints on Evidentials in Complement Clauses. *Linguistic Inquiry*, 52(1), 210-26. https://doi.org/10.1162/Ling_a_00363.

Ótott-Kovács, E. (2021). Double Evidential Morphology in Turkish. *Proceedings of the Linguistic Society of America.* 6(1), 761-8. https://doi.org/10.3765/plsa.v6i1.5011.

Schroeder, C. (2000). Between Resultative, Historical and Inferential: Non-Finite *-mIş* Forms in Turkish. Johanson, L; Utas, B. (eds), *Evidentials: Turkic, Iranian and Neighbouring Languages*. Berlin; New York: Mouton de Gruyter, 115-46.

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# The Consequences of Large Language Models for Linguistic Theory

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**Abstract** Large Language Models (LLMs) have revolutionized the relationship between linguistics and artificial intelligence. This paper argues that, despite their remarkable performance, LLMs are not linguistic theories but tools that can both challenge and advance them. I will show that current models diverge from human cognition and that linguistics remains essential not only for interpreting how these systems work but for guiding the design of more cognitively plausible and interpretable language models.

**Keywords** Language models. Linguistic theory. Artificial intelligence. Distributional learning. Cognitive plausibility.

**Summary** 1 Introduction. – 2 Linguistics and Machines Before and After LLMs. – 3 They Speak Like Us, but They Are Not Like Us. – 4 What Linguistics Can (and Must) Do for Large Language Models. – 5 Conclusions.

## 1 Introduction

Language Models – neural networks trained to predict the most probable word given the preceding context – have emerged as key players in the contemporary landscape of artificial intelligence (AI) and cognitive science. Their extraordinary performances, often comparable to human abilities and in some cases even 'superhuman' (especially in their larger versions, the so-called Large Language Models, LLMs), have sparked an intense debate on the nature, acquisition, and processing of human language (Chesi 2025; Futrell, Mahowald 2025).

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For decades, natural language processing (NLP), the field of AI devoted to building machines endowed with all aspects of human intelligence connected to the use and understanding of natural language, sought to construct 'talking machines' solely through the implementation of linguistic theories, either in the form of manually crafted rules or via linguistically annotated data used to train supervised machine-learning algorithms. Today, for the first time, we are witnessing a new era: A generation of computational models has emerged, the LLMs, that acquire highly sophisticated and unprecedented linguistic abilities exclusively from the distributional statistics extracted from massive amounts of unannotated data. A kind of 'Copernican revolution' has thus taken place: rather than implementing linguistic theories, computational models are increasingly conceived as linguistic theories themselves (Piantadosi 2024). This shift is accompanied by the diffusion of a scientific paradigm in which the linguistic abilities of computational models are seen simply as emergent properties arising from the ever-growing mass of training data and the scale of neural architectures.

In this article, I will outline several arguments in favor of a different view of the relationship between Language Models and linguistic theory, which can be summarized as follows:

1. Language Models are not, in themselves, linguistic theories (Katzir 2023), but they possess extraordinary potential as tools for the investigation and validation of scientific hypotheses in linguistics and cognitive science;[1]
2. Existing Language Models, especially the largest ones, are not yet ready to fully assume such a role. Although they are technologically powerful systems with enormous applicative potential, significant gaps remain relative to the requirements that a scientifically valid model of human language acquisition and processing should satisfy (Frank 2023);
3. Linguistics can and must offer a fundamental contribution to the evolution of Language Models, transforming them into tools for the study of natural language and guiding the development of a new generation of models more directly inspired by the functioning and acquisition of language in humans, models capable of overcoming the structural limitations of current LLMs and their dependence on 'superhuman' amounts of training data.

**1** Goldberg 2024; Portelance, Jasbi 2024; Baggio 2025; Binz et al. 2025; Futrell, Mahowald 2025.

## 2 Linguistics and Machines Before and After LLMs

To fully grasp the scope and implications of the ongoing transformation in the relationship between linguistics and AI, consider the following example:

(1) Yesterday evening Ann asked Mary if she wanted to go to the cinema with her. Mary replied: "I have to get up early tomorrow." What did Mary mean by that sentence?

The correct answer is that Mary politely declined Ann's invitation, justifying herself by saying that she needed to wake up early the next day. In other words, Mary performed an indirect speech act: she used an assertion to implicitly communicate a refusal.

Before the advent of LLMs, designing an artificial system capable of answering the question in (1) involved formalizing and then implementing the knowledge and processes underlying human linguistic competence. For instance, linguistic theory tells us that to answer question (1) correctly, one must activate several types of knowledge:

1. reconstructing the morphological and syntactic structure of the sentence: for example, recognizing that the implied subject of the infinitival clause *to go* is Mary, that the pronoun her refers to Ann, that the subordinate clause governed by ask is an indirect question, and so forth;
2. correctly identifying the meanings of lexical items: for instance, interpreting the phrasal verb *get up* as rising from the bed after sleeping;
3. integrating this information with encyclopedic and pragmatic knowledge: for instance, that going to an evening movie implies returning home late, which might conflict with the need to get up early the next morning;
4. inferring the communicative intent associated with Mary's utterance on the basis of its meaning and all contextual information.

Until the 1990s, such knowledge was primarily formalized through rule-based systems operating on symbolic representations (such as context-free grammars, feature structures, semantic networks, etc.), manually crafted by computational linguists (Lenci, Vestrucci 2024). With the rise of the data-driven statistical paradigm, linguistic knowledge began to be represented as annotated data labeled with categories and structures, used to train supervised machine-learning algorithms.

In this context, a typical system designed to answer question (1) might consist of a classifier of communicative intents trained on

annotated corpora to distinguish, for instance, between different types of illocutionary acts expressed by sentences. Such a classifier would use syntactic and semantic information provided by specialized models designed to perform tasks such as syntactic parsing, anaphora resolution, and word-sense disambiguation, each trained, in turn, on corpora annotated with the relevant categories via machine-learning algorithms.

The shift from rule-based models to statistical and deep learning methods based on neural networks (with multiple hidden layers) represented a significant advancement, providing artificial systems with greater robustness, generalization capacity, and adaptability. The role of linguistics shifted from creating "grammars" to creating "annotated data" from which computational models could learn linguistic representations. However, models of this generation, including neural networks, continued to process language through explicit representations of categories supplied a priori by linguistic theory.

With the advent of LLMs, a substantial paradigm change occurred. These models demonstrate the ability to interact in natural language with a level of quality significantly superior to previous generations, despite not being explicitly trained to recognize or manipulate formal linguistic categories. For instance, when presented with a prompt consisting of question (1), a LLM such as ChatGPT provides the following answer:

(2) Mary's reply — "I have to get up early tomorrow" — is an indirect way of saying she can't (or doesn't want to) go to the cinema because she needs to wake up early the next day. In other words, she's politely refusing Ann's invitation and giving a reason for it: she has an early commitment in the morning.

An interesting point is that ChatGPT not only provides the correct answer but also the appropriate metalinguistic explanation, explicitly labeling Mary's response as an "indirect refusal". Similarly, the system can correctly identify the implicit subject of a subordinate clause, while also providing a detailed syntactic analysis of the sentence in linguistic terms:

(3) Prompt: What is the subject of "to go" in the sentence "Yesterday evening Ann asked Mary if she wanted to go to the cinema with her"?
ChatGPT: In the sentence "Yesterday evening Ann asked Mary if she wanted to go to the cinema with her," the subject of "to go" is Mary.
Here's why: The clause "if she wanted to go to the cinema with her" depends on "asked." The verb "wanted" has the subject "she" (which refers to Mary). The infinitive "to go" is part of what Mary wanted — so the understood (logical) subject of "to go" is the same as the subject of "wanted", i.e. Mary.

These answers are quite surprising, at least at first glance, given the way LLMs work. They consist of deep neural networks – Transformers (Vaswani et al. 2017) – which operate on continuous vector representations (known as embeddings). These embeddings *implicitly* encode knowledge about linguistic structures entirely derived from statistical regularities extracted from massive quantities of linguistic data (Lenci, Sahlgren 2023; Lenci et al. 2025).

Unlike previous computational paradigms, LLMs are not trained to manipulate grammatical categories or syntactic structures defined by linguistic theory. They are trained exclusively to solve the task of predicting the most probable next word given a preceding sequence of words. The linguistic abilities displayed by LLMs are therefore considered emergent abilities (Wei et al. 2022), since they do not stem from pre-specified linguistic knowledge but arise from the inductive learning process inherent in word-sequence prediction.

However, the advanced performance of models like ChatGPT cannot be attributed solely to basic predictive training (the so-called pretraining phase), but also to subsequent refinement processes (post-training) such as instruction tuning and reinforcement learning from human feedback (Tie et al. 2025), which play a crucial role in aligning the model's responses with human communicative and social expectations. It is important to note, however, that these refinement procedures do not involve explicit instruction about grammatical categories or linguistic rules: no model is ever explicitly taught what a grammatical subject is, for example.

LLMs therefore represent the first 'talking machines' developed without any direct contribution from traditional linguistic theories about the organization and functioning of human language. They mark a significant epistemological discontinuity relative to previous computational paradigms, raising new questions both in computational modeling and in our theoretical understanding of linguistic competence.

## 3 They Speak Like Us, but They Are Not Like Us

Although LLMs may astonish us with their linguistic abilities, these machines are profoundly different from humans in how such abilities are acquired and realized.

First, the training data available to LLMs differ from those accessible to humans, both quantitatively and qualitatively. LLMs are trained on datasets that are vastly larger than the linguistic input human speakers are ever exposed to. For instance, Lan et al. (2024) estimate that the data used for the first version of ChatGPT correspond to roughly 36,540 human years of linguistic exposure, assuming eleven million words as the average yearly linguistic input

for a person (Hart, Risley 1995). Moreover, the training corpora consist almost entirely of written texts scraped from the web (Liu et al. 2024). Therefore, they lack key aspects of the data humans use to acquire language, such as oral and visual input, conversational dynamics, and references to extra-linguistic and social contexts.

Second, LLMs rely exclusively on probabilistic prediction mechanisms. While distributional learning undoubtedly plays an important role in linguistic development (Lenci, Sahlgren 2023), other data, cognitive mechanisms, and structures are indispensable as well (Resnik 2025). This crucially includes extralinguistic experiences in multimodal communicative contexts, as well as learning biases that help the learner to rapidly converge towards the target linguistic structures in the face of highly noisy input data. Language is an extremely sophisticated function that has evolved to optimize the use of the limited cognitive and physiological resources humans possess for acquiring it. It is highly plausible that the outcome of this evolution is a system of cognitive constraints that guide the acquisition, representation, and organization of linguistic knowledge, enabling humans to generalize effectively even from limited input.

The same holds true for how LLMs solve any task, either linguistic or otherwise. ChatGPT produces the answer in (2) because that string of text is the most probable continuation of the text string in (1) used as a prompt. Word-sequence probability is, in fact, the sole behavioral criterion guiding the system. McCoy et al. (2023) show that even the mathematical problem-solving abilities of LLMs depend on the frequency of occurrence of the relevant functions in their training data. These systems are therefore constrained by their purely probabilistic nature, being models trained simply to predict word sequences. This is true even for the more recent reasoning models, a new generation of LLMs optimized specifically for reasoning, and yet they still exhibit substantial limitations in problem-solving capabilities (McCoy et al. 2024; Shojaee et al. 2025).

These findings are consistent with the view that, while probabilistic processes play an important role in human cognition, they are not the only form of reasoning of which we are capable (Kahneman 2011). Human reasoning, in its more complex forms, clearly relies on inferential schemes that may not be learnable solely from the statistical co-occurrence patterns on which LLMs are based. Therefore, the fact that ChatGPT produces human-like answers does not mean it does so using human-like mechanisms. As Shanahan (2024) puts it, although they seem to speak like us, LLMs are new entities that are, in reality, not like us, exhibiting "a patchwork of less-than-human with superhuman capacities, of uncannily human-like with peculiarly inhuman behavior" (p. 79).

Mitchell and Krakauer (2023) argue that Large Language Models constitute a new class of systems within the 'technological zoo,'

achieving linguistic competence through fundamentally non-human processes. From an engineering perspective, this is not a problem: technological innovations often diverge from biological mechanisms in the way they realize a given function, just as airplanes differ from birds in how they fly. Indeed, the history of human technological progress is full of examples of tools capable of performing tasks once reserved for humans or animals, even though they rely on mechanisms entirely different from those found in nature.

The case of flight is exemplary. As long as humans tried to imitate bird wings directly, every attempt failed. The Wright brothers' first successful flight at Kitty Hawk (North Carolina) on December 17, 1903, became possible precisely because of a machine built on principles far removed from those of animal flight: rigid wings, an engine for propulsion, and a structure entirely unlike that of a living organism. 'Flying machines,' therefore, share certain elements with birds but are radically different in how they realize the act of flying. Something similar occurred on November 30, 2022, the day OpenAI released ChatGPT. Thus, describing the emergence of LLMs and generative AI as a 'Copernican revolution' is entirely appropriate. Copernicus's scientific revolution displaced humanity from the center of the universe; similarly, LLMs have displaced humans from the center of language. Linguistic abilities now appear to manifest themselves in machines that, while inspired by human processes such as neural modeling and distributional learning, learn language in ways that greatly differ from human ones.

Likewise, linguistics, as the scientific study of human language, seems to have been removed from the center of research on 'talking machines.' Yet this decentering is only apparent, and hopefully only temporary. There are at least two reasons why linguistics can and must continue to contribute to AI, albeit in a new way compared to the past.

## 4 What Linguistics Can (and Must) Do for Large Language Models

The mainstream approach to LLM design assumes that the continual increase in training data and the size of neural architectures is sufficient to enable artificial systems to acquire linguistic and reasoning abilities comparable to those of humans. Such abilities are said to emerge from linguistic data once a critical mass is reached (Wei et al. 2022). The scaling up of models and datasets has indeed been decisive for recent progress, but it carries important theoretical and practical consequences:

- LLMs are now widely used to validate hypotheses in linguistic theory (a prominent case being the Poverty of the Stimulus argument; Lan et al. 2024; Piantadosi 2024). However, the

"superhuman" quantities of data used to train increasingly large systems raise significant doubts about their actual usability for cognitive and linguistic research, and about their validity as models of human language acquisition and use.

- The growth of LLMs is not unlimited, since the amount of textual data available is finite (leading to the increasing use of synthetic linguistic data produced by the models themselves; Villalobos et al. 2024). Moreover, their scaling is unsustainable, given the immense computational resources required both for their training and at inference, which entail extremely high environmental costs and a deeply concerning carbon footprint (Ren et al. 2024).

As discussed in Section 2, it is not uncommon for a machine to perform the same functions as a biological organism using different mechanisms, but one must ask whether it does so with equal efficiency. From this observation arises a first fundamental role for the language sciences in AI: to contribute to the development of a new generation of talking machines that are more sustainable and efficient, inspired by the constraints and principles governing human language.

A promising line of research focuses on the development of so-called Baby Language Models (BabyLMs), trained on data that are more similar, both quantitatively and qualitatively, to the input available to human learners. For instance, the BabyLM Challenge (Warstadt et al. 2023) created a small-scale dataset (approximately one hundred million words), roughly comparable to the linguistic input received by a ten-year-old child, constructed from transcriptions of spoken language, a significant portion of which consists of child-directed speech. Suozzi et al. (2025) developed BAMBI (BAby language Models Bootstrapped for Italian), a series of BabyLMs trained on samples of Italian data selected to model the linguistic input available to learners at different age ranges, from 0 to 24 years. In this context, the contribution of linguistics lies both in the selection and collection of cognitively plausible training data, and in the study of how to integrate the predictive mechanisms of Language Models with learning biases and architectural constraints (e.g., hierarchical structuring, locality constraints, minimum description length, etc.) capable of guiding the acquisition of linguistic structures even in environments with limited training data (Zamparelli 2025).

One of the most significant contributions of Language Models has been to demonstrate that the information available from the statistical distribution of linguistic input is far richer than previously imagined (Lenci 2023). This is an extremely important finding for the study of human language acquisition. However, the richness and power of distributional information do not rule out the possibility that human ontogenetic development also relies on a priori biases (Mandler

2004, Carey 2009) or specialized mechanisms (Tomasello 2003; Yang et al. 2017) that structure and optimize stimuli and cognitive resources during language learning, enhancing generalization capacity. Natural language is the product of a long evolutionary process: a remarkable communicative faculty that has developed within the cognitive and physiological constraints of our species. A better understanding of the linguistic and extralinguistic constraints that govern the learning and use of language, such as the ability to generalize from minimal data, or to integrate multimodal stimuli, can help us design computational models that are more efficient, less resource-intensive, and potentially even more capable, given the still-significant limitations of current systems (Mahowald et al. 2024; Shojaee et al. 2025).

The second contribution that linguistics can make to AI concerns the crucial issue of interpretability in Language Models, for which no clear explanatory theory yet exists. We have created machines with extraordinary linguistic abilities without fully understanding why they succeed when they do, or why they fail when they do not. This is due both to the immense architectural complexity of LLMs and to the implicit nature of the distributed representations they employ, which make them genuine black boxes. We do not know exactly what information is encoded in their billions of parameters, nor do we possess a causal theory linking a model's internal states to its observed behaviors.

Like other complex systems, LLMs exhibit non-locality: minimal linguistic variations in a prompt's phrasing can produce completely different responses or turn a correct answer into an error. The limited interpretability of LLMs is especially problematic when they are used as scientific models of human language. A scientific model of a process is expected to explain its causal structure, but LLMs still lack the level of interpretability required to provide a causal and theoretically grounded account even of their own linguistic behavior.

The same observable linguistic behavior can, in fact, result from fundamentally different internal strategies or representational formats (Warstadt, Bowman 2022). It is therefore essential to understand not only whether a model succeeds or fails, but also how and why it produces a given output. To address the challenge posed by the opacity of LLMs, a new research area has emerged: mechanistic interpretability (López-Otal et al. 2025). This focuses on analyzing the internal activations, representational structures, and mechanisms of Language Models.

In recent years, considerable effort has been devoted to interpreting the linguistic knowledge encoded in Language Models, particularly those based on the Transformer architecture. However, research has not yet yielded a comprehensive, coherent, and exhaustive account of how linguistic information is acquired, represented, and utilized by

LLMs. Nevertheless, recent advances in mechanistic interpretability are refining the tools available to researchers and promise to finally illuminate the black box of modern artificial systems. Following the distinction between formal and functional linguistic competence proposed by Mahowald et al. (2024), Hanna et al. (2025) conducted mechanistic interpretability analyses on several Large Language Models to determine whether a clear separation exists between functional and formal circuits, adapting the evaluation tasks to represent both types of competence. Hanna and Mueller (2025) began from the question of whether LLMs process sentences incrementally, similarly to humans, through an investigation of garden-path constructions, showing that such a parallel exists, though only in a limited form. Boguraev et al. (2025) examined the causal mechanisms underlying English filler-gap constructions, hypothesizing relevant similarities across instances (Sag 2010). Their results reveal that LLMs share partial causal structures among different filler-gap constructions, consistent with the relevant linguistic theory, while also identifying new factors that could help refine that theory, demonstrating how the interaction between linguistic theorization and mechanistic analysis can yield stronger hypotheses about human language.

Rodriguez et al. (2025) investigated the mechanisms governing the inheritance of properties in Language Models, providing mechanistic insights into how LLMs reason and connect concepts, while also suggesting new psycholinguistic experiments with human participants. Causal interpretability has also been used to explore phonological phenomena such as assimilation in neural speech-recognition models, allowing for comparisons between computational and human processing (Pouw et al. 2024). Other studies have focused on the geometry of embedding vector spaces to assess the internal conceptual organization performed by LLMs. These studies suggest that models partially encode concepts and relations as directional vectors within their representational spaces (Park et al. 2024; Proietti, Lenci 2025), although the organization of these spaces does not fully align with the semantic structures traditionally posited in linguistics.

Our understanding of the internal mechanisms within the black box of Language Models is still in its infancy and is hindered by the immense complexity of the largest models. Yet success in this endeavor cannot occur without the contribution of the language sciences, whose task is to formulate hypotheses about the structures and processes we seek to identify in these models. In this sense, linguistics remains the indispensable light needed to illuminate the black box and to guide our exploration within it.

## 5 Conclusions

The rise of generative AI and LLMs has been interpreted by many as either the long-awaited or the much-feared end of existing theories of language. This perceived 'end' affects not only Minimalist Generative Grammar, although it is often the primary target, but theoretical linguistics as a whole.

The 'Copernican revolution' brought about by LLMs has profoundly transformed the role of the language sciences within AI, since machines exhibiting linguistic abilities nearly indistinguishable from those of humans have been built without directly implementing the structures, constraints, and processes theorized by linguistics. This has led some to conclude that we no longer need linguistic theory at all, and that LLMs themselves are the best theory of language currently available (Piantadosi 2024), given their exceptional performance acquired purely through inductive learning from training data via probabilistic prediction mechanisms.

The arguments presented here point in precisely the opposite direction (for a similar position cf. Chesi 2025; Futrell, Mahowald 2025). The success of LLMs makes a theory of language more necessary than ever. The Wright brothers' first flight also occurred before the science of aerodynamics was fully established; likewise, we now need new theories to explain these 'talking machines.' We do not yet know what shape such theories will take, but that does not mean they cannot be formulated. We are just at the beginning, as 1903 marked the beginning of the history of aeronautics. In the age of generative AI, linguistic theory plays a crucial role:

i. to help design artificial systems that rely less on data quantity, by incorporating the constraints and biases that enable humans to learn language with limited data and cognitive resources;
ii. to understand whether and how neural models represent the structures of natural language, equipping themselves with new theoretical and methodological tools capable of grappling with their complexity.

At the same time, if LLMs cannot dispense with linguistics, it is equally true that linguistics itself cannot remain unchanged in the face of LLMs. These models can become virtual laboratories for testing and falsifying theories and hypotheses about the nature of language itself. However, linguistics will have to relinquish many of its long-held certainties to adapt to the new universe of Language Models. We need theories of language capable of interfacing with complex models that operate on sub-symbolic and continuous structures, where information is represented through overlapping states and entanglement (Huang et al. 2024) reminiscent of quantum systems. The convergence of

neural Language Models and linguistic theory may, in fact, enable linguistics to take a further step toward the full realization of the Galilean scientific method, whereby the hypotheses of linguistic theory can be experimentally tested through computational models simulating the processes of language acquisition and processing, analogous to what occurs in the physics of subatomic states.

This integration between Language Models and linguistic theory is also necessary on practical and technological grounds. It cannot be abandoned if we truly wish to understand AI systems and move beyond mere text generation toward authentic forms of communication. This transition is essential for defining the role of LLMs in our future. In the case of flight, the goal was not to imitate birds but to make aerial mobility possible; for language, by contrast, we seek machines capable not only of producing imitations of human texts, but of engaging in social interaction and communication with us, sharing knowledge, reasoning, and values. This is crucial, given the increasing presence of AI in our daily lives.

## Bibliography

Baggio, G. (2025). "Could Machine Learning Help to Build a Unified Theory of Cognition?". *Nature*, 644, 881-3.

Binz, M. et al. (2025). "A Foundation Model to Predict and Capture Human Cognition". *Nature,* 644, 1002-9.

Boguraev, S.; Potts, C.; Mahowald, K. (2025). "Causal Interventions Reveal Shared Structure Across English Filler-Gap Constructions". *arXiv*, 2505.16002. https://arxiv.org/abs/2505.16002.

Carey, S. (2009). *The Origin of Concepts*. Oxford: Oxford University Press.

Chesi, C. (2025). "Is It the End of (Generative) Linguistics as We Know It?". *Italian Journal of Linguistics*, 37(1), 3-44.

Frank, M.C. (2023). "Bridging the Data Gap Between Children and Large Language Models". *Trends in Cognitive Sciences*, 27(11), 990-2.

Futrell, R.; Mahowald, K. (2025). "How Linguistics Learned to Stop Worrying and Love the Language Models". *Behavioral and Brain Sciences*, 49, 1-80.

Goldberg, A.E. (2024). "Usage-Based Constructionist Approaches and Large Language Models". *Constructions and Frames*, 16(2), 220-54.

Hanna, M.; Belinkov, Y.; Pezzelle, S. (2025). "Are Formal and Functional Linguistic Mechanisms Dissociated in Language Models?". *Computational Linguistics*, 52(1), 43-83.

Hanna, M.; Mueller, A. (2025). "Incremental Sentence Processing Mechanisms in Autoregressive Transformer Language Models". *Proceedings of the 2025 Conference of the Nations of the Americas Chapter of the Association for Computational Linguistics: Human Language Technologies*, 3181-203.

Hart, B.; Risley, T.R. (1995). *Meaningful Differences in the Everyday Experience of Young American Children*. Baltimore, MD: Paul H. Brookes.

Huang, J.; Wu, Z.; Potts, C.; Geva, M.; Geiger, A. (2024). "RAVEL: Evaluating Interpretability Methods on Disentangling Language Model Representations".

*Proceedings of the 62nd Annual Meeting of the Association for Computational Linguistics*, 8669-87.

Kahneman, D. (2011). *Thinking, Fast and Slow*. New York: Farrar, Straus and Giroux.

Katzir, R. (2023). "Why Large Language Models Are Poor Theories of Human Linguistic Cognition: A Reply to Piantadosi". *Biolinguistics*, 17.

Lan, N.; Chemla, E.; Katzir, R. (2024). "Large Language Models and the Argument from the Poverty of the Stimulus". *Linguistic Inquiry*, 1-28. Lingbuzz 006829.

Lenci, A. (2023). "Understanding Natural Language Understanding Systems". *Sistemi Intelligenti*, 2, 277-302.

Lenci, A.; Sahlgren, M. (2023). *Distributional Semantics*. Cambridge: Cambridge University Press.

Lenci, A.; Vestrucci, A. (2024). "Artificial Intelligence and Language". Boobalan, R.; Shrivastava, N.; Kiruthigadevi, N.; Ravichandran, P. (eds), *International Encyclopedia of Language and Linguistics*. 3rd ed. Amsterdam: Elsevier.

Lenci, A.; Auriemma, S.; Miliani, M. (2025). *Linguistica computazionale. Natural language processing e intelligenza artificiale*. Milano: Hoepli.

Liu, Y.; Cao, J.; Liu, C.; Ding, K.; Jin, L. (2024). "Datasets for Large Language Models: A Comprehensive Survey". *arXiv*, 2402.18041. https://arxiv.org/abs/2402.18041.

López-Otal, M.; Gracia, J.; Bernad, J.; Bobed, C.; Pitarch-Ballesteros, L.; Anglés-Herrero, E. (2025). "Linguistic Interpretability of Transformer-Based Language Models: A Systematic Review". *arXiv*, 2504.08001. https://arxiv.org/abs/2504.08001.

Mahowald, K.; Ivanova, A.A.; Blank, I.A.; Kanwisher, N.; Tenenbaum, J.B.; Fedorenko, E. (2024). "Dissociating Language and Thought in Large Language Models". *Trends in Cognitive Sciences*, 28(6), 517-40.

Mandler, J.M. (2004). *Foundations of Mind*. Oxford: Oxford University Press.

McCoy, R.T.; Yao, S.; Friedman, D.; Hardy, M.; Griffiths, T.L. (2023). "Embers of Autoregression: Understanding Large Language Models Through the Problem They Are Trained to Solve". *arXiv*, 2309.13638. https://arxiv.org/abs/2309.13638.

McCoy, R.T.; Yao, S.; Friedman, D.; Hardy, M.D.; Griffiths, T.L. (2024). "When a Language Model Is Optimized for Reasoning, Does It Still Show Embers of Autoregression? An Analysis of OpenAI o1". *arXiv*, 2410.01792. https://arxiv.org/abs/2410.01792.

Mitchell, M.; Krakauer, D.C. (2023). "The Debate over Understanding in AI's Large Language Models". *Proceedings of the National Academy of Sciences*, 120(13), e2215907120.

Park, K.; Choe, Y.J.; Veitch, V. (2024). "The Linear Representation Hypothesis and the Geometry of Large Language Models". *arXiv*, 2311.03658. https://arxiv.org/abs/2311.03658.

Piantadosi, S.T. (2024). "Modern Language Models Refute Chomsky's Approach to Language". Gibson, E.; Poliak, M. (eds), *From Fieldwork to Linguistic Theory. A Tribute to Dan Everett*. Berlin: Language Science Press, 353-414.

Portelance, E.; Jasbi, M. (2024). "The Roles of Neural Networks in Language Acquisition". *Language and Linguistics Compass*, 18(6), e70001.

Pouw, C.; Kloots, M.D.H.; Alishahi, A.; Zuidema, W. (2024). "Perception of Phonological Assimilation by Neural Speech Recognition Models". *Computational Linguistics*, 50(4), 1557-85.

Proietti, M.; Lenci, A. (2025). "The Quasi-Semantic Competence of LLMs: A Case Study on the Part-Whole Relation". *arXiv*, 2504.02395. https://arxiv.org/abs/2504.02395.

Ren, S.; Tomlinson, B.; Black, R.W.; Torrance, A.W. (2024). "Reconciling the Contrasting Narratives on the Environmental Impact of Large Language Models". *Scientific Reports*, 14(1).

Resnik, P. (2025). "Large Language Models Are Biased Because They Are Large Language Models". *Computational Linguistics*, 51(3), 885-906

Rodriguez, J.D.; Mueller, A.; Misra, K. (2025). "Characterizing the Role of Similarity in the Property Inferences of Language Models". *Proceedings of the 2025 Conference of the Nations of the Americas Chapter of the Association for Computational Linguistics: Human Language Technologies*, 11515-33.

Sag, I.A. (2010). "English Filler-Gap Constructions". *Language*, 86(3), 486-545.

Shanahan, M. (2024). "Talking About Large Language Models". *Communications of the ACM*, 67(2), 68-79.

Shojaee, P.; Mirzadeh, I.; Alizadeh, K.; Horton, M.; Bengio, S.; Farajtabar, M. (2025). "The Illusion of Thinking: Understanding the Strengths and Limitations of Reasoning Models via the Lens of Problem Complexity". *arXiv*, 2506.06941. https://arxiv.org/abs/2506.06941.

Suozzi, A.; Capone, L.; Lebani, G.E.; Lenci, A. (2025). "BAMBI: Developing Baby Language Models for Italian". *Lingue e Linguaggio*, 24(1), 83-102.

Tie, G.; Zhao, Z.; Song, D.; Wei, F.; Zhou, R.; Dai, Y.; Yin, W.; Yang, Z.; Yan, J.; Su, Y.; Dai, Z.; Xie, Y.; Cao, Y.; Sun, L.; Zhou, P.; He, L.; Chen, H.; Zhang, Y.; Wen, Q.; Liu, T.; Gong, N.Z.; Tang, J.; Xiong, C.; Ji, H.; Yu, P.S.; Gao, J. (2025). "Large Language Models Post-Training: Surveying Techniques from Alignment to Reasoning". *arXiv*, 2503.06072. https://arxiv.org/abs/2503.06072.

Tomasello, M. (2003). *Constructing a Language. A Usage-Based Theory of Language Acquisition*. Cambridge, MA: Harvard University Press.

Vaswani, A.; Shazeer, N.; Parmar, N.; Uszkoreit, J.; Jones, L.; Gomez, A.N.; Kaiser, Ł.; Polosukhin, I. (2017). "Attention Is All You Need". *Proceedings of the 31st Conference on Neural Information Processing Systems (NIPS 2017)*. Long Beach, CA.

Villalobos, P.; Ho, A.; Sevilla, J.; Besiroglu, T.; Heim, L.; Hobbhahn, M. (2024). "Position: Will We Run out of Data? Limits of LLM Scaling Based on Human-Generated Data". *Proceedings of the 41st International Conference on Machine Learning*. Vienna.

Warstadt, A.; Bowman, S.R. (2022). "What Artificial Neural Networks Can Tell Us About Human Language Acquisition". *arXiv*, 2208.07998. https://arxiv.org/abs/2208.07998.

Warstadt, A.; Mueller, A.; Choshen, L.; Wilcox, E.; Zhuang, C.; Ciro, J.; Mosquera, R.; Paranjabe, B.; Williams, A.; Linzen, T.; Cotterell, R. (2023). "Findings of the BabyLM Challenge: Sample-Efficient Pretraining on Developmentally Plausible Corpora". *Proceedings of the Baby Language Model Challenge at the 27th Conference on Computational Natural Language Learning*, 1-34.

Wei, J.; Tay, Y.; Bommasani, R.; Raffel, C.; Zoph, B.; Borgeaud, S.; Yogatama, D.; Bosma, M.; Zhou, D.; Metzler, D.; Chi, E.H.; Hashimoto, T.; Vinyals, O.; Liang, P.; Dean, J.; Fedus, W. (2022). "Emergent Abilities of Large Language Models". *Transactions on Machine Learning Research*.

Yang, C.; Crain, S.; Berwick, R.C.; Chomsky, N.; Bolhuis, J.J. (2017). "The Growth of Language: Universal Grammar, Experience, and Principles of Computation". *Neuroscience & Biobehavioral Reviews*, 81, 103-19.

Zamparelli, R. (2025). "Doing Linguistics in the GPT Era". *Italian Journal of Linguistics*, 37(1), 177-84.

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# Rethinking Subject Doubling in Brazilian Portuguese

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**Abstract** This article shows that subject doubling (SD) is not uniform in Brazilian Portuguese (BP). Focusing on pronouns, we draw on classical proposals for the segmentation of pronouns in natural languages to show that resumptive pronouns display heterogeneous properties, being either strong or deficient. We also provide evidence that the subject may remain in an argument position without moving to the left periphery of the sentence. We propose two SD structures in BP: one with topic doubling and another with argumental doubling. Splitting occurs only in the former, whereas in the latter both elements behave as a single syntactic object.

**Keywords** Syntactic doubling. Subject. Topic. Pronouns. Brazilian Portuguese.

**Summary** 1 Introduction. – 2 The Subject Is Not Always Left Dislocated. – 3 More than One Type of Resumptive Pronoun. – 4 Deficient Pronouns, but Not Clitics. – 5 Subject and Pronoun Positions in Brazilian Subject Doubling. – 6 Conclusions.

## 1 Introduction

Syntactic doubling constructions challenge current linguistic theories, as they appear to violate three fundamental principles of syntax, semantics, and pragmatics: the Economy Principle (Chomsky 1995), the Principle of Compositionality (Frege 1892), and Grice's

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Cooperative Principle (Grice 1975).[1] These constructions seem to defy economy when both the 'doublee' and the 'doubler'[2] bear the same thematic role; compositionality is also compromised insofar as the doubler does not directly contribute to the semantic interpretation of the resulting structure; and finally, doubling appears to yield a sentence that is more informative than required.

According to Barbiers (2008), one way to address this issue, at least from a syntactic perspective, is to propose an analysis in which the doubling phenomenon arises because a single syntactic element is associated with more than one syntactic position. To mitigate the semantic and pragmatic problem, it has been argued that syntactic doubling is only apparent, with the doubler contributing to both the semantic and pragmatic interpretation of the sentence.

In this paper, we discuss some syntactic properties of the subject-doubling construction in Brazilian Portuguese (BP). In this language, doubling may occur through a nominal or pronominal subject constituent followed, directly or indirectly, by a personal pronoun that generally agrees in gender and number with the head element of the subject, as illustrated below.

(1) O meu irmão mais novo ele é um cara que viaja muito
the my brother more young he is a guy that travels a lot
'My youngest brother is a guy who travels a lot'

(2) Ele, por exemplo, ele gosta de Racionais
he for example he likes of Racionais
'For example, he likes Racionais'

Doubling constructions are also observed in languages such as French and the Trentino dialect spoken in Northern Italy:

(3) Le garçon, il mangeait une pomme
the boy he ate an apple
'The boy ate an apple'

(Coveney 2005, 96)

**1** We would like to thank the organizers of this Festschrift in honor of Anna Cardinaletti for their dedication and care in bringing together a collection of works inspired by Anna's contributions. We are especially grateful to Anna for her pioneering work on subjecthood, which has provided the theoretical foundations that have guided and shaped our own research. Building on her insights, we have sought to further develop the study of subject syntax in Brazilian Portuguese.

**2** The term doubling suggests the duplication of a single argument. In this paper, we follow Belletti (2005) in using the terms "doublee" and "doubler" to refer to the duplicated elements.

(4) Nane el vien doman
Nane he comes tomorrow
'Nane is coming tomorrow'

(Cardinaletti 2019, 9)

In this paper, we argue that, unlike what has been proposed for other languages such as French (Kayne 2000), subject doubling in BP should not necessarily be analyzed as a topicalization strategy, nor as a Subject Clitic Left Dislocation construction (Camacho 2006). Drawing on the diagnostics proposed by Cardinaletti and Starke (1999), we show that resumptive pronouns do not behave uniformly, giving rise to distinct constructions. According to this approach, we maintain that, although they sometimes resemble deficient items, these elements cannot be regarded as clitics, unlike what occurs in Northern Italian dialects.

The paper is organized as follows: section 2 presents a discussion of the positions occupied by the subject in this construction, showing that the subject may appear either left-dislocated or not; section 3 examines the behavior of resumptive pronouns, highlighting that they sometimes behave as strong pronouns and sometimes as deficient ones; section 4 refines this observation by showing that, although these pronouns may be deficient, they do not display the properties of clitics; finally, section 5 provides an explanation that accounts for the distinct patterns of subject doubling in BP.

## 2 The Subject Is Not Always Left Dislocated

In the literature, subject doubling in BP has traditionally been analyzed as a case in which the subject constituent occupies a position in the left periphery of the clause and is resumed by a pronoun in the TP domain. Duarte (1995), building on Pontes (1987), argues that this construction should be classified as a left-dislocation structure. This view is also adopted by Vasco (2006) and Orsini and Vasco (2007), who observe that subject doubling involves a topicalized element followed by a copy-pronoun corresponding to the clausal subject. Galves (2001), in turn, proposes that subject doubling in the third person functions as a "reminder strategy", involving the topicalization of the subject constituent along with an independent reminder pronoun in subject position.

Indeed, it is not possible to dissociate the possibility of subject displacement in this construction from its topic-like behavior. One piece of evidence supporting this view

comes from the possibility of displaced constituents intervening between these elements and the pronoun, as is the case with the contrastive focus object in (5b).

(5) a. A Maria ela comeu uma fruta
the Mary she ate a fruit
'Mary ate a fruit'

b. A Maria, UMA FRUTA ela comeu (não um legume)
the Mary A FRUIT she ate not a vegetable
'Mary ate a fruit (not a vegetable)'

It is worth emphasizing as well that the lack of pauses (comma intonation) following the subject does not affect the acceptability of such sentences, as in (5a). However, it is interesting to note that although the DP may appear in the left periphery, the pronoun must remain in a non-dislocated position, as evidenced by the ungrammaticality of (6), where the resumptive precedes the contrastive focus.

(6) *A Maria, ela UMA FRUTA comeu (não um legume)
the Mary she A FRUIT ate not a vegetable

This fact resembles the weak Italian pronoun *egli*, which cannot be left-dislocated (Cardinaletti, Starke 1999, 68):

(7) *Egli a Gianni [pro non gli ha parlato]
he to Gianni pro not to.him has spoken

Another aspect that runs counter to analyses claiming that the subject in SD always occupies a left-peripheral topic position is the possibility of extraction (Quarezemin 2019). Rizzi (2004) shows that when a constituent is dislocated in the left periphery of an embedded clause, Wh-extraction is blocked, as can be seen in (8b); however, this is not the case when SD occurs in the subordinate clause, as illustrated in (8a).

(8) a. Onde o Pedro acha que [a Ana ela] encontrou o
where the Peter thinks that the Ana she met the
João?
John
'Where does Peter think that Ana met John?'

b. *Onde o Pedro acha que o João a Ana (ela)
where the Peter thinks that the John the Ana she
encontrou?
met

In addition, Quarezemin (2020) observes that pragmatic effects also point to a distinction between SD, on the one hand, and sentences with an explicitly left-dislocated phrase, on the other.

(9) a. O que aconteceu?
what happened
'What happened?'

b. A Ana ela comprou um carro
the Ana she bought a car
'Ana bought a car'

c. #Um carro, Ana comprou (ele)
a car Ana bought it

It can be observed that only SD occurs in out-of-the-blue contexts. The sentence with a left-dislocated object does not fit wide-focus contexts, as shown in (9c). The evidence presented so far suggests that the DP in a SD construction does not always occupy a topic position in the A′-domain, but may also appear within the TP zone. This leads us to Generalization 1 in (10), which will be refined below. This generalization requires assuming two possible structural configurations for the construction, as represented in (11).

(10) Generalization 1: subjects in SD may appear either in the CP or the TP domain.

(11) a. [$_{CP}$ subj [$_{TP}$ Resumptive Pronoun …
b. [$_{CP}$ [$_{TP}$ subj Resumptive Pronoun …

## 3 More than One Type of Resumptive Pronoun

In this section, we analyze the resumptive pronouns in light of the typology of pronominal categories proposed by Cardinaletti and Starke (1999). Their analysis roughly distinguishes two groups of pronouns: strong and deficient. Two properties that distinguish these groups are particularly relevant for the present study: only strong pronouns can be coordinated and c-modified.

Applying these diagnostics to BP subject-doubling sentences, Krieck (2022) observes that resumptive pronouns can be successfully coordinated or c-modified.

(12) A Maria e o João, depois de casar, ele e ela
the Mary and the John after of to.get.married he and she
querem ter filhos.
want to.have children
'After getting married, Mary and John want to have children.'

(13) O João, hoje à noite, só ele vai sair.
the John tonight only he will go.out
'Only John will go out tonight.'

It seems, however, that this is only possible when some material intervenes between the subject and the resumptive pronoun. When no morphophonological material or prosodic break is present, both coordination and c-modification of the resumptive pronoun result in ungrammaticality, as shown by the data below.

(14) *A Maria e o João ele e ela querem ter filhos
the Mary and the John he and she want to.have children

(15) *O João só ele vai sair
the John only he will go.out

This diagnostic suggests that a strong pronoun can only occur when the subject appears in a topicalized position. Moreover, when the projections QembP and FinP are activated, coordinated or c-modified pronouns cannot occur, as evidenced by the ungrammaticality of (16a′, b′). This indicates that, in such cases, the pronoun is deficient rather than strong.

(16) a. Eu fico me perguntando [$_{QembP}$ que coisa [$_{Qemb}$ que [$_{IP}$ o
I keep me asking what thing that the
Bruno e a Maria eles cozinharam
Bruno and the Maria they cooked
'I keep wondering what Bruno and Maria cooked.'

a'. *Eu fico me perguntando [$_{QembP}$ que coisa [$_{Qemb}$ que [$_{IP}$ o
I keep me asking what thing that the
Bruno e a Maria ele e ela cozinharam
Bruno and the Maria he and she cooked

b. Eu fico me perguntando [$_{QembP}$ que coisa [$_{Qemb}$ que [$_{IP}$ o
I keep me asking what thing that the
Bruno ele cozinhou
Bruno he cooked
'I keep wondering what Bruno cooked.'

b'. *Eu fico me perguntando [$_{QembP}$ que coisa [$_{Qemb}$ que [$_{IP}$ o
I keep me asking what thing that the
Bruno só ele cozinhou
Bruno only he cooked

The data above confirm the hypothesis presented in the previous section that there are two available positions for hosting subjects. They also show that pronouns cannot be homogeneously categorized, and that their distinct behavior appears to be associated with the position occupied by the subject, given the clear difference in the acceptability of strong pronouns when the subject is dislocated and when it is not.

At this stage, we must determine whether deficient pronouns are also possible when DPs occupy a topicalized position, or whether only strong pronouns are allowed in that context. To address this issue, we examine the behavior of the pronoun *cê*, an apparent reduced form of the second-person singular pronoun *você* 'you'. Othero (2013) and Barbosa (2005) point out that these two forms display distinct behaviors, the former patterning as a deficient pronoun and the latter as a strong one. The data below illustrate a restriction on the c-modification and focalization of *cê* when compared to *você*.

(17) a. Só você chegou mais cedo
only you arrived more early
'Only you arrived earlier'

b. *Só cê chegou mais cedo
only you arrived more early

(18) a. VOCÊ eu acho que terá que vir amanhã (não eu)
YOU I think that will.have that come tomorrow not me
'I think YOU are the one who will have to come tomorrow, not me'

b. *CÊ eu acho que terá que vir amanhã (não eu)
YOU I think that will.have that come tomorrow not me

The reduced form cê has a different status from the reduced pronouns of the first and third person. To begin with, its morphological form differs from that of the strong pronoun você, whereas the reduced

forms of the first and third person are morphologically homophonous and can only be distinguished in speech. It is also worth noting that the third-person deficient forms cannot appear at the beginning of a simple clause, nor can they be doubled by their strong or weak counterparts.

It thus seems that both strong and deficient pronouns, the latter in more restricted contexts, function as doublers with topicalized DPs and pronouns. This observation leads us to Generalization 2 below and to the refinement of the structures proposed in (11).

(19) Generalization 2: When the subject occurs in the CP domain, doubler pronouns may be either strong or deficient (a,b). When it occurs in the TP domain, resumptive pronouns can only be deficient (c).

(20) a. [CP subj [TP $RP_{strong}$ …
b. [CP subj [TP $RP_{deficient}$ …
c. [CP [TP subj $RP_{deficient}$ …

## 4 Deficient Pronouns, but Not Clitics

The pronominal class analysis proposed by Cardinaletti and Starke (1999) assumes that the simple division of pronouns into strong and deficient does not fully capture their properties, and that a further split within the deficient class, between weak pronouns, on the one hand, and clitics, on the other, is necessary. In this section, we show that this distinction is particularly relevant to the case of resumptive pronouns, arguing that the elements found in BP subject-doubling sentences are not clitics but weak pronouns.

In previous analyses (Quarezemin 2020; Krieck 2021), we argued that subject-doubling sentences could represent a case of Subj lexicalization (as proposed by Rizzi 2018 for Northern Italian dialects). In this case, that head would act as a probe, attracting the subject to its specifier and thus allowing doubling, as illustrated in (21).

(21) a. A Maria ela saiu
the Mary she left
'Mary left'
b. [$_{SubjP}$ A Maria [$_{Subj}$ ela…

Our proposal was based on the defective paradigm of reduced weak pronouns in BP (Kato, Duarte 2014), which, due to morphophonological reduction, are obligatorily deficient. At the time, it was argued that in

a subject-doubling structure these pronouns would no longer behave as weak forms, but rather as clitics.

It is widely acknowledged that clitic pronouns are syntactically dependent on the verb. In this regard, among the properties of clitics discussed by Kayne (1975), we highlight two: (i) clitics cannot be separated from the verb by any intervening element, and (ii) negation operators cannot appear between the clitic and the verb. Let us consider, for instance, how both properties apply to the impersonal clitic se in BP.

(22) a. Em breve se saberá a hora da festa
soon cl.3SG.IMPERS know.FUT the time of.the party
'Soon the time of the party will be known.'

b. *Se em breve saberá a hora da festa
cl.3SG.IMPERS soon know.FUT the time of.the party
'Soon the time of the party will be known.'

(23) a. Não se sabe a hora da festa
not cl.3SG.IMPERS know.PRES the time of.the party
'The time of the party is not known.'

b. *Se não sabe a hora da festa
cl.3sg.impers não know.PRES the time of.the party

If the pronoun in (21) could function as a clitic in SD, we would expect them to behave identically to the pronoun se, namely, that no adverbial form or negation marker could intervene between them and the verb. However, these conditions are not always maintained, as shown below.

(24) a. Eles, eis em breve saberão a hora da festa
they they soon will.know the time of.the party

b. Eles, em breve eis saberão a hora da festa
they soon they will.know the time of.the party
'They will know the time of the party soon'

(25) a. Eles, eis não sabem a hora da festa
they they not know the time of.the party
'They don't know the time of the party'

b. *Eles, não eis saberão a hora da festa
they not they will.know the time of.the party

The data in (24) show that adjacency between the doubler pronoun and the verb can be easily disrupted, indicating that, in BP, there is no strong dependency relation between the pronoun and the verbal form, unlike what we find with the impersonal pronoun se. Regarding the negation operator in (25), the only possible configuration is for it to remain adjacent to the verb, thereby excluding adjacency between the resumptive and the verb. Considering these properties, the reduced pronoun in (21) seems to retain a weak status when it appears in SD contexts.

Based on the facts presented, we argue for two distinct configurations of subject doubling in BP: when the DP is topicalized, the pronoun is strong, and may be weak in a pronominal doubling construction, as in (24); when the DP occurs in the TP zone, the pronoun is only weak and cannot be analyzed as a clitic. This assumption is also consistent with analyses showing that the loss of the clitic pronoun system in BP is directly related to the distinct behavior of SD constructions in this language, as compared to other Romance languages, such as French (Kato 1993; 2017). Accordingly, we propose a third generalization, accompanied by the structural possibilities, which refine those in (20).

(26) Generalization 3: When subjects occur in the CP domain, doubler pronouns are either strong or weak. When they occur in the TP domain, doubler pronouns can only be weak.

(27) a. [CP subj [TP $RP_{strong}$ …
b. [CP subj [TP $RP_{weak}$ …
c. [CP [TP subj $RP_{weak}$ …

## 5 Subject and Pronoun Positions in Brazilian Subject Doubling

Before turning to the syntax of SD, it is important to recall a few points. First, BP is not a language that exhibits generalized syntactic doubling constructions, as there are no instances of object doubling, unlike in Spanish. Although both pronominal and non-pronominal doubling occur, the former is restricted to cases where the doublee is topicalized. This scenario may be related to the weakening of the object clitic system in BP (Carvalho, Calindro 2018; Kato, Ordoñez 2021), as well as to the fact that the EPP is no longer satisfied by agreement markers in BP. According to Barbosa et al. (2005), BP and European Portuguese (EP) differ with respect to EPP checking: it is satisfied via phrase movement in the former, whereas the latter resorts to agreement markers through affixal clitics. One

consequence of these properties is that SD in BP is more frequent, since the doubler pronoun compensates for the absence of a fully productive agreement system, as observed in EP.

Although the role of the doubler pronoun may be related to the agreement system in BP, we have shown in the previous sections that these elements cannot be treated as clitics. We find two distinct groups, the strong doubler pronoun and the weak doubler pronoun. The former is in complementary distribution with the subject DP, and therefore, in constructions where doubling occurs, the DP must necessarily appear in the left periphery of the sentence, leaving the pronoun in the argumental position, SpecSubjP, as shown in (28).

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| (28) | [$_{TopP}$ | o | menino | [$_{SubjP}$ | ele | [$_{TP}$ | dormiu | tarde | ]]]] |
| | | the | boy | | he | | slept | late | |

Note that the nominative Case feature is checked by the pronoun that moves to SpecSubjP, thereby ensuring its status as "the subject of predication", in the sense of Cardinaletti (1997, 2004). This is a way of dissociating phi-features from Case-system features. Regarding the resumption of the topic by the weak pronoun in SD, we observed in the previous section that these elements do not behave like clitics. In this respect, we compare them with the Italian pronouns egli and esso, and follow Cardinaletti (2004, 133), who argues that these pronouns, although syntactically weak, share the same distribution as strong subjects, occurring therefore in SpecSubjP.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (29) | [$_{TopP}$ | você | [$_{SubjP}$ | cê$_{i}$ | [$_{TP}$ | t$_{i}$ | [$_{T}$ | precisa | estudar | mais | ]]]] |
| | | you | | you | | | | need | to.study | more | |

When analyzing SD with a topicalized DP or pronoun resumed by a strong or weak pronoun, we observe a splitting between the two elements during the course of the derivation. In this case, we can follow the Big DP analysis, assuming that the two doubling elements are projected within the same DP in a thematic position. Subsequently, the doublee moves out of vP to the left periphery of the sentence, leaving the remaining DP available for Case and phi-feature checking, as well as for the checking of the criterial feature "subject of predication". It is interesting to note that this splitting does not seem to occur when the DP is resumed by a weak pronoun, with both elements remaining in argumental position. When doubling takes place within the argumental domain, adjacency between the doublee and the doubler must be preserved.

Before addressing this point, it is important to examine the lower area of the left periphery in embedded interrogative clauses, which

provides indirect support for this observation. As shown by Krieck (2021, 2022), SD can also occur below an embedded interrogative expression *que coisa* (what thing).

(30) a. Eu fico me perguntando que coisa (que) [$_{IP}$ o Bruno
I keep me asking what thing that the Bruno
ele cozinhou pra Carla
he cooked to Carla
'I keep wondering what Bruno cooked to Carla.'

b. [$_{QembP}$ que coisa$_i$ [$_{Qemb}$ (que) [$_{TP}$ o Bruno ele $t_i$ ]]
what thing that the Bruno he

Considering that Qemb is a low head within CP, whose projection, according to Rizzi and Bocci (2017), may follow but never precede topics, it is possible to argue that both the subject and the pronoun occupy an A-position. For these cases, we follow the analysis proposed by Quarezemin and Ordóñez (2024), who treat subject doubling in the argumental domain as a single syntactic object, a Big DP that does not undergo any stripping when moved to the subject position.

## 6 Conclusions

This study argued that, unlike what has been proposed for other languages such as French, subject doubling in Brazilian Portuguese should not necessarily be analyzed as a topicalization strategy. Drawing on the diagnostics proposed by Cardinaletti and Starke (1999), the analysis showed that resumptive pronouns did not behave uniformly, giving rise to distinct constructions. It was further maintained that, although they sometimes resembled deficient items, these elements could not be regarded as clitics, unlike what occurred in Northern Italian dialects.

Furthermore, two distinct groups were identified: the strong doubler pronoun and the weak doubler pronoun. The former is in complementary distribution with the subject DP, and therefore, in constructions where doubling occurs, the DP must appear in the left periphery of the sentence, leaving the pronoun in the argumental position. It was also shown that in cases of SD involving a topicalized DP or pronoun resumed by a strong or weak pronoun, a splitting between the two elements arises during the course of the derivation. This splitting, however, does not seem to occur when the subject DP is resumed by a weak pronoun, with both elements remaining in argumental position. When doubling takes place within the argumental domain, adjacency between the doublee and the doubler must be preserved.

## Bibliography

Barbiers, S. (2008). "Microvariation in Syntactic Doubling – An Introduction". Barbiers, S, Koeneman, O.; Lekakou, M.; van der Ham, M. (eds), *Syntax and Semantics, Vol 36: Microvariation in Syntactic Doubling*, 1-34.

Barbosa, L.P. (2005). *Estatuto da Forma Cê. Clítico ou Palavra?* [Master's Thesis]. Belo Horizonte: Universidade Federal de Minas Gerais.

Barbosa, P.; Duarte, M.E.L.; Kato, M.A. (2005). "Null Subjects in European and Brazilian Portuguese". *Journal of Portuguese Linguistics*, 4, 11-52.

Belletti, A. (2005). "Extending Doubling and the VP-Periphery". *Probus* 17, 1-36.

Camacho, J. (2006). "In Situ Focus in Caribbean Spanish: Towards a Unified Account of Focus". Díaz-Campos, M. (ed.), *Proceedings of the 9th Hispanic Linguistics Symposium*, Somerville, MA: Cascadilla Proceedings Project, 13-23.

Cardinaletti, A. (1997). "Subjects and Clause Structure". Haegeman, L. (ed.), *The New Comparative Syntax.* London: Longman, 33-63.

Cardinaletti, A. (2004). "Toward a Cartography of Subject Positions". Rizzi, L. (ed.), *The Structure of CP and IP. The Cartography of Syntactic Structures*, vol. 2. Oxford: Oxford University Press, 115-65.

Cardinaletti, A. (2019). "Cliticization as Extraction. The Big DP Hypothesis Revisited". *Revista da Associação Portuguesa de Linguística*, 5, 1-16. https://doi.org/10.26334/2183-9077/rapln5ano2019a1.

Cardinaletti, A.; Starke, M. (1999). "The Typology of Structural Deficiency. A Case Study of the Three Classes of Pronouns". Van Riemsdijk, H. (ed.), *Clitics in the Languages of Europe*. Berlin; New York: De Gruyter Mouton, 145-234. https://doi.org/10.1515/9783110804010.145.

Carvalho, J.; Calindro, A. (2018). "A Unified Account for the Loss of Third Person Clitics in Brazilian Portuguese". Carvalho, D.; Brito, D. (eds), *Pronomes: Morfossintaxe e semântica*. Salvador: Edufba, 91-110.

Chomsky, N. (1995). *The Minimalist Program*. Cambridge: MIT Press.

Coveney, A. (2005). "Subject Doubling in Spoken French. A Sociolinguistic Approach". *The French Review*, 79(1), 96-111. http://www.jstor.org/stable/25480132.

Duarte, M.E.L. (1995). *A Perda do Princípio "Evite Pronome" no Português Brasileiro* [PhD Dissertation]. Campinas: Universidade Estadual de Campinas.

Frege, G. (1892). "Über Sinn und Bedeutung". *Zeitschrift für Philosophie und philosophische Kritik*, 100, 25-50.

Galves, C. (2001). "A Sintaxe Pronominal do Português Brasileiro e a Tipologia dos Pronomes". Galves, C. (ed.), *Ensaios sobre as Gramáticas do Português*. Campinas: Editora da Unicamp.

Grice, H.P. (1975). "Logic and Conversation". Cole, P.; Morgan, J.L. (eds), *Syntax and Semantics, Vol. 3: Speech Acts*. New York: Academic Press, 41-58.

Kato, M.A. (1993). "The Distribution of Null and Pronominal Objects in Brazilian Portuguese". Ashby, W.; Mithun, M.; Perissinotto, G. (eds), *Linguistic Perspectives on the Romance Languages: Selected Papers from the 21st Linguistic Symposium on Romance Languages*. Amsterdam: John Benjamins, 225-35.

Kato, M.A. (2017). "A Variação no Domínio dos Clíticos no Português Brasileiro". *Linguística*, 33, 135-49. https://doi.org/10.5935/2079-312x.20170009.

Kato, M.A.; Duarte, M.E.L. (2014). "Restrições na Distribuição de Sujeitos Nulos no Português Brasileiro". *Veredas*, 18(1), 1-22.

Kato, M.; Ordóñez, F. (2021). "Diachronic Changes in Romania Nova: Loss of Clitics, Loss of Free Inversion and Emergence of Topic Subject Constructions".

*Cadernos de Estudos Linguísticos*, 63, 1-15. https://doi.org/10.20396/cel.v63i00.8661783.

Kayne, R. (1975). *French Syntax. The Transformational Cycle*. Cambridge: MIT Press.

Kayne, R. (2000). *Parameters and Universals*. Oxford: Oxford University Press.

Krieck, L.E. (2021). "A Cartografia dos Pronomes Resumptivos Pessoais da Construção de Sujeito Duplo do Português Brasileiro. Uma Proposta Sincrônica". *Linguística*, 17(3), 82-99. https://doi.org/10.31513/linguistica.2021.v17n3a50186.

Krieck, L.E. (2022). *As Sentenças com Duplicação do Sujeito no Português Brasileiro. Uma Análise Cartográfica* [Master's Thesis]. Florianópolis: Universidade Federal de Santa Catarina.

Orsini, M.; Vasco, S.L. (2007). "Português do Brasil. Língua de Tópico e de Sujeito". *Revista Diadorim*, 2, 83-98. https://doi.org/10.35520/diadorim.2007.v2n0a3852.

Othero, G. (2013). "Revisitando o Status do Pronome Cê no Português Brasileiro". *Revista de Estudos Linguísticos*, 21(1), 135-56. http://dx.doi.org/10.17851/2237–2083.21.1.135–156.

Pontes, E. (1987). *O tópico no português do Brasil*. Campinas: Pontes.

Quarezemin, S. (2019). "Um Novo Olhar sobre as Sentenças com Redobro em Português Brasileiro". *Revista da Anpoll*, 48(1), 52-63. https://doi.org/10.18309/anp.v1i48.1253.

Quarezemin, S. (2020). "Brazilian Double Subjects and the Sentence Structure". Pires de Oliveira, R.; Emmel, I.; Quarezemin, S. (eds), *Brazilian Portuguese, Syntax and Semantics. 20 Years of Núcleo de Estudos Gramaticais*. Amsterdam: John Benjamins Publishing Company, 107-34.

Quarezemin, S.; Ordóñez, F. (2024). "Different Types of Subject Doubling in Brazilian Portuguese". *Talk Presented at the XIII Romania Nova, Universidade Federal de Santa Catarina, March*.

Rizzi, L. (1997). "The Fine Structure of Left Periphery". Haegeman, L. (ed.), *Elements of Grammar*. Dordrecht: Kluwer Academic Publishers, 281-337.

Rizzi, L. (2004). "Locality and Left Periphery". Belletti, A. (ed.), Structures and Beyond: The Cartography of Syntactic Structures, vol. 3, Oxford: Oxford University Press, 223-51.

Rizzi, L. (2018). "A Note on Left-Peripheral Maps and Interface Properties". *Structuring Variation in Romance Linguistics and Beyond In Honour of Leonardo M. Savoia*. Grimaldi, M. et al. (eds). Amsterdam: John Benjamins Publishing Company.

Rizzi, L.; Bocci, G. (2017). "Left Periphery of the Clause. Primarily Illustrated for Italian". Everaert, M.; Riemsdijk, H.C. (eds), *The Wiley Blackwell Companion to Syntax*. 2nd ed. Hoboken: John Wiley & Sons, 1-30.

Vasco, S.L. (2006). *Construções de Tópico na Fala Popular* [PhD Dissertation]. Rio de Janeiro: Universidade Federal do Rio de Janeiro.

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# Pronouns in Gascon: Clitic or Weak?

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**Abstract** There are two possible realizations of the third person masculine singular accusative (ACC) pronoun in Gascon: /u/ and /lu/. While /u/ can appear in proclisis or in enclisis, the distribution of /lu/ is more restricted: it can only appear in enclisis. Similarly, the first person singular dative (DAT) pronoun is realized as /m/ or /me/; the consonantal form is attested in pre- or post-verbal position, while the latter is only found post-verbally. We account for these facts by proposing that these pronouns are morphosyntactically distinct elements: /u/ and /m/ are clitics, and /lu/ and /me/ are weak pronouns. We support this proposal with the stress patterns found in the data and with related data from other Romance languages.

**Keywords** Weak pronoun. Clitic pronoun. Gascon. Enclisis. Imperatives. Stress shift.

**Summary** 1 Introduction. – 2 Background. – 3 Proposal. – 4 Syntactic Account of Clitic /u/, /m/ and Weak /lu/, /me/. – 5 Phonological Evidence. – 6 Conclusion.

## 1 Introduction

In the variety of Gascon spoken in Bearn the third person masculine singular accusative (ACC) pronoun has two possible realizations: /u/ and /lu/. We find the former (/u/) in proclisis with indicative verbs or in enclisis with second-person singular (2sg) imperative verbs, but the distribution of /lu/ is more restricted: it can only appear in enclisis. We find a parallel distribution of the first-person singular

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dative (DAT) pronoun which is realized as /m/ or /me/ (with variation in the quality of the vowel: /me/, /mi/, /mə/, etc.). The former – the consonantal form /m/ – is found in proclisis or enclisis, and the latter – the CV form – is restricted to post-verbal position. In this paper, we follow Cardinaletti and Starke (1999) and analyze these pronouns as morphosyntactically distinct elements: /u/ and /m/ are clitics, and /lu/ and /me/ are weak pronouns. This proposal is corroborated by phonological data involving stress patterns and by cross-linguistic data from other Romance languages. This paper is organized as follows. In §2 we present the data and background information, along with a review of the literature on the topic, and we move on to our proposal in §3. We then provide a syntactic account of our proposal (§4) and supporting evidence from phonological patterns (§5). We conclude the paper in §6.

## 2 Background

Gascon is one of the varieties of Occitan (*langue d'oc*) or the Southern Gallo-Romance varieties of France (Oliviéri, Sauzet 2016; Mooney 2021; Kristol 2023; Miró Lozano 2024). The data that we use come from fieldwork conducted in January 2009 by Francisco Ordóñez who interviewed 6 native speakers of Gascon. They were all born in the Bearn region (Pau and areas around Pau) before 1945 and grew up speaking Gascon; they were also all fluent in French. At the time of the interviews, they were all 65 years or older. We recruited participants through contacts made at the Center for Occitan Studies and the University of Pau and the Adour Region (UPPA), and the interview consisted of a translation task (French-Gascon) of 100-200 utterances designed to elicit pronominal forms in different verbal contexts. Demographic information was also collected, and the interviews were recorded and coded. Each utterance was coded for over 40 grammatical properties: for the verb we coded person, number, tense, etc., and for the pronoun we indicated its form (accusative, dative, locative, etc.) and, where relevant, its gender, number, and person. The phonological properties include position of stress and gemination. All data are available on the freely accessible *Clitics of Romance Languages* database (Repetti, Ordóñez 2011). All data in this article come from this database, and the number after each utterance refers to the speaker and utterance number in the database. For consistency we only include verbs in the indicative mood with proclitics, and second person singular positive imperative verbs with enclitics.

In the first column in (1), we list the four pronouns under study. In the second column, they are presented in proclitic position, and in the third column in enclitic position in different phonotactic

environments (after a vowel-final verb and after a consonant-final verb). We see that /u/ and /m/ can appear in proclisis or in enclisis, while /lu/ and /me/ can only appear in enclisis. The data in (1) only include verbs with a single pronoun, not pronominal clusters (which we discuss below). The distribution is puzzling: why do we not find /lu/ and /me/ preverbally?

(1) single pronoun:
- /u/ and /m/ can appear in proclisis or in enclisis
- /lu/ and /me/ can only appear in enclisis, but not in proclisis

| | **proclisis** | **enclisis** |
|---|---|---|
| /u/ | /ke u-kuneʃ/ 'he knows him' (80.163) | • /krumpe-u/ 'buy it!' (80.54)<br>• /—C-u/[1] |
| /lu/ | | • /krumpe-lu/ 'buy it!' (80.55)<br>• /pren-lu/ 'take it!' (80.3) |
| /m/ | /kɛ m-dits/ 'he tells me …' (80.169) | • /bajɛ-m/ 'give me …!' (80.19)<br>• /dig-m/ > /dig-o̲m/[2] 'tell me!' (82.10) |
| /me/ | | • /da-me/ 'tell me …!' (80.18)<br>• /pren-me/ 'take me!' (83.6) |

There is little information in the literature on the morphosyntactic properties of clitics in Gascon, and much of it is inconsistent or incomplete.[3] For example, some sources state that the masculine singular ACC pronoun is /lu/, but then include examples of /u/ (Buckenmaier 1934). Some references list combinations of pronouns without any information on variants or restrictions on the position of the clusters relative to the verb or relative to each other (Rohlfs 1977; Ronjat 1908; Séguy 1954). A recent and welcome exception is Miró Lozano (2024) who provides a detailed analysis of clitics in Gascon based on more recent data from Bianchi and Romieu (2005) and Guilhemjoan (2006). Their findings partially coincide with ours.

Patterns similar to those found in Gascon are found in many Romance varieties. For example, in Pigna (Imperia, Italy) the masculine singular ACC is realized as /u/ preverbally (/e u-pøʃu faɹ/ 'I can do it' (93_54)) and /u/ or /ɹu/ in enclisis (/da-u-me/ 'give.2sg it to me!' (93_1b); /da:-ɹu/ 'give.2sg it!' (93_5)). Crucially, /ɹu/ is not

**1** We do not have data with postverbal /u/ following a consonant. This is probably due to a limitation of our data, as we have very few consonant-final verbs inflected in the second person singular imperative form. Similarly, we do not have data with consonant-final verbs and enclitic clusters.

**2** We analyze the /o/ as an epenthetic vowel inserted for syllabification purposes. Its quality is rounded because it is adjacent to a labial consonant.

**3** We will discuss the literature on their phonological patterning in section 5.

attested in proclisis (*/e ɹu-pøʃu faɹ/ 'I can do it'). See Manzini, Savoia 2017 for more examples from different Romance varieties.

In the next section we present our proposal to account for this surprising distribution.

## 3 Proposal

Given the limited precedent in the literature for accounting for the patterns in (1), we begin our analysis by questioning whether a purely phonological approach can explain our data. Postverbally, all forms are found, while preverbally the distribution of the pronouns is restricted to /u/ and /m/. However, there is no phonological reason for banning /lu/ and /me/ in preverbal position: they consist of CV syllables that generally have an unrestricted distribution. We conclude that phonology alone is not the reason for the particular patterns in (1).

A more conservative approach would argue that these are merely cases of allomorphy, with a stipulation of which allomorph is realized in which context, and similar patterns in other Romance languages have been argued to be cases of allomorphy (Manzini, Savoia 2017; Pescarini 2018). While an allomorphic approach can describe the patterns, it does so in an ad hoc way, and does not provide an explanation for the patterns or for the syntactic correlations. Furthermore, it leaves the cross-linguistic similarities unaccounted for.

If phonology and allomorphy cannot account for the patterns, what can? We propose an alternative approach: the traditional distinction "clitic" vs. "strong pronoun" is too broad and needs to be further refined. There is not one uniform category of "clitic", and so-called "clitics" might actually correspond to two (or more) groups of pronouns that are morphosyntactically distinct: "true clitics" and "weak pronouns" (Cardinaletti, Starke 1999). We propose that the Gascon data can be better understood if we divide these pronouns into two categories: /u/ and /m/ are true clitics, and /lu/ and /me/ are weak pronouns.

One characteristic of clitic vs. weak pronouns identified by Cardinaletti, Starke (1999) and Cardinaletti (2008) applies to the pronouns under investigation in Gascon.[4]

(2) Weak pronouns are morphologically more complex than clitics (Cardinaletti, Starke 1999, 178).

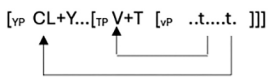
**4** Other characteristics of weak pronouns, but not clitics, include the fact that they can be stressed and that clitics precede weak pronouns in clusters (Cardinaletti, Starke 1999). We address these claims below.

The presence or absence of /l/ in ACC reflects morphological complexity, so /lu/ is more complex than /u/. Similarly, the presence/absence of a non-epenthetic vowel in DAT reflects morphological complexity, so /me/ is more complex than /m/. Hence, we conclude that /lu/ and /me/ are weak pronouns.

## 4 Syntactic Account of Clitic /u/, /m/ and Weak /lu/, /me/

In this section we examine the asymmetries between proclisis and enclisis in the distribution of clitics and weak pronouns. First, we make explicit what theory of proclisis and enclisis we are adopting. According to wide consensus (since Kayne 1991; Rizzi 2000), it is assumed that enclisis (clitics or weak pronouns) is the product of the movement of the verb to the left of the final position where the clitic or the weak pronoun is in the structure.

(3) Schema of proclisis




(4) Schema of enclisis (with verb movement)

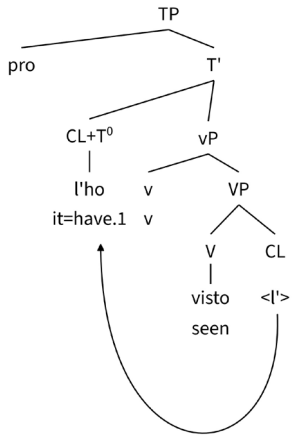



The idea that there is obligatory verb movement when there is enclisis is inspired by the first proposals of verb movement in French vs. English (Jackendoff 1972; Emonds 1978) in finite contexts. The basic hypothesis is that the differences in the distribution of adverbs and verbs (adverb-verb in English and verb-adverb in French) can be explained by assuming that verbs move past adverbs in French, but not in English. Thus, the difference is reduced to a parameter of verb movement. This proposal has further support because it can also account for the differences in distribution of verbs with floating quantifiers and negation in English vs. French. Similarly, the difference between verb-clitic and clitic-verb order can be explained by assuming further verb movement in verb-clitic order, but not in clitic-verb order.

Another important claim in our proposal is that clitics and weak pronouns have different landing sites: clitics are heads X and adjoin to a head, while weak pronouns are XPs and land in a specifier

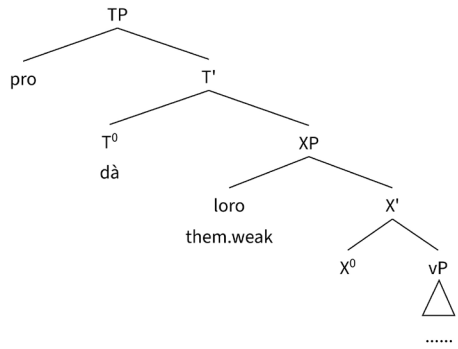
position (Cardinaletti, Starke 1999). We assume that these two types of pronouns have moved from their respective argument positions. According to Kayne (1991), tense is the head where clitics move to in finite clauses (see also Corver, Delfitto 1999); since clitics are heads, they adjoin to a tense head.

(5) tree with clitic adjoining to T: Italian *l'ho visto* 'I have seen it'




Weak pronouns are able to move to the specifier of a functional projection XP above the vP and below Tense (Cardinaletti 1991).

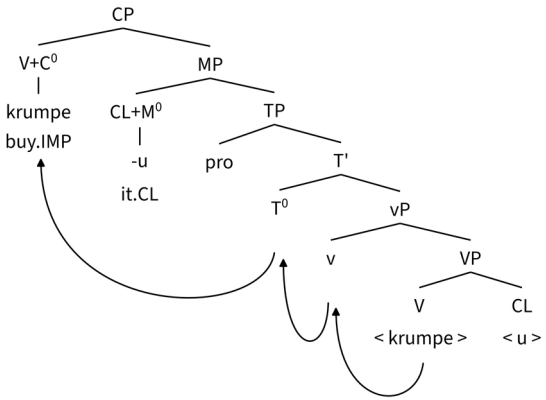
(6) tree with weak pronoun: Italian *dà loro* 's/he gives them'




Imperatives do not have obvious tense projection since they do not have forms in the past or future. This lack of obvious specification has been taken by some linguists to indicate that there is no tense in imperatives. It is therefore possible to think that clitics adjoin to a

different kind of projection in imperatives. Some linguists assume they adjoin to C or M (Mode) (Rivero, Terzi 1995). Gascon second person imperatives have the order verb-pronoun (clitic or weak pronoun) as many other Romance languages. If we follow the hypothesis of verb movement above, we will assume that the verb must move to a projection higher than the landing sites of the pronoun. Rivero and Terzi (1995) have proposed that the verb moves to C.

(7) tree with verb movement to C and enclisis in imperatives: Gascon /krumpe-u/ 'buy it!'

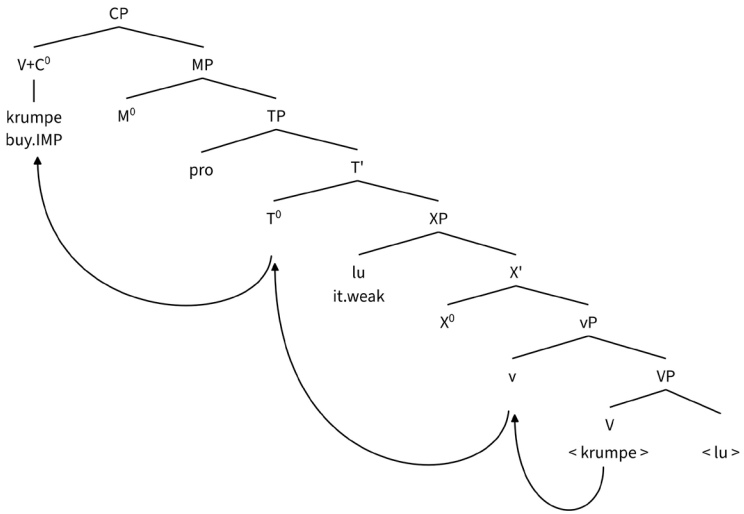



In some of the examples of enclisis, Gascon has weak pronouns and not clitics. We link the presence of weak pronouns in those contexts to the special nature of imperatives with respect to tense. In those special conditions we propose that weak pronouns meet the conditions for being realized. Below we present the two choices for 3rd person ACC and 1st person DAT pronouns: in some cases the clitic is chosen, and in others the weak pronoun is.

| (8) | post-verbal clitic pronoun | post-verbal weak pronoun |
|---|---|---|
| 3rd person ACC | /krumpe-u/ 'buy it!' (80.54) | /krumpe-lu/ 'buy it!' (80.55) |
| 1st person DAT | /bajɛ-m/ 'give me …!' (80.19) | /da-me/ 'give me …!' (80.18) |

The distribution of clitics and weak pronouns must be explained by the specific condition that requires one or the other in the syntactic tree. Some contexts permit clitics and others do not.

(9) tree with weak pronoun: Gascon /krumpe-lu/ 'buy it!'




The crucial question is why weak pronouns are not made available in regular tense clauses in Gascon (our first observation about the lack of weak pronouns in proclisis). For that we invoke a principle of Economy of Representation (Cardinaletti, Starke 1999, 198). In finite contexts, weak and clitic pronouns compete under the same syntactic configuration, and a principle of Economy of Representation requires the clitic to be made available.

(10) Economy of Representations: Minimise Structure (Cardinaletti, Starke 1999, 198)

This generalization reduces to the statement that a "smaller structure" is obligatorily chosen when possible. This means clitics are chosen over weak pronouns in finite clauses, where all speakers are consistent in having only clitics. However, contrary to finite clauses, in imperatives (and for some speakers, in infinitives) weak pronouns are made available. Not all clitics are banned from imperatives, and we get a mixed system with some speakers, as shown previously. Clitics are made available based on very complex factors like when pronouns appear in a cluster, and there is intra- as well as inter-speaker variation. But imperatives are somehow exceptional in allowing weak pronouns in these languages. Standard Catalan and Standard Spanish do not have any weak pronouns available in their inventory, and languages that have lost weak pronouns require the insertion of clitics in imperatives.

We follow the logic of Cardinaletti and Starke's (1999) explanation of the distribution of the weak pronoun *loro* vs. clitic *gli* in Italian, both of which are third person plural datives. Weak pronoun *loro* is

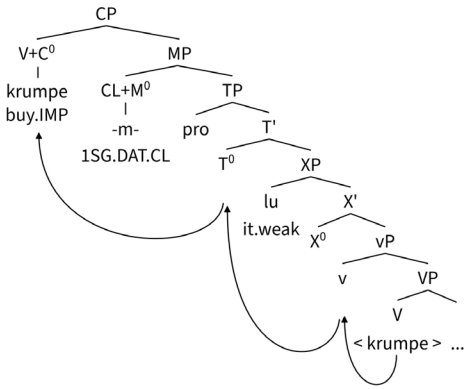
possible when a given clitic position in T is not available. If clitic *gli* is not available (the reason for this is beyond the scope of this paper), then *loro* is possible. Thus, Italian allows these two configurations: one with clitics and the other one with weak pronouns. This can also explain the use of one or the other in Gascon.

(11) two configurations of Italian 'I have given them the book'

| | | | | | |
|---|---|---|---|---|---|
| (a) | ho | dato | *loro* | il | libro |
| | have.1sg | given | them.dat | the | book |
| (b) | *gli* | ho | dato | il | libro |
| | them.dat | have.1sg | given | the | book |

This accounts for our finding that weak pronouns /lu/ and /me/ can only appear in enclisis, but not in proclisis. We identify another generalization that can be accounted for in a similar way: pronoun combination DAT-ACC /m-lu/ is also only found in enclisis. The cluster /m-lu/ involves weak pronoun /lu/ in combination with clitic /m/.[5] This is a similar structure to what Ordóñez and Repetti (2014) found with the DAT-ACC cluster /millə/ in Neapolitan, which was analyzed as a combination of a clitic (/m/) with a weak pronoun (/illə/). In the trees above for imperatives, clitics are higher than weak pronouns; therefore, it is not surprising that the order of pronouns found in enclisis in Gascon (and Neapolitan) is clitic-weak: /m-lu/ (and /m-illə/).

(12) tree with verb-clitic-weak in imperatives: Gascon /krumpe-m-lu/ 'buy it for me!'




**5** Another cluster attested in the data is ACC /u/ (clitic) followed by DAT /me/ (weak): /u-me/. We do not address this split-clitic structure in the paper.

This analysis is also consistent with another property of weak pronouns identified by Cardinaletti (2008, 64): a morphologically complex pronoun (weak pronoun) cannot be the first constituent in a cluster. According to this analysis, the /m/ in the cluster /m-lu/ cannot be a weak pronoun; therefore, it must be a clitic. Not surprisingly, we do not find weak /me/ or /lu/ as the first element in a cluster.

Finally, if we think about the diachronic evolution of clitics and weak pronouns, our system makes an interesting prediction. It has been assumed that weak pronouns first appeared in Late Latin, and weak pronouns lead to clitics. In systems in which clitics and weak pronouns are both available, clitics take precedence over weak pronouns when the licensing conditions are equal. We propose that clitics first appeared in Romance languages in finite clauses with tense, and later they started to appear in other contexts. We have not yet found any counter-evidence to this hypothesis.

## 5 Phonological Evidence

We return to phonology. Stress in Occitan is somewhat predictable: one of the final two syllables of a word is usually stressed. The final syllable is stressed if it is heavy, and the penultimate syllable is stressed if the final syllable is light (Mooney 2021). The literature on stress with enclitics in Romance is vast, and for Occitan, two patterns are reported: either the final clitic is stressed,[6] or stress is shifted to the penultimate syllable when there is an enclitic pronoun (Sauzet 1986). We found each of these patterns in the Gascon data, but not for all enclitics (13)-(14). We indicate the stressed syllable of the verb and the quality of the vowels of the verb in isolation in the underlying form.[7]

(13) stress shift to the final enclitic

(a) /u/ —[8]
(b) /lu/ /krúmpa-lu/ > [krúmpe-lú] ‘buy it!’ (80.55)
(c) /m/ —[9]

**6** Kelly 1973, 93, 200; Oliviéri, Sauzet 2016, 331; Séguy 1954; Sauzet 1986.

**7** Note that the unstressed final vowel of the verb may raise from /a/ > /e/ when an enclitic is added (13b), and from /a/ > /é/ when stress is shifted to it ((13e), (14a), (14c), (14d)). We limit ourselves to noting the occasional change in vowel quality without proposing an explanation, and to noting similar changes in other Romance varieties, such as Friulian in which the unstressed final /e/ of the verb raises to /i/ when an enclitic is added: *clame* ‘call.2sg!’ > *clami-mi* ‘call.2sg me!’.

**8** The one case of prominence on final clitic /u/ in [krumpe-u] ‘buy it!’ (80.110) involves rising intonation in a question-like contour.

**9** We cannot check this for clitic /m/ since it is asyllabic.

(d) /me/ /prén-me/ > [prén-mé] ‘take me!’ (83.6)
(e) /m-lu/ /bája-m-lu/ > [bajé-m-lú] ‘give it to me!’ (80.20)

(14) stress shift to vowel before the enclitic

(a) /u/ /krúmpa-u/ > [krumpé-u] ([krum.péw]) ‘buy it!’ (80.54)
(b) /lu/ /prén-lu/ > [prén-lu] ‘take it!’ (80.3)
(c) /m/ /bája-m/ > [bajé-m] ‘give me…!’ (80.25)
(d) /me/ /krúmpa-me/ > [krumpé-mə] ‘buy me…!’ (80.58)
(e) /m lu/ /bája-m-lu/ > [bajá-m-lu] ‘give it to me!’ (80.29b)

One of the diagnostics that Cardinaletti and Starke (1999, 172) propose for distinguishing weak vs clitic pronouns is the presence vs absence of stress: weak pronouns attract or affect stress, while true clitics are unstressed. We can test our proposal that in Gascon /u/ and /m/ are clitics, and /lu/ and /me/ are weak pronouns, by checking if /u/ and /m/ are unstressed, while /lu/ and /me/ attract stress. We find this prediction borne out in the data in (13) in which stress is realized on the post-verbal weak pronoun (/lu/ and /me/), but not on the post-verbal clitic /u/ (see footnotes 7-8).

What about the stress shift in (14)? We attribute that to the metrical structure of the verb + enclitic unit. We saw above that stress in Occitan is predictable: a heavy final syllable attracts stress, else the penult is stressed. In (14a) and (14c) the final VV and VC sequence, respectively, attract stress, while in (14d)-(14e), the final syllable of the verb + enclitic unit is light, and the penultimate syllable is stressed. For final /lu/ (14b), the only attested forms in our database involve a monosyllabic verb, making it impossible to see if there is a stress shift to the penultimate syllable; we attribute this gap to the limited data available. In the data in (14), the metrical pattern of the language – which does not regularly allow for final stressed light syllables – takes precedence over the requirement for final weak pronouns to be stressed.

One may question the role of intonation in the patterns in (13)-(14). Intonation of Occitan varieties, including Gascon, has been studied in detail (Sichel-Bazin, Meisenburg, Prieto 2015; Prieto, Sichel-Bazin, Meisenburg 2007-14; Lai, Rilliard 2007; Lai 2005; Hualde 2003), and our data are consistent with the findings. First, commands are associated with a rising-falling intonation (Sichel-Bazin, Meisenburg, Prieto 2015), and we found that in our data as well. Second, it has also been noted that the intonational patterns of some varieties of Occitan have been influenced by French, the neighboring and superstrate prestige variety. In those varieties, the pitch accent is aligned with the last stressed syllable of the Accentual Phrase (AP), which includes verb + enclitic units, and there may be a shift in prominence, so that

the lexically stressed syllable is deaccented and the AP-final syllable is stressed (Sichel-Bazin, Meisenburg, Prieto 2015; Mooney 2021). That claim is also consistent with our observations.

We have not yet examined the phonetics of these phrases in detail, but we can make a prediction. If final prominence is an intonational artifact, we would expect it with both weak pronouns and true clitics; on the other hand, if final prominence is due to metrical stress, we would expect it with weak pronouns only, but not true clitics. In order to check this, we need to see if there are any data with prominence on final enclitic /u/. The intonational analysis would predict that such data should exist, while the weak pronoun vs. true clitic approach that we are pursuing would predict that such data should not exist. In fact, we do not find stress on final clitic /u/, except in an interrogative intonation context (see footnote 7). These facts support our analysis of /lu/ and /me/ as weak pronouns, and /u/ and /m/ as clitic pronouns, but they also suggest a complex interplay of metrical structure and intonation that is beyond the scope of this article.

Finally, note that the patterns described in (13)-(14) are optional, and we also find a few cases in which enclisis does not affect stress assignment (15). These patterns are much less frequent, and we have no data for lack of stress shift with enclitic /m-lu/ (15e), in other words, stress is always shifted with enclitic /m-lu/. In the cases in which stress is not shifted with enclisis (15a-d), we can argue that maintaining the original metrical structure of the verb is more important than accommodating the metrical structure of the post-verbal weak pronoun or the derived metrical structure of the verb + enclitic unit. It is important to note that the data in (15b) and (15d) involve monosyllabic verbs, so it is impossible to differentiate between no shift and stress shift to the penultimate syllable.

(15) no stress shift with enclisis

| | |
|---|---|
| (a) /u/ | /pórta-u/ > [pórta-u] ‘carry it’ (81.49) |
| (b) /lu/ | /prén-lu/ > [prén-lu] ‘take it!’ (80.3) |
| (c) /m/ | /krúmpa-m/ > [krúmpe-m] ‘buy me...!’ (80.82) |
| (d) /me/ | /dá-me/ > [dá-me] ‘give me…!’ (80.18) |
| (e) /m-lu/ | — |

The correlation between stress and the type of post-verbal pronoun is found in many Romance varieties. Ordóñez and Repetti (2014, 175) analyze the Lucanian post-verbal unstressed ACC pronoun /u/ as a clitic (/fá-mm-u:/ ‘do.2sg it for me!’), and the post-verbal stressed ACC pronoun /illə/ as a weak pronoun (/fa-mm-íllə/ ‘do.2sg it to me!’). Others have analyzed these alternations as cases of allomorphy (Pescarini 2018) or as having a syntactic and semantic motivation

(Manzini, Savoia 2017). See Repetti 2016 for more on stress and post-verbal pronouns in Romance.

## 6 Conclusion

We have argued for an analysis of pronouns in Gascon whereby they fall into at least two different morphosyntactic categories: clitic pronouns and weak pronouns. In (16) we summarize the data in light of Cardinaletti's (2008) and Cardinaletti and Starke's (1999) diagnostics for clitic vs. weak pronouns.

(16) clitic vs. weak pronoun

| diagnostic | Gascon | proposal |
|---|---|---|
| 1. The presence/lack of /l/ reflects morphological complexity, and weak pronouns are morphologically more complex than clitics (Cardinaletti, Starke 1999, 178). | /lu/ is morphologically more complex than /u/. | /lu/ is a weak pronoun, and /u/ is a clitic. |
| 2. A weak pronoun never precedes a clitic in a cluster (Cardinaletti 2008). | /me/ and /lu/ are never the first element in a cluster. | /me/ and /lu/ are weak pronouns. |
| 3. The lack/presence of stress on a pronoun is a diagnostic of the clitic/weak distinction (Cardinaletti, Starke 1999, 172). | /lu/ and /me/ can be stressed, while /u/ is not stressed. | /lu/ and /me/ are weak pronouns, and /u/ is a clitic. |

While the data we analyze consistently point in the direction we propose, further research would strengthen our conclusions. The sample size is not particularly small (see Repetti, Ordóñez 2011 for more examples); however, the questionnaire was identical for all informants, limiting the range of contexts examined. In particular, the number of verbs used was small, and monosyllabic verbs are overrepresented. Additional data and a broader range of forms would therefore be desirable to further corroborate our findings.

In conclusion, we propose that analyzing pronouns in this way allows us to better understand their distribution and phonological properties and provides a more straightforward account of the different realizations of the same pronoun – in preverbal vs. postverbal position, stressed or unstressed forms, and with varying degrees of morphological complexity – while constraining cross-linguistic variation to a limited range of patterns.

## Bibliography

Buckenmaier, A. (1934). *Die Mundart von Camarès.* Tübingen: Göbel.

Bianchi, M.; Romieu, A. (2005). *Gramatica de l'occitan gascon contemporanèu*. Pessac: Presses Universitaires de Bordeaux.

Cardinaletti, A. (1991). "On Pronoun Movement: the Italian Dative *loro*". *Probus*, 3, 127-54. https://doi.org/10.1515/prbs.1991.3.2.127.

Cardinaletti, A. (2008). "On Different Types of Clitic Clusters". De Cat, C.; Demuth, K. (eds), *The Bantu-Romance Connection: A Comparative Investigation of Verbal Agreement, DPs, and Information Structure.* Amsterdam: John Benjamins, 41-84. https://doi.org/10.1075/la.131.06car.

Cardinaletti, A.; Starke, M. (1999). "The Typology of Structural Deficiency: A Case Study of the Three Classes of Pronouns". van Riemsdijk, H. (ed.), *Clitics in the Languages of Europe: Volume 5/Part 1: Clitics in the Languages of Europe.* Berlin, New York: De Gruyter Mouton, 145-234. https://doi.org/10.1515/9783110804010.145.

Corver, N.; Delfitto, D. (1999). "On the Nature of Pronoun Movement". van Riemsdijk, H. (ed.), *Clitics in the Languages of Europe: Volume 5/Part 1: Clitics in the Languages of Europe.* Berlin, New York: De Gruyter Mouton, 799-862. https://doi.org/10.1515/9783110804010.799.

Emonds, J. (1978). "The Verbal Complex V' - V in French". *Linguistic Inquiry,* 9, 151-75.

Guilhemjoan, P. (2006). *La nouvelle grammaire abrégée du gascon*. Orthez: Per noste.

Hualde, J. (2003). "Remarks on the Diachronic Reconstruction of Intonational Patterns in Romance with Special Attention to Occitan as a Bridge Language". *Catalan Journal of Linguistics*, 2, 181-205. https://doi.org/10.5565/rev/catjl.49.

Jackendoff, R. (1972). *Semantic Interpretation in Generative Grammar.* Cambridge, MA: MIT Press.

Kayne, R. (1991). "Romance Clitics, Verb Movement and PRO". *Linguistic Inquiry,* 22, 647-86.

Kelly, R.C. (1973). *A Descriptive Analysis of Gascon*. The Hague; Paris: Mouton.

Kristol, A. (2023). "Southern Gallo-Romance: Occitan and Gascon". *Oxford Research Encyclopedia of Linguistics*. https://oxfordre.com/linguistics/view/10.1093/acrefore/9780199384655.001.0001/acrefore-9780199384655-e-740.

Lai, J. (2005). "Étude de l'intonation d'un parler occitan: Gap". *Géolinguistique*, 3, 65-86. https://doi.org/10.3406/geol.2005.1223.

Lai, J.; Rilliard, A. (2007). "Étude de l'intonation du parler occitan de la Viadène". Dorta Luis, J. (ed.), *La prosodia en el ámbito lingüístico románico*. Santa Cruz de Tenerife, Spain: La Página Ediciones, 73-100.

Manzini, M.; Savoia, L. (2017). "Enclisis/Proclisis Alternations in Romance: Allomorphies and (Re)ordering". *Transactions of the Philological Society*, 115, 98-136. https://doi.org/10.1111/1467-968x.12093.

Miró Lozano, J. (2024). *Les clitiques pronominaux du Gascon: les propositions normatives à l'épreuve des parlers hérités* [Thèse de doctorat]. Toulouse: Université de Toulouse. https://doi.org/10.70675/33a99a33zace8z46b1z9269z62a027d84d91.

Mooney, D. (2021). "Occitan". Gabriel, C.; Gess, R.; Meisenburg, T. (eds), *Manual of Romance Phonetics and Phonology*. Berlin: de Gruyter, 709-42. Manuals of Romance Linguistics 27. https://doi.org/10.1515/9783110550283-023.

Oliviéri, M.; Sauzet, P. (2016). "Southern Gallo-Romance (Occitan)". Ledgeway, A.; Maiden, M. (eds), *The Oxford Guide to the Romance Languages*. Oxford: Oxford University Press, 319-49. https://doi.org/10.1093/acprof:oso/9780199677108.003.0019.

Ordóñez, F.; Repetti, L. (2014). "On the Morphological Restriction of Hosting Clitics in Italian and Sardinian Dialects". *L'Italia dialettale*, 75, 173-99.

Pescarini, D. (2018). "Stressed Enclitics are not Weak Pronouns: A Plea for Allomorphy". Repetti, L.; Ordóñez, F. (eds), *Romance Languages and Linguistic Theory 14: Selected Papers from the 46th Linguistic Symposium on Romance Languages (LSRL)*. Amsterdam; Philadelphia: John Benjamins, 231-44. https://doi.org/10.1075/rllt.14.13pes.

Prieto, P.; Sichel-Bazin, R.; Meisenburg, T. (eds) (2007-14). *Atlàs interactiu de l'intonacion de l'occitan*. https://prosodia.upf.edu/atlasintonacion/index-english.html.

Repetti, L. (2016). "The Phonology of Postverbal Pronouns in Romance Languages". Tortora, C.; den Dikken, M.; Montoya, I.; O'Neill, T. (eds), *Romance Linguistics 2013. Selected Papers from the 43rd Linguistic Symposium on Romance Languages (LSRL 43)*. Amsterdam; Philadelphia: John Benjamins, 361-78. https://doi.org/10.1075/rllt.9.19rep.

Repetti, L.; Ordóñez, F. (2011). *Clitics of Romance Languages Database*. http://crl.linguistics.stonybrook.edu/.

Rivero, M.; Terzi, A. (1995). "Imperatives, V-Movement, and Logical Mood". *Journal of linguistics,* 31, 301-32. https://doi.org/10.1017/s0022226700015620.

Rizzi, L. (2000). *Comparative Syntax and Language Acquisition*. London; New York: Routledge.

Rohlfs, G. (1977). *Le gascon: Études de philologie pyrénéenne*. Berlin: De Gruyter.

Ronjat, J. (1908) "Sur l'enclise des pronoms personnels". *Revue des langues romanes*, 51, 505-11.

Sauzet, P. (1986). "Les clitiques occitans". *Morphosyntaxe des langues romanes*, 4, 155-80.

Séguy, J. (1954). *Atlas linguistique et etnographique de la Gascogne*. Toulouse: Institut d'études méridionales de la Faculté des Lettres.

Sichel-Bazin, R.; Meisenburg, T.; Prieto, P. (2015). "Intonational Phonology of Occitan: Towards a Prosodic Transcription System". Frota, S.; Prieto, P. (eds), *Intonation in Romance*. Oxford: Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199685332.003.0006.

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# Pronouns in Discourse: A Theoretical Framework and Its Application to Donald Trump's Inaugural Addresses

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**Abstract** The paper focuses on the use of pronouns in discourse and their rhetoric exploitation. It starts with a brief overview of Benveniste's theory of persons, with special reference to the first person plural, and the inclusive- vs exclusive-we contraposition. Against this theoretical background, the use of persons is traced in two instances of institutional discourse, namely President Trump's Inaugural Addresses of 2017 and 2025. Differences in the occurrence of personal forms are connected to other structural features of the two speeches, showing a marked evolution in the way the norms of the genre are actually enacted by the arguer and confirming the crucial role of enunciation patterns in discourse.

**Keywords** Discourse. Person. Genre. Inaugural Address. Trump's Inaugurals.

**Summary** 1 Introduction. – 2 Discourse, Person, Subjectivity. – 3 Trump's 2017 and 2025 Inaugural Addresses: A Case Study. – 4 Conclusions.

## 1 Introduction

The paper investigates the use of pronouns in discourse and their rhetoric exploitation, focusing on Trump's Inaugural Addresses as a case study. In order to sketch the theoretical background, I will briefly re-examine Benveniste's fundamental observations on the role of person in language use, starting from the distinction between first and second person, on the one hand, and third person on the other (*correlation de*

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*personalité*) (§ 2.1), with special reference to the problem of pluralization, which appears particularly interesting for the first person (§ 2.2).

The notions put forth by Benveniste and then developed in more recent research have been applied to the analysis of discourse in different domains and genres. In this paper, I will examine the two Inaugural Addresses delivered by Donald Trump (in 2017 and in 2025), to trace the use of pronouns and their pragmatic value. The speeches are two instances of the same institutional genre, whose prototypical traits will be briefly described (§ 3.1). Though delivered by the same President, they are both representative of a Challenger's Address, as Trump's second Address was delivered eight years after the first, after a term of another President (Biden). In principle, this circumstance should strengthen the similarities between the two Inaugurals. Yet this may not be the case, as Trump's attitude profoundly changed between 2017 and 2025. The aim of this analysis is to ascertain if and to which extent the two speeches show any differences, for both their overall organization and main argumentative line (§ 3.2), and to verify whether the discrepancies (if any) correspond to a different way of exploiting person reference (§ 3.3).

## 2 Discourse, Person, Subjectivity

### 2.1 Pronouns and *Discours*

In an essay published in 1946,[1] Benveniste makes a fundamental distinction between the actual person(s) (i.e. the so-called first and second person) and the *non-person* (i.e. the third), thus identifying a *correlation of personality*, in which *je/tu* possess the sign of person and participate in the dialogic structure of discourse, while the third person represents "a nonpersonal invariant" (Benveniste 1971, 200), and therefore does not share with the other two the capacity of representing the actual situation of enunciation.

Benveniste clearly identifies the level of language use, mentioning Charles Morris, as the one who labelled it as *pragmatics* (cf. Benveniste 1971, 217). *Je* can only be defined in enunciation, as the person who is uttering the present instance of discourse, while *tu* can be defined symmetrically, as the individual who is spoken to. Pronouns serve the needs of intersubjective communication, making it possible to

**1** The paper was originally published in the Bulletin de la Société de Linguistique (1946) and reprinted in the volume *Problèmes de linguistique Générale* (1966), in a section devoted to *L'homme dans la langue*. Quotations in the text are taken from the English translation of the volume (Benveniste 1971).

convert language into *discours* – a plane of language use defined "in its widest sense: every utterance assuming a speaker and a hearer, and in the speaker the intention of influencing the other in some way" (Benveniste 1971, 209).[2]

This definition combines the dialogic nature of *discours* with an inherent persuasive component. Scholars have frequently debated the point, often distinguishing between overt argumentative aims (which are typical of given domains and genres) and a mere argumentative *dimension* spreading across a wide range of practices and communicative exchanges (Amossy 2005). Whether this component is a necessary and ineliminable element or not is still a matter of debate. In any case, as already put forth by Benveniste, the *interpersonal* character of discourse implies the respective positioning of the interlocutors, and this in turn often includes promotion of one's own image and viewpoints.

Moving from the realm of pragmatics to that of rhetoric proper, the representation of the interlocutors evidently takes a prominent position. *I* represents the arguer, introduces their qualities and their convictions, is the first and foremost expression of *ethos*. For Aristotle ethos was in some respect the strongest argument, as it is able to generate trust (Rh. 1356a). Self-representation plays therefore a crucial role, and includes both *speaking* of oneself (*l'ethos dit*) and *showing* one's own character (*l'ethos montré*; cf. Maingueneau 2016).

Symmetrically, *you* identifies the audience: it is used to address them but at the same time makes it possible to single out and represent a series of selected features that are functional to the construction of agreement. As emphasised in the New Rhetoric (Perelman/Olbrechts-Tyteca 1958), the preliminary step for any form of persuasive discourse is the identification of the intended audience. Success in the persuasive process depends on a clear awareness on behalf of the arguer of the group they intend to address, and on the selection of adequate 'objects of agreement' (facts and values). This in turn generates a common ground where premises to argumentation proper are shared and do not need to be proved. As argumentation does not rely on premises universally assumed as true, but (rhetorically) depends on probable premises, their preliminary identification is a necessary step, influencing the whole structure of a speech and crucially contributing to its effectiveness.

*I* and *you* are therefore the backbone of persuasive discourse. Moreover, as the construction of the audience is pursued in close connection with the representation of the arguer, it leads to the creation of a collective identity including both. This is where *we* comes into play.

**2** The paper was originally published in the Bulletin de la Société de Linguistique (1959) and reprint in the same section of the 1966 volume (s. previous note).

## 2.2 *We* as Non-Pluralization of *I*

The relations established among the three pronominal forms of the singular cannot be applied to the plural. The passage from the singular to the plural "does not involve a simple pluralization" (Benveniste 1971, 201). As for the first person, there is a further semantic point, as "'we' is not a multiplication of identical objects but a *junction* between 'I' and the 'non-I' [...]. The presence of 'I' is constitutive of 'we'" (Benveniste 1971, 202).

Thus, for Benveniste it is *ontologically* impossible to conceive *nous* without *moi*, though it is important to consider that the 'non-I' element can be filled with different contents. In numerous languages, "'we' is expressed in one way for 'I + you' and in another for 'I + they'" (202). *Inclusive* and *exclusive* forms can be morphologically differentiated, but the distinction is not universally codified, and there are numerous languages where the semantic interpretation of the first person plural shifts from a minimum core (the self + one other) to a maximum expansion (the self + mankind as a whole), or "the speaker and a variable" (Nunberg 1993). The blurred boundaries of *we* are defined in context, leaving room for their exploitation for communicative purposes.

While the first person plural has been given comparatively little attention in both sociolinguistic and strictly pragmatic research,[3] it has been repeatedly investigated in a discourse analytic perspective, especially in media and political studies, where the construction of contraposed identities plays a crucial role (cf., among others, Duszak 2002). In particular, the opposition between inclusive and exclusive forms has been frequently explored in different domains and contexts – the notion of *clusivity* including the possibility of applying the distinction also to the second person (Filimova 2005).

In the domain of politics, a 'non-prototypical' usage of the first person plural may occur, namely the so-called *rhetorical-we* (Quirk et al. 1985), a special case of *speaker*-exclusive form.[4] Speaker-exclusiveness should be excluded *a priori* (for ontological reasons, as stated by Benveniste), but it does occur in numerous contexts (for a comprehensive review, cf. Helmbrecht 2015), all characterized by an empathic attitude of the speaker, who puts themselves in the position of the addressee or identify as members of a group they actually

**3** In pragmatics, the focus primarily lies on the creation of perspectives in discourse (e.g. the use of personal subjects vs impersonal/passive forms). In a rather recent volume tackling the pragmatics of pronouns (Gardelle/Sorlin 2015), no single paper is devoted to the first person plural. On the other hand, Truan (2021) focuses on third-person forms, exploring their potential in political discourse.

**4** A common example of speaker-exclusive *we* is "How do *we* feel today?", uttered by a doctor/nurse addressing a patient. For a more comprehensive analysis cf. Santulli 2020.

do not belong to. The rhetorical use differs from the other cases of speaker-exclusiveness in that it *creates* a group.

The rhetorical use can be exploited with persuasive aims and metaphorical implications (Santulli 2020). A famous example can be found in the American Constitution, where *We the people* is expression of a collective feeling and identifies a group of people (extending across centuries) who recognise themselves in their common founding values. In this case, the formula is often evoked in markedly addressee-inclusive contexts, with the aim of strengthening the relation between speaker and audience through the exploitation of a recognisable (and linguistically codified) common ground.

In this paper, the use of personal pronouns – particularly the first person plural – has been traced in two speeches belonging to a well codified institutional genre. The next section examines Trump's Inaugural Addresses linking pronominal choices to the distinguishing traits that prototypically characterize this genre.

## 3 Trump's 2017 and 2025 Inaugural Addresses: A Case Study

### 3.1 The Inaugural Address as a Genre

Among discourse genres in the domain of political communication, the Inaugural Address (IA) stands out as a prototypical example of highly codified institutional genre (Degano 2022). Institutional genres usually display a high level of stability, as persisting contextual constraints limit the variability of textual features, and both aims and expectations tend to remain resistant to diachronic change. This is particularly evident when a genre produces recurring instances at regular time intervals and in a limited number, as is the case with the IA, a speech delivered during the ritualized ceremony marking the beginning of a new presidency and including the presidential oath. The IA is therefore an important document not only for the term it inaugurates, but also in the dimension of US political history. Firstly, it aims to restore 'ideological normality' after the contrasts characterizing the electoral campaign, and at the same time it invokes the 'Plural Presidency', as the arguer no longer speaks as an individual but gives voice to the institution (Hart 1984, Campbell/Jamieson 1986). The President addresses all the American people, obliterating the divisions that had prevailed during the campaign, and summons the audience to unity and common action. Complying with genre rules presidents establish their administration in the wake of tradition, frequently evoking (and occasionally quoting) their predecessors to reinforce connection with the past.

As a highly institutionalized genre occurring at regular intervals, the IA can be studied in its diachronic dimension, to investigate its evolution and, at the same time, to emphasize the preservation of constant traits that belong to its distinguishing features. Despite evident changes, some elements have survived through the centuries, given the relative stability of the institutional context and the highly symbolic function of the genre. If we narrow the focus, and take into consideration a shorter period, the distinguishing features become more evident: Degano (2022) analyzed a corpus of IAs delivered after World War II and was able to identify a series of recurring moves and steps as well as a prototypical argumentative line.

In the framework of genre theory (Bhatia 1993), Degano (2022, 115-29) singles out four moves: Appeal to collective identity and unity of purpose; Problem statement and solution; Plural Presidency as a call to action; Final exhortation and historical quotation. The first move, in its turn, comprises three different steps: Why we are here; Unity over division; Unity against an enemy. The argumentative line can be summarized as follows: we have to set aside divisions, as we now have a common goal (based on common values), which can be achieved only if we all contribute to it.

Though differently enacted by each individual president, these elements recur across the decades, adapting to the changing historical context and reflecting the personal attitudes of the arguer.

In the following paragraphs Trump's IAs will be examined in the light of genre and argumentation theory to show if they comply with the prototypical traits. The investigation will then focus on the pronominal patterns, to ascertain whether they correspond to the general structure of the speeches, to the selected argumentative line, and, ultimately, to the aims of the arguer.

## 3.2 The Macro-Structure of the Speeches

### 3.2.1 The 2017 Inaugural

In enacting the first move of the prototypical structure described above (Degano 2022) Trump[5] starts with the crucial first step, which includes both deictic space-time reference and a metadiscursive comment, combined with the expression of thanks for the *gracious* behavior of the previous President. He does not expand on the notion, as some of his predecessors did, emphasizing the "majesty

**5** Quotations are taken from the version published on the website of the American Presidency Project (UC Santa Barbara): `https://www.presidency.ucsb.edu/documents/inaugural-address-14`.

of the moment" (Nixon) as a "celebration of freedom" (Kennedy), a celebration of unity, "the mystery of American renewal" (Clinton), a "miracle" (Reagan) of democracy. Yet in the 2017 Inaugural, the meaning of the ceremony is forwarded thanks to its evaluative description ("every four years we gather on these steps to carry out *the orderly and peaceful* transfer of power" [emphasis mine]). The first move also includes the identification of the Enemy with the Federal Capital, Washington as the personification of the establishment – of the politicians who prospered to the detriment of "the citizens of our country".[6] Differently from most IAs where the Enemy is identified with an external threat (e.g. the Communists or terrorism), this representation echoes Reagan's famous claim that "government is not the solution to our problem, government is the problem". The first move is completed with the representation of unity as a movement of people who share the same conviction, namely "that a nation exists to serve its citizens". There is no actual appeal to unity, as unity is already taken for granted, as evident from the very beginning of the speech: "We, the citizens of America, *are now joined* in a great national effort to rebuild our country [emphasis mine]".

This movement of the united people against Washington shifts the focus onto the problems of the present and the solutions for the future. Success will come because of the "total allegiance to the United States of America": loyalty, patriotism, unity are the keywords, reinforced by a Biblical quotation. There is no further quotation in the final part, but a grand past of victories is evoked, combining the blood of patriots with the homage to the American flag, and exhorting to a common action for an ultimate aim – make America great again.

The speech is on the shorter side if compared with other Inaugurals, but the essential elements of the genre are comprised in its structure. Moreover, in its main argumentative line unity does play a crucial role, although with a shift from the prototypical pattern described above: Success will come *because* the American people have already achieved unity.

### 3.2.2 The 2025 Inaugural

The first striking feature of the 2025 IA[7] is the complete cancellation of the first step: there is no pragmatic frame, no idea of tradition and

**6** After Watergate, this theme frequently recurs in pre-electoral speeches (e.g. "the ways of Washington" are evoked by both Clinton and Obama), though the winners then avoid mentioning it explicitly in their Inaugurals.

**7** Quotations are taken from the version published on the already mentioned website: `https://www.presidency.ucsb.edu/documents/inaugural-address-54`.

continuity, no representation of the inaugural ceremony as a symbol of democracy. The very meaning of the ceremony is ignored; after a series of vocative appeals, the *incipit* is clear-cut: "The golden age of America begins right now". It revives an often-exploited myth, which is usually presented with a presupposition ('return'), implying that it is necessary to forget the recent past and recover an ancient glorious tradition. In Trump's words, on the other hand, the idyllic condition starts from scratch, simply because he will "put America first". As in the 2017 IA, the Enemy hides inside, but it is explicitly identified with the incumbent administration, whose policies are the source of all problems. And, as in the 2017 IA, unity is not an aim but a reality, as "the entire nation is rapidly unifying behind our agenda". The description of the problems is more in tune with the deliberative style of a pre-electoral speech, while the celebration of unity would better resound in a Victory Speech ("we had a powerful win in all seven swing States and the popular vote we won by millions of people") (Santulli, Degano 2022). Trump does not aim to reconstruct unity after division; on the contrary, he emphasizes the divide between the winning Republicans and the succumbing Democrats. In this context, *unity* sounds hollow.

When coming to the solutions, the prototypical appeal to the Plural Presidency is changed into a series of actions performed by the new president, i.e. the signing of "a series of historical executive orders". This is the core of the speech: a long list of decisions which result in radically new policies to be enacted immediately after the presidential oath.

Compared with the 2017 Inaugural, the speech is nearly twice as long, as the actions to be performed are numerous, spanning from immigration policies to the re-naming of the Gulf of Mexico. Despite the lack of historical quotations, the final exhortation is rather long, characterized by an upward spiral movement: the growth of the American nation is traced back to its origin, looking for the roots of American pride. In Inaugurals, these common origins are usually evoked in the opening lines; here they come towards the end, and – again – take the tones of a triumphant Victory Speech ("The American people have spoken"). The final exhortation is a summary of the problems ("our Nation has suffered greatly") and the prospected solutions ("we are going to bring it back and make it great again"), which lead to the desired result; the speech ends as it started, as America's "golden age has just begun".

In this atypical Inaugural, the argumentative line is limited to suggesting that success is a mere consequence of the exceptional character of American people. Unity belongs to the American spirit, it is its tradition and at the same time a divine gift ("we are one people, one family, and one glorious nation under God"), and the unity of the nation is represented in a long series of statements projected into

a very near future where the determination of the American people makes it possible to enact the will of their leader.

## 3.3 The Arguer (*I*), the Audience (*you*) and Their Union (*we*)

The different patterns exploited in the two speeches[8] are reflected in the data concerning the occurrence of personal pronouns and possessive adjectives, shown in Table 1.[9]

**Table 1** Occurrences of personal pronouns and possessive adjectives

| Pronouns and Possessives | 2017 | 2025 |
|---|---|---|
| I | 3 (0.21%) | 33 (1.13%) |
| My | 1 (0.07%) | 16 (0.55%) |
| You | 14 (0.96%) | 32 (1.09%) |
| Your | 11 (0.75%) | 5 (0.17%) |
| We | 47 (3.22%) | 85 (2.91%) |
| Our | 48 (3.29%) | 71 (2.43%) |
| Us | 2 (0.14%) | 2 (0.07%) |

### 3.3.1 First person singular

The most remarkable difference between the two speeches is the relevance attributed to the speaking subject. In 2017, the first person singular subject *I* occurred only thrice, two of the occurrences being rather formulaic and expressing the commitment of the arguer to support his audience ("I will fight for you / I will never let you down"). Conversely, the 2025 IA includes 33 occurrences of *I*, corresponding to more than five times as many in percentage. This confirms the predominance of the enunciator who puts himself on stage and takes full responsibility of the actions that are going to be performed. Concordances show 18 occurrences of *I will*, most of them marking the progression of actions to be performed in order to solve America's problems (and the executive orders to be signed). The occurrences

**8** The two speeches differ in length (1461 vs 2923 tokens, respectively). For this reason, percentages are provided in Table 1.

**9** Frequency lists and concordances were obtained using Wordsmith Tools 8.0. The Tables in the text show the absolute number of occurrences and the percentages obtained with the Frequency Tool. The third person (which, as discussed above, is a non-person) is not considered in this research. The data presented are purely descriptive; a quantitative approach to the texts would require inferential processing that lies beyond the scope of this paper, which is focused on qualitative analysis.

of *my* are not negligible in the 2025 speech: a few of them refer to the attack on Trumps' life during the campaign, while there are also a couple of formulaic uses ("my fellow citizens / my message to America"). It is however interesting to note that in some cases *my* is used to emphasize the predominant position of the new President who intends to hold firm control of his government ("my administration / my Cabinet / my policy / my leadership").

### 3.3.2 Second Person

Data for the second person (which is always intended as a plural, representing the audience) are more homogeneous, particularly in the case of the pronoun *you*. Yet the number of occurrences in the formula "Thank you" is much higher in 2025 (23 vs 5 in 2017). Excluding these, the proportion of *you* is twice as high in the 2017 Inaugural (0.62% vs 0.34% in 2025), but in both speeches *you* is only occasionally a subject (4 times in 2025 vs 3 in 2017, one of which subject of a passive sentence, "You will never be ignored"). In the object position, *you* occurs in similar contexts in both speeches, with "I will fight for you" occurring in both speeches; in 2017, however, *you* serves to represent the solemn moment when power shifts from Washington to the people ("I am giving it [power] back to you / It belongs to you /everyone is listening to you"). This is also reflected in the use of *your*, which combines with words like *moment*, *victory*, *triumph*, *celebration*, *day*, all referring to the new meaning of the old Capitol Hill ceremony. *Your* is far less frequent in the 2025 Inaugural, and combined with nouns referring to Trump election (*your vote* [twice], *choice*, *voice*, *help*).

### 3.3.3 First Person Plural

Globally considered, the first person plural is more frequent in the 2017 Inaugural, with more relevant differences for the adjective *our*. These data are however meaningless if we do not consider them in the light of the opposition between inclusive and exclusive forms. It is obviously difficult to assign each single occurrence to one or the other group, even working on a qualitative basis and analysing their value by hand. In some cases, the inclusive character is signalled by linguistic clues (we all / together we / we in America /we, the citizen of America / we assembled here today /etc.), while in other cases it is the semantics or the pragmatic value of the utterance that enhances the exclusive (or, more rarely, the inclusive) interpretation.

In political discourse, the ambiguities of the first person plural are often exploited to obtain an inclusive *pragmatic* effect even if

the *semantic* interpretation of the pronoun is more consistent with exclusivity. In principle, however, the subject pronoun *we* – especially in combination with a future tense – is likely to have a semantically exclusive value in the context of institutional addresses where arguers present themselves and sketch the actions they intend to perform, as the pronoun refers to the group who is going to enact a shared programme (his/her party /government /collaborators etc.). The possessive adjective, on the other hand, is more frequently used with an inclusive value, and is exploited to emphasise that speaker and audience share a common ground, which includes both sheer facts and 'loaded' values (in Trump's IAs: our country / nation / children / flag, etc.; but also: our dreams / loyalty / way of life / freedom, etc.).[10]

In this perspective, the higher number of occurrences of *our* in 2017 should *per se* indicate a prevalence of inclusivity. This is in fact confirmed by the analysis of concordance lines, which shows that in almost all occurrences the inclusive value is evident. On the other hand, there is only one case where exclusivity clearly prevails ("at the bedrock of our politics"). The pattern is completely different in the 2025 Inaugural. A lower percentage of occurrences of *our* combines with a significant proportion of clearly exclusive (or markedly ambiguous) forms: "*our* top priorities / under *our* Administration /*our* agenda" obviously refer to the speaker + his collaborators, sometimes enhancing a *majestatis* interpretation (e.g. "*our* presidential election / I will direct *our* government"). There are also a few ambiguous occurrences which however seem to be more consistent if interpreted as exclusive ("we will measure our success / our power will stop all wars").

As for the pronoun, while the occurrences of the object form (*us* occurs only twice in both speeches) are negligible (and yet, in 2017 they are both evidently inclusive, while in 2025 one of them is at best ambiguous), the subject form has similar percentages of occurrence in the two speeches. The most frequent collocate is in both cases *we will* (28 occurrences in 2017 vs 53 in 2025, with similar percentages): in 2017 the cluster "we will make America" occurs 8 times; while in 2025 the most frequent clusters are "we will be (10) / will not be (8)". There is however an important difference between the two speeches. In the 2017 Inaugural, linguistic clues clearly indicate that the actions will be performed by the speaker in conjunction with the audience ("together, we will make America great/safe/proud/wealthy/strong again; we all salute the same great American flag; we all enjoy the same glorious freedoms", etc.). In 2025, on the other hand, future actions are mostly the task of a government ("we will move

**10** For more data and their refined analysis cf. Santulli 2005, who examined the institutional genre of presentation of a new government to Parliament in Italy.

with purpose and speed / we will restore integrity / we will reinstate my Remain in Mexico policy / we will bring prices down / we will end the green new deal", etc.). In this context, ambiguous statements (e.g. "we will not forget our country/our Constitution/our God") foster an exclusive interpretation, but as they refer to very general attitudes and values, inclusion cannot be totally excluded. The audience is given no agency power, but it is involved in a process of *embrayage*, which is more evident when (inclusive) *we* is used in predicative structures: e.g. we will be proud/strong/the envy of every nation.

### 3.3.4 Summary

To sum up, the data presented above clearly show that the explicit representation of the speaker is not essential in the 2017 IA: the enunciator occasionally materialises in discourse as the leader who fights for his supporter. Quite differently, in 2025 the enunciator takes responsibility for his actions and presents himself as the agent who is going to enact a momentous change.

In both speeches the audience is represented as a rather passive character, but in 2017 they are considered the addressees of a profound transformation in political mechanisms (power is to be brought back to them). In 2025, on the other hand, the audience is represented as a mere instrument for the achievement of the aims set by the leader: their support (and their vote) made it possible for the speaker to win the presidency and, in this new role, to bring forth his programme for change.

The use of the first person plural is consistent with these different representations of both speaker and audience. In 2025 the possessive adjective is more often used with an exclusive meaning, contributing to the exclusion of the audience from all political action. Similarly, in 2017 the pronoun *we* is frequently used in conjunction with linguistic expressions that suggest an inclusive interpretation, while in 2025 exclusion prevails, contraposing the actions of Trump's government to the passive representation of the people who are only included in a static picture of hollow grandeur.

## 4 Conclusions

The use of personal pronouns in Trumps' IAs illustrated in the previous section is in tune with other features of the two speeches. Some important structural elements reflecting the different ways of enacting the norms of the genre correspond to significant differences in the structure of the enunciation and in the representation of the

actors involved, thus confirming the crucial role of persons in the rhetoric organization of discourse.

In 2025 the marked divergence from the prototypical structure of the IA and the fainting of its ritual meaning corresponds to the evident exclusion of the audience from the role of agent: the enunciator takes possession of discourse and takes the prominent position, while the audience is reduced to a mere instrument (as they put the enunciator in the position of agent). The union of leaders and followers is weak: far from being called to action, the latter are deprived of any power, thus eliminating a crucial move of the genre. The first person plural has an exclusive value when in a subject position, while an inclusive interpretation is possible only to identify qualities or attitudes.

The use of personal pronouns confirms that, in comparison with the 2017 Address, the 2025 IA reveals a different attitude of the arguer. Some elements of the first address that already indicated a divergence from the prototypical structure of the speech and its generic significance are further developed and emphasised, leading to a new interpretation of the institutional role of the whole inaugural ceremony. The prevalence of individual actions (reflected in the overwhelming use of *I*) is in contrast with the principle of the Plural Presidency, while the disempowerment of the audience, predominantly excluded from the agent role, precludes the possibility of a call to action.

These elements complete the distortion of the genre, evident from the very beginning of the speech, as the lack of the first step (why we are here) is *per se* symptomatic of a totally new course: we are here for a purpose unlike that of the past.

## Bibliography

Amossy, R. (2005). "The Argumentative Dimension of Discourse". van Eemeren, F.; Houtlosser, P. (eds), *Practices of Argumentation.* Amsterdam: John Benjamins, 87-98.

Aristotle, *Ars Rhetorica* (Rh.). En. transl. by C.D.C. Reeve. *Rhetoric.* Indianapolis; Cambridge: Hackett Publishing Company, 2018.

Benveniste, É. (1971). *Problems in General Linguistics*. Miami: Miami University Press. En. transl. of: *Problèmes de linguistique générale*. Paris: Gallimard, 1966.

Bhatia, V.K. (1993). *Analysing Genre: Language Use in Professional Settings.* London; New York: Longman.

Campbell, K.K.; Jamieson, K.H. (1986). "Inaugurating the Presidency". Simons, H.W.; Agazarian, A.A. (eds), *Form, Genre, and the Study of Political Discourse*, 5. Columbia: University of South Carolina Press, 203-25.

Degano, C. (2022). "The Inaugural Address: Fostering Objects of Agreement". Santulli, F.; Degano, C., *Agreement in Argumentation. A Discursive Perspective*. Cham: Springer, 113-44. https://doi.org/10.1007/978-3-031-16293-0_5.

Duszak, A. (ed.) (2002). *Us and Others. Social Identities across Languages, Discourses and Cultures*. Amsterdam; Philadelphia: John Benjamins. https://doi.org/10.1353/lan.2006.0091.

Filimova, E. (ed.) (2005). *Clusivity. Typology and Case Studies of the Inclusive-Exclusive Distinction*. Amsterdam; Philadelphia: John Benjamins. https://doi.org/10.1075/tsl.63.06cys.

Gardelle, L.; Sorlin, S. (eds) (2015). *The Pragmatics of Personal Pronouns*. Amsterdam; Philadelphia: John Benjamins.

Hart, R.P. (1984). *Verbal Style and the Presidency*. Orlando: Academic Press.

Helmbrecht, J. (2015). "A Typology of non-Prototypical Uses of Personal Pronouns: Synchrony and Diachrony". *Journal of Pragmatics*, 88, 176-89.

Maingueneau, D. (2016). *L'ethos en analyse du discourse*. Paris: L'Harmattan.

Nunberg, G. (1993). "Indexicality and Deixis". *Linguistics and Philosophy,* 16, 1-43.

Perelman, Ch.; Olbrechts-Tyteca, L. (1958). *Traité de l'argumentation. La nouvelle rhétorique*. Paris: Presses Universitaires de France. https://doi.org/10.7202/705750ar.

Quirk, R.; Greenbaum, S.; Leech, G.; Svartvik, J. (1985). *Comprehensive Grammar of the English Language*. London: Longman. https://doi.org/10.2307/415437.

Santulli, F. (2005). *Le parole del potere, il potere delle parole. Retorica e discorso politico.* Milano: FrancoAngeli. https://doi.org/10.1525/rh.2008.26.2.202.

Santulli, F. (2020). "*We Shall Fight*: Speaker-Exclusive *We* as a Grammatical Metaphor". *International Journal of Linguistics*, 12(4), 43-64. https://doi.org/10.5296/ijl.v12i4.16931.

Santulli, F.; Degano, C. (2022). *Agreement in Argumentation. A Discursive Perspective*. Cham: Springer.

Truan, N. (2021). *The Politics of Person Reference*. Amsterdam: John Benjamins.

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# Focus Movement to a Low FocusP in Double Complement Constructions

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**Abstract** Drawing on Anna Cardinaletti's work on Italian and previous research by the author and by Adriana Belletti, this paper argues that focus movement to a low focus position above vP can explain some of the alternations between the DP PP and the PP DP orders in the double complement construction in Brazilian Portuguese. The study develops the idea that movement of a focused constituent to the specifier of a low FocusP is followed by the fronting of the remnant vP to the specifier of a functional head merged immediately above FocusP.

**Keywords** Focus Movement. Double complement constructions. Ditransitives. Brazilian Portuguese.

**Summary** 1 Introduction. – 2 Focus Movement in Syntactic Theory. – 3 "Low" or vP-Peripheral Focus. – 4 A Low FocusP in Double Complement Sentences. – 5 Conclusions.

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## 1 Introduction[1]

Anna Cardinaletti's work on the low FocusP in Italian – especially Cardinaletti (2016) – serves as the main source of inspiration for this contribution. I begin by reviewing the evidence for focus movement more generally, with particular attention to arguments in favor of movement to a low position within the clause. I then turn to focalization in double-complement sentences, focusing on data from Brazilian Portuguese. The analysis proposed here extends the account of low focalization developed for other constructions in Shlonsky and Rizzi (2018) and Shlonsky (2024).

## 2 Focus Movement in Syntactic Theory

A central issue that continues to preoccupy syntacticians working on information structure is the syntactic status of discourse-dependent semantic/pragmatic properties: are phenomena such as focus and topic encoded in syntactic structure, and if so, in what way?

The major milestones in the syntactic study of discourse-related properties begin with Chomsky's (1977) seminal paper, "On Wh Movement". In this work, Chomsky analyzed 'topicalization' – a term then used ambiguously to cover both focus fronting and topic fronting, distinct from left dislocation – as a specific subtype of wh-movement. Chomsky posited that the topicalized or focused constituent is associated with a wh-operator that moves and subsequently deletes. Later research reinterpreted "movement followed by deletion" as movement of a phonetically null operator. This analysis naturally leads to a refinement in which the focalized or topicalized constituent itself undergoes movement. This approach reflects the standard implementation of Chomsky's original proposal in contemporary research.

(1) ?I believe that that book, John gave ___ away to some friends.

**1** I would like to thank the audiences and participants at two conferences held at the Federal University of Santa Catarina in Florianópolis: *Zoom na Cartografia: Brazilian Portuguese under Cartographic Lenses* (2023) and *Romania Nova* (2024). I am especially grateful to Sandra Quarezemin for hosting me and for the many stimulating conversations we shared during my stay and beyond.

This contribution is dedicated to my dear friend and colleague Anna Cardinaletti, who has listened to me talk about these topics over countless spritzes on the Zattere. Her presence and insight are woven into nearly everything I write.

In (1), the targeted constituent, 'that book', appears in the surface string displaced from the position in which it receives its θ-role. Within theories of grammar that espouse syntactic movement (whether conceived as transformations or internal Merge), word order permutations make it relatively clear that the focused or topicalized element has moved.

However, there are instances where a focalized constituent, despite appearing in situ, exhibits properties indicative of covert movement. Such cases offer significant theoretical insights.

Chomsky (1976) examined the pattern illustrated in (2). While coreference between 'he' and 'John' is permissible in (2a), it is blocked in (2b), mirroring the impossibility observed in (2c). This supports the generalization that Weak Crossover (WCO) – the syntactic constraint prohibiting wh-movement across a coindexed pronoun – applies not only to overt wh-phrases, as in (2c), but also to focused constituents, as in (2b). Chomsky argued that in both ungrammatical instances, wh-movement generates an illicit WCO configuration: overtly in (2c) and covertly in (2b)

(2) a. The woman $he_i$ loved called $John_i$.
b. *The woman $he_i$ loved called $JOHN_i$.
c. *$Who_i$ did the woman $he_i$ loved call $t_i$?

In related work, Horvath (1986) demonstrated that in Hungarian – as well as in certain other languages such as Basque, e.g., Irurtzun (2016) – the interpretation of a constituent as focus requires overt syntactic movement to a position immediately to the left of the verb.

(3) a. Attila felt a földerngéstől.
Attila feared the earthquake-from
'Attila was afraid of the earthquake.'
b. Attila A FÖLDERNGÉSTŐL felt.
Attila THE EARTHQUAKE-FROM Feared.
'Attila was afraid OF THE EARTHQUAKE'
or: 'It was THE EARTHQUAKE that Attila was afraid of.'
c. Attila felt A FÖLDERNGÉSTŐL.
Attila feared THE EARTHQUAKE-FROM

The major contribution of the cartographic perspective to this discussion lies in identifying a dedicated structural position for the moved focus and specifying its location within the clausal hierarchy. This was Rizzi's (1997) central insight: the proposal of a fully articulated, X-bar – compliant projection labeled FocusP, situated in what he termed the *left periphery* of the clause. Focus

movement – whether overt or covert – targets Spec/FocusP. The head of this projection, Focus$^0$, is phonologically null in English but overtly realized in many other languages. For Hungarian, the natural analysis is that the focused constituent moves to Spec/FocusP, while the verb obligatorily raises and incorporates into a phonologically null Focus$^0$ – precisely the structure argued for in Puskás (2000).

## 3 "Low" or vP-Peripheral Focus

Many Bantu languages exhibit a focus position referred to as 'Immediately After the Verb' (IAV) (see Watters 1979 on Aghem, and the references to many other languages in van der Wal 2015). Unlike Hungarian, where the verb is in Focus$^0$ – immediately following the focused constituent – the verb in IAV languages surfaces immediately to the left of, and thus structurally above, the focused constituent. Given that the Bantu verb follows the subject in unmarked declarative clauses, its movement is generally assumed to be restricted to the TP domain. IAV focus is therefore a reliable diagnostic for a low Focus phrase, as many specialists have pointed out (for example, in the references listed in Buell et al. 2011, 695).

(4) a. fɨ́l á mɔ̀ zɨ́ kɨ́-bɛ́ án 'sóm. Aghem: Watters 1979
friends SM P2 eat fufu in farm
'The friends ate fufu in the farm.'

b. fɨ́l á mɔ̀zɨ́ án 'sóm bɛ́-'kɔ́.
friends SM P2 eat in farm fufu-DET

The IAV pattern parallels Romance 'postverbal focus.' In Italian, for instance, new information focus – including that of subjects – is realized postverbally. A focused subject must appear in this postverbal position and cannot be interpreted as new information focus in the canonical preverbal position (5) (Belletti 2001; 2004; Calabrese 1992). Belletti and Shlonsky (1995) argue that this low, postverbal position is also exploited for the focalization of direct and indirect objects, patterns I discuss in greater detail below.

(5) a. Chi ha mangiato la mela?
who has eaten the apple

b. L'ha mangiata GIANNI.
3s=has eaten-sf GIANNI.

b'. *GIANNI l'ha mangiata.
GIANNI 3s=has eaten-sf

Sentences in which lexical material intervenes between the verb and the focused subject exhibit varying degrees of marginality, as illustrated in (6) (Belletti 2004), where the intervening material is bolded. Various deviations from the strict IAV pattern have also been documented in Bantu languages (see, e.g., Buell 2009). These parallels suggest that the Romance and Bantu patterns of low focalization are sufficiently similar to warrant close comparison.

(6) a. Capirà **tutto** MARIA.
'Maria will understand everything.'
b. ?Capirà **completamente** MARIA
'Maria will completely understand.'
c. ??Capirà **il problema** GIANNI.
'Gianni will understand the problem.'

The typological parallel between Bantu and Romance regarding postverbal focus has not gone unnoticed (see, e.g., Aboh 2007; Costa, Kula 2008). However, while the existence of a FocusP in the clausal left periphery – along with movement to its specifier – is now widely accepted, the status of a low, VP-peripheral FocusP, as proposed by Belletti (2001; 2004), Jayaseelan (2001), and Ndayiragije (1999), remains a subject of substantial debate. Bonan (2021) provides a detailed overview of this discussion.

This debate is unsurprising, given that the word-order effects of low focalization are more subtle than those of left-peripheral focus. Specifically, distinguishing between movement to a dedicated low FocusP and in-situ focalization proves challenging.

Low focus interacts intricately with verb movement, the internal ordering of arguments within the vP, adverb placement, and other structural factors, as illustrated by the varying acceptability of the sentences in (6). Belletti (2004), for instance, argues that these three intervening elements occupy distinct positions and interact differently with both Case assignment and verb (or VP) movement.

## 4 A Low FocusP in Double Complement Sentences

### 4.1 Focus and the Linear Order of Complements in Brazilian Portuguese Double Complement Sentences

Belletti and Shlonsky (1995) argue the order of postverbal complements in Italian and Hebrew is sensitive to information structure, and permutations of this order entail movement of one of the focalized complements to a clause-internal FocusP. Similar

analyses have been proposed for Brazilian Portuguese – which, for independent reasons, lacks the subject inversion configuration in (5b) and (6), characteristic of Italian subject focus.

The default, 'neutral' order of complements in a Brazilian Portuguese double complement sentence is DO IO (Cépeda, Cyrino 2020, among others). This order remains unchanged – though see §4.4 – when the IO is focused, as shown in (7b). However, when the DO is focused, as it is in (8b), the order of complements is reversed: the DO now follows the IO (Quarezemin 2009; Cépeda, Cyrino 2020; Lacerda 2023), data adapted from Quarezemin (2009, 117). The DO IO order in (8b) is not to be equated with English Dative Shift: the dative preposition is retained, and the DO must be focalized.

(7) a. Pra quem o João deu um presente?
To-the who the João gave a Present
'Who did João give a present to?'
b. O João deu um presente PRA MARIA.
the João gave a present to-the Maria
'João gave a present TO MARIA.'

(8) a. O que o João deu pra Maria?
the what the João gave to-the Maria
'What did João give to Maria?'
b. O João deu pra Maria UM PRESENTE.
the João gave to-the Maria a present
'João gave A PRESENT to Maria.'

Since IO focalization in (7b) entails no change in word order, it is consistent with focalization in-situ, without recourse to movement to Spec/Focus. This view is defended in Lacerda (2023; 2025) and challenged below.

(8b) might involve movement of the DO to a right-hand Spec/Focus position, as Ndayiragije (1999) argues for Kirundi. Whether such an option exists is tied to the more general question of whether rightward movement operations – such as right adjunction, rightward specifiers, extraposition, right dislocation, or Heavy NP Shift – are licit operations. In other words, the issue turns on whether *c*-command relations and linear order are, or are not, interdependent.

Kayne's Linear Correspondence Axiom (Kayne 1994) entails the impossibility of rightward movement, thus substantially narrowing the range of grammars available to the language learner. The unavailability of rightward movement is, moreover, supported by the robust typological fact that word order patterns are overwhelmingly asymmetric. A compelling set of arguments to this effect is presented

in Cinque (2023). Taken together, these considerations support the hypothesis – that I adopt – that movement is invariably leftward.

Putting the option of rightward movement aside, there are several other conceivable (partial) derivations for (8b): (9a) is proposed in Cépeda and Cyrino (2020). (9b) is an alternative derivation, in which focus movement is followed by vP movement above FocusP, after which the verb and the subject are extracted and moved to their respective positions within TP/SubjP.[2]

(9) Possible derivations of (8b)

a. Movement of 'a present' to a (left) Spec/Focus and movement of 'to Maria' over it to the spec of a Topic head above FocusP.
…[$_{\text{TopicP}}$ [to Maria] Top0 [$_{\text{FocusP}}$ [a present] Foc0 [$_{\text{vP}}$…$t_{\text{DO}}$ $t_{\text{IO}}$]]]

b. Movement of 'a present' to a (left) Spec/Focus and movement of the remnant vP above FocusP.
[$_{\text{vP}}$…v [to Maria] $t_{\text{DO}}$] … [$_{\text{FocusP}}$ [a present] Foc0 $t_{\text{vP}}$]]

In section 4.4, I develop an argument in favor of the derivation (9b), in terms of vP remnant movement above the low FocusP. My argument requires that we backtrack and ask whether, aside from word order considerations, there is independent evidence that movement to a l*ow* FocusP above vP is a genuine UG option. If it is available in the learner's toolkit, it stands to reason that it manifests itself, albeit in different ways in different grammars. The independent evidence comes from English pseudogapping, §4.2 and from a focus construction found in regional/colloquial Spanish and Portuguese, §4.3.

## 4.2 Focus Movement in English Pseudogapping

Surprisingly, English provides a robust source of evidence, despite the fact that focus movement of the type illustrated in (1) is only marginally acceptable and strictly limited in distribution compared to languages like Italian or Spanish, as Haegeman (2012) meticulously demonstrates. Indeed, the unmarked strategy for focus in English is intonational: under appropriate discourse conditions, all three arguments in (10) can bear focal stress.

**2** Bošković (2018) argues that there are systematic exceptions to the ban on movement out of moved constituents, the 'freezing ban': Movement is tolerated of elements that are either base-generated at the edge of the moved constituent or obligatorily moved there. See also Bošković 2021. In the fronted vP in (9b), both the subject and the verb are on the edge of vP. Their movement out of the fronted vP doesn't therefore violate the freezing ban.

(10) a. JOANNA gave the book to Marta.
b. Joanna gave THE BOOK to Marta.
c. Joanna gave the book TO MARTA.

Focus movement in English can be detected in some ellipsis phenomena. In particular, pseudogapping is often analyzed as involving a step of low focus movement. Consider the examples in (11), all drawn from the literature: Gengel 2013; Jayaseelan 2001; Sailor, Thoms 2014; Thoms 2016.[3]

(11) a. Cathy didn't bring beer, but she did **whiskey**.
b. This should make you laugh, it did **me**.
c. The DA will prove Jones guilty, and the assistant will **Smith**.
d. Although John wouldn't give Bill the book, he would **the paper**.

Assuming that ellipsis invariably targets a constituent (i.e., that there is no scattered deletion), a straightforward analysis of (11) would have the remnant in pseudogapping moving out of vP, after which vP undergoes deletion. This was Jayaseelan's (2001) proposal, which has been adopted with slight variations in much of the current literature and is schematized in (13).

(12) a. Move some vP-internal constituent to a vP-peripheral FocusP.
b. Delete the complement of Focus°.

(13) Cathy didn't bring beer, but she did $[_{\text{FocusP}}$ **whiskey** Foc0 $[_{\text{vP}}$ ~~bring t$_{\text{whiskey}}$~~$]]$

As first argued by Larson (1988) and widely adopted in subsequent research, double-complement VPs are layered: the verb originates in the lowest VP and moves successively to the highest verbal head (presumably *v*), positioning it above both the direct and indirect objects. Pseudogapping occurs when one or both complements move out of the VP to a FocusP prior to VP ellipsis.

In (14a), the indirect object moves to Spec/FocusP, and the remnant VP – comprising the verb, the direct object, and the trace

**3** Focus in pseudogapping is contrastive: the remnant is contrasted with an expression in the main clause (Konietzko, Winkler 2010; Stockwell 2020 and references cited.) Postverbal focus in Italian and Brazilian Portuguese is essentially new-information focus (although it may also be contrastive, depending on the context). I assume that the properties distinguishing these and other types of focus are not themselves coded in the low Focus head. High Focus0 appears to be more selective, as Cruschina (2011) argues on the basis of Sicilian focus movement. See also Bianchi, Bocci, Cruschina 2015.

of the focused indirect object – is elided. In (14b), the direct object undergoes focus movement; consequently, the elided VP contains its trace, the verb, and the indirect object. Finally, in (14c), the VP containing both complements (and presumably the verb traces) moves to Spec/FocusP, leaving a remnant VP that undergoes deletion. In all three cases, the target of ellipsis is the VP; what varies is the constituent extracted to Spec/FocusP prior to deletion.[4]

(14) a. I would give a Kindle to my son with less hesitation than I would to my daughter.
b. I would give a Kindle to my son with less hesitation than I would an iPad.
c. I would give a Kindle to my son with less hesitation than I would an iPad to my daughter.

Unlike Romance, English provides meager evidence for a low focus position. The fact that it is exploited in the relatively exotic environment of pseudogapping argues that UG makes it available. In English pseudogapping, the complement of Focus° undergoes ellipsis. I now discuss a case in which focus-movement of a constituent to the low FocusP is followed by *movement* of the complement of Focus°, not by deletion.

## 4.3 The Focalizing 'ser' Construction

Some varieties of Latin American Spanish and Brazilian Portuguese exhibit a focus construction known as the focalizing *ser* 'be' construction (FSC), see e.g., Bosque 1999; Camacho 2006; Curnow, Travis 2004; Kato, Mioto 2016; Méndez Vallejo 2009; 2015; 2019; Mioto 2012; Resenes, den Dikken 2012; Sedano 1990 and Toribio 2002. This construction is characterized by the presence of the verb 'be' immediately preceding a clause-internal focalized constituent and thus resembles the Bantu IAV construction discussed above. To express their meaning in English, some of the sentences in (15) are translated as clefts and pseudoclefts. However, there are significant differences between focalizing *ser* sentences and genuine clefts and pseudoclefts in these languages (see, e.g., Mioto 2012 and Kato, Mioto 2016).

**4** It is likely that the target of deletion is actually vP (or VoiceP, see Merchant 2008) and not VP, since the subject moves out prior to deletion, but this is tangential to the main point.

(15) a. Eu vou comer **é** um cachorro-quente. Brazilian Portuguese
I going eat.INF be.PRES a hotdog.
'It is a hotdog that I'm going to eat.'
'What I'm going to eat is a hotdog.'

b. Juan comió **era** papas. Spanish
John eat.PST be-IMPERF potatoes
'It is potatoes that John ate.'
'What John ate is potatoes.'

c. Nosotras llegamos **fue** cansaditas Spanish
we.F arrive.PST be.PST tired.DIM.F
'We arrived TIRED.'

d. Mamá tenía que ir **era** Spanish
Mom need.IMPERF that go.INF be.IMPERF
al mercado.
to.the market
'It was to the market that Mom had to go.'

e. Me da miedo **es** la arena. Spanish
me give.PRES fear be.PRES the sand
'It is sand that frightens me.'
'What frightens me is sand.'

Example (16) – from Camacho (2006) – shows that the focalizing 'be' is not the copular 'be', as the two may cooccur.

(16) Mi hermano estaba era triste.
My brother be.IMPERF.COP be.IMPERF sad
'It was sad that my brother was.'
What my brother was was sad.

Following discussions with Luigi Rizzi, I would like to suggest that the derivation of the FSC involves the following steps.

(17) a. Movement of a constituent to Spec/Focus above vP.
b. Merge of the 'special', focus-related 'be'.
c. Movement of the remnant vP – the complement of Focus0 – to Spec/'be'
d. Movement of the verb and the subject out of the extracted vP to T and Spec/Subj, respectively.

Steps (a-c) of the derivation of an FSC such as (18b), are schematized in (19).

(18) a. ¿Qué trajó Laura? Méndez Vallejo (2015, 68)
what bring.PST Laura
'What did Laura bring?'
b. Laura trajó fue Sangría.
Laura bring.PST be.PST sangria
'It was sangria that Laura brought.'
'What Laura brought was Sangria.'

(19) a. [$_{vP}$ Laura trajó sangría] Merge of Foc and move of *sangria*:
b. Sangría Foc0 [$_{vP}$ Laura trajó __] merge of *be*:
c. *be* [$_{FocusP}$ sangría Foc0 [$_{vP}$ Laura trajó __]] vP movement
d. [$_{vP}$ Laura trajó __] *be* [$_{FocusP}$ sangría Foc0___]

In this analysis, FocP is the complement of the 'focalizing' *ser*. I take the head lexicalized by *be* to both select FocusP and attract its complement to its specifier. In Shlonsky (2024), I argue that this analysis is valid for other constructions involving a clause-internal FocusP such as inverted copular constructions (on which, see also Rizzi 2015 and Shlonsky, Rizzi 2018) and Bantu subject-object inversion. FocusP is selected by a head that I label SelF° "Select Focus", which also attracts the complement of Foc°, triggering its movement to Spec/SelFP.

## 4.4 Focus Movement and vP/VP fronting in double complement sentences

Extending this analysis to focalization in the double complement construction is straightforward, under the assumption that a (null) 'be' – of the sort that is overtly realized in FSCs – is merged above FocP, and attracts vP to its spec.

Consider first focalization of the indirect object, as in the exchange in (7), repeated below. Focus movement of the PP *pra Maria* to Spec/FocusP is followed by vP movement. As a result, the DO ends up to the left of the IO, re-establishing the default order. The (relevant part of the) derivation of (7b) is given in (20).

(7) a. Pra quem o João deu um presente?
To-the who the João gave a present
'Who did João give a present to?'
b. O João deu um presente PRA MARIA.
the João gave a present to-the Maria
'João gave a present TO MARIA.'

| | | | |
|---|---|---|---|
| (20) | a. | $[_{vP}$ …DO …IO…] | Base order is DO IO. Merge Focus0 and move IO to Spec/Focus: |
| | b. | $[_{FocusP}$ IO Foc0 $[_{vP}$…$t_{IO}$…DO…]] | Merge BE (null 'be') and move vP to its spec: |
| | c. | $[[_{vP}$…$t_{IO}$…DO…] BE $[_{FocusP}$ IO Foc0 $t_{vP}$]] | |

Since the order of complements in the output of step (20c) is the same as in the default DO IO order, one might wonder whether the IO here is simply focalized in situ. Let us leave this question pending while we turn to focalization of the direct object, as in the exchange in (8). The proposed derivation of (8b) is in (21).

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| (8) | a. | O | que | o | João | deu | pra | Maria? |
| | | the | what | the | João | gave | to-the | Maria |
| | | 'What did João give to Maria?' | | | | | | |
| | b. | O | João | deu | pra | Maria | UM | PRESENTE |
| | | the | João | gave | to-the | Maria | a | present |
| | | 'João gave A PRESENT to Maria.' | | | | | | |

| | | | |
|---|---|---|---|
| (21) | a. | $[_{vP}$ …DO …IO…] | Base order is DO IO. Merge Focus0 and move DO to Spec/Focus: |
| | b. | $[_{FocusP}$ DO Foc0 $[_{vP}$…$t_{DO}$…IO…]] | Merge BE (null 'be') and move vP to its spec: |
| | c. | $[[_{vP}$…$t_{DO}$…IO…] BE $[_{FocusP}$ DO Foc0 $t_{vP}$]] | |

In the output of (21c), the direct object is carried along by vP-fronting to Spec/BE. The order of the two complements in (8b) reverses the base order. If focalization occurred in situ, the reversal of the complements would be unexpected.

Quarezemin (2009) observes that IO DO in (8b) is not the only possible word order in the answer to (8a); DO IO in (22) is also an option.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| (22) | O | João | deu | UM | PRESENTE | pra | Maria. |
| | the | João | gave | a | present | to-the | Maria |
| | 'João gave A PRESENT to Maria.' | | | | | | |

(22) cannot be derived in the way I have suggested: If vP is fronted over FocusP, the IO should end up to the left of the focus, as it effectively does in (21c). Prima facie, the grammaticality of (22) alongside that of (8b), suggests that focalization of the complement in Brazilian Portuguese double complement sentences can *either* incur focus movement and vP fronting – in (8b) –, or occur in-situ – in (7b) and (22).

I now argue that neither (7b) nor (22) exemplify in-situ focalization. Rather, the derivation of both depends on the dual operations of focus movement to a vP-external focus position and of vP fronting above it.

Quarezemin (2009) also notes the ungrammaticality of (23), (as an answer to (7a)).

(23) ??O João deu PRA MARIA um presente.
the João gave to-the Maria a present
'João gave Maria a present.'

(23) cannot be derived if vP is fronted over FocusP, as the DO appears stranded to the right of the IO. But note that (23) is also problematic for an in-situ analysis of focalization, since the unmoved order of complements is DO IO and not IO DO.

Lacerda (2023), moreover, shows that if the DO in (23) is definite, the sentence is grammatical.

(24) O João deu PRA MARIA o Programa Minimalista.
the João gave to-the Maria the Program Minimalist
'João gave Maria the Minimalist Program.'

The contrast between (23) and (24) leads Lacerda to argue that the DO in these examples is a Topic. A distinctive property of Topics that Frascarelli and Hinterhölzl (2007) name 'familiar topics' is that they must be definite. This is the reason for which (24) is grammatical and (23) is not, as Lacerda (2023) proposes.

Frascarelli and Hinterhölzl (2007) demonstrate that in the Italian (clausal) left periphery, familiar topics occur only to the right of and hence below FocusP, as opposed to contrastive or aboutness shift topics, which occur above FocusP. Cardinaletti (2016) – the source of the examples in (25b) ((25a) is from Benincà and Poletto 2004) – provides several additional arguments in favor of this cartography.

(25) a. A GIANNI, un libro di poesie, lo regalerete,
to Gianni, a book of poetry, 3MS.DAT.CL give-FUT.2PL,
non a Maria
not to Maria.
'A book of poetry, you'll give GIANNI, not MARIA.'

b. A GIANNI, questo libro di poesie, lo regalerete,
to Gianni, this book of poetry, 3MS.DAT.CL give-FUT.2PL,
non a Maria.
not to Maria.
'This book of poetry, you'll give GIANNI, not MARIA.'

Cardinaletti (2016) further argues that familiar topics are the only kinds of topics that can appear 'right dislocated' in Italian. Right dislocation, for her, involves movement of the entire SubjP above the left-peripheral Familiar TopicP (presumably to a higher TopicP, since familiar topics can be recursive).[5]

Cardinaletti's analysis can straightforwardly accommodate the Brazilian Portuguese data discussed above. (24) and (22), include 'right-dislocated' topics, the DO in the first example and the IO in the second. In both examples, the topics are merged in the clausal left periphery, and SubjP raises above them.

Arguably, then, (22) is *not* a case of in-situ focalization. The only examples of focalization *without* topicalization are (7b) and (8b), where the focused constituent appears clause-finally. I conclude from this discussion that the focalization + vP fronting operations yield a valid description of the data and one does not need to assume that focalization in-situ is an option in this environment.

## 5 Conclusions

In the preceding sections, I have presented new evidence in favor of focus movement to the low, vP-peripheral FocusP proposed in recent work (e.g., Shlonsky 2024; Shlonsky, Rizzi 2018). I argued that movement to this FocusP is systematically followed by fronting of the complement of Focus° to the specifier of a head merged immediately above FocusP.

This final step plays a central role in the proposed analysis of focalization in double complement sentences. The analysis leads to the question of whether vP (remnant) movement is optional or a general property of the derivation. Specifically, does the merger of a Focus head inherently trigger the subsequent merger of a higher head that attracts the remnant vP to its specifier?

I have suggested that the low Focus head is selected by such a higher head – one that not only attracts the verbal/predicative complement of Focus but also carries a semantics related to focus structure. A natural hypothesis is that this head encodes *givenness* (see Kratzer, Selkirk 2020 on givenness as a functional category).

In support of this view, I proposed that the head is morphologically realized by the verb 'ser' in the Focalizing 'Ser' Construction discussed in §4.3, and that comparable configurations can be observed in other grammars where the focused constituent appears below the head that determines its position – such as the immediately-after-verb (IAV)

**5** For Cardinaletti (2002), (2016), Italian does not make use of a vP-peripheral TopicP, of the sort assumed in Belletti 2001, 2004 and Cépeda, Cyrino 2020.

focus position in Bantu languages. Finally, the logic of the proposed architecture leads to the suggestion that in English pseudogapping, the constituent targeted for deletion is first moved to the specifier of the Focus-selecting head, prior to ellipsis.

## Bibliography

Aboh, E.O. (2007). "Leftward Focus Versus Rightward Focus: The Kwa-Bantu Conspiracy". *SOAS Working Papers in Linguistics*, 15, 81-104.

Belletti, A. (2001). "Inversion as Focalization". Hulk, A.; Pollock, J.-Y. (eds), *Subject Inversion in Romance and the Theory of Universal Grammar*. New York: Oxford University Press, 60-90. https://doi.org/10.1093/oso/9780195142693.003.0003.

Belletti, A. (2004). "Aspects of the Low IP Area". Rizzi, L. (ed.), *The Structure of CP and IP. The Cartography of Syntactic Structures*. Vol. 4. New York: Oxford University Press, 16-51. https://doi.org/10.1093/oso/9780195159486.003.0002.

Belletti, A.; Shlonsky, U. (1995). "The Order of Verbal Complements: A Comparative Study". *Natural Language and Linguistic Theory*, 13, 489-526. https://doi.org/10.1007/bf00992739.

Benincà, P.; Poletto, C. (2004). "Topic, Focus and V2: Defining the CP Sublayers". Rizzi, L. (ed.), *The Structure of CP and IP*. New York: Oxford University Press, 52-75. https://doi.org/10.1093/oso/9780195159486.003.0003.

Bianchi, V.; Bocci, G.; Cruschina, S. (2015). "Focus Fronting and Its Implicatures". Aboh, E.O.; Schaeffer, J.C.; Sleeman, P. (eds), *Romance Languages and Linguistic Theory 2013. Selected Papers from "Going Romance" Amsterdam 2013*. Vol. 8. Amsterdam: John Benjamins, 3-19. https://doi.org/10.1075/rllt.8.01bia.

Bonan, C. (2021). *Romance Interrogative Syntax. Formal and Typological Dimensions of Variation*. Amsterdam: John Benjamins. https://doi.org/10.1075/la.266.

Bošković, Ž. (2018). "On Movement out of Moved Elements, Labels, and Phases". *Linguistic Inquiry*, 49(2), 247-82. https://doi.org/10.1162/LING_a_00273.

Bošković, Ž. (2021). "On Smuggling, the Freezing Ban, Labels, and Tough-Constructions". Belletti, A.; Collins, C. (eds), *Smuggling in Syntax*. Oxford: Oxford University Press, 53-95. https://doi.org/10.1093/oso/9780197509869.003.0004.

Bosque, I. (1999). "Sobre la estructura sintáctica de una construcción focalizadora". *Estudios en honor de Ambrosio Rabanales con motivo de los 80 años de su nacimiento*. Vol. 1. Santiago de Chile: Universidad de Chile, 207-31. Boletín de Filología 37.

Buell, L. (2009). "Evaluating the Immediate Postverbal Position as a Focus Position in Zulu". Matondo, M.; McLaughlin, F.; Potsdam, E. (eds), *Selected Proceedings of the 38th Annual Conference on African Linguistics. Linguistic Theory and African Language Documentation*. Somerville, MA: Cascadilla Proceedings Project, 166-72.

Buell, L.C.; Riedel, K.; Van der Wal, J. (2011). "What the Bantu Languages Can Tell Us About Word Order and Movement". *Lingua*, 121(5), 689-701. https://doi.org/10.1016/j.lingua.2010.10.015.

Calabrese, A. (1992). "Some Remarks on Focus and Logical Structures in Italian". *Harvard Working Papers in Linguistics*, 1, 91-127.

Camacho, J. (2006). "In Situ Focus in Caribbean Spanish: Towards a Unified Account of Focus". *Proceedings of the 9th Hispanic Linguistics Symposium*. Somerville, MA: Cascadilla Proceedings Project, 13-23.

Cardinaletti, A. (2002). "Against Optional and Null Clitics. Right Dislocation vs. Marginalization". *Studia Linguistica*, 56(1), 29-57. https://doi.org/10.1111/1467-9582.00086.

Cardinaletti, A. (2016). "Some New Observations on the Cartography of Topic and Focus". *Rivista di Grammatica Generativa*, 38, 45-63.

Cépeda, P.; Cyrino, S. (2020). "Putting Objects in Order: Asymmetrical Relations in Spanish and Portuguese Ditransitives". Pineda, A.; Mateu, J. (eds), *Dative Constructions in Romance and Beyond*. Berlin: Language Science Press, 97-116.

Chomsky, N. (1976). "Constraints on Rules of Grammar". *Linguistic Analysis*, 2, 303-51.

Chomsky, N. (1977). "On Wh Movement". Culicover, P.W.; Wasow, T.; Akmajian, A. (eds), *Formal Syntax*. Dordrecht: Reidel, 71-132.

Cinque, G. (2023). *On Linearization. Towards a Restrictive Theory*. Cambridge, MA: MIT Press. https://doi.org/10.1017/s002222672300021x.

Costa, J.; Kula, N.C. (2008). *Focus at the Interface. Evidence from Romance and Bantu*. Amsterdam: John Benjamins. https://doi.org/10.1075/la.131.16cos.

Cruschina, S. (2011). *Discourse-Related Features and Functional Projections*. New York: Oxford University Press. http://site.ebrary.com/id/10531074.

Curnow, T.J.; Travis, C.E. (2004). "The Emphatic ES Construction of Colombian Spanish". Moskovsky, C. (ed.), *Proceedings of the 2003 Conference of the Australian Linguistic Society*. http://www.als.asn.au.

Frascarelli, M.; Hinterhölzl, R. (2007). "Types of Topics in German and Italian". Winkler, S.; Schwabe, K. (eds), *On Information Structure, Meaning and Form*. Amsterdam: John Benjamins, 87-116. https://doi.org/10.1075/la.100.07fra.

Gengel, K. (2013). *Pseudogapping and Ellipsis*. Oxford: Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199665303.001.0001.

Haegeman, L. (2012). *Adverbial Clauses, Main Clause Phenomena, and the Composition of the Left Periphery*. New York: Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199858774.003.0004.

Horvath, J. (1986). *FOCUS in the Theory of Grammar and the Syntax of Hungarian*. Dordrecht: Foris.

Irurtzun, A. (2016). "Strategies for Argument and Adjunct Focalization in Basque". Fernández, B.; Ortiz de Urbina, J. (eds), *Microparameters in the Grammar of Basque*. Amsterdam: John Benjamins, 243-63. https://doi.org/10.1075/lfab.13.09iru.

Jayaseelan, K.A. (2001). "IP-Internal Topic and Focus Phrases". *Studia Linguistica*, 55(1), 39-75. https://doi.org/10.1111/1467-9582.00074.

Kato, M.A.; Mioto, C. (2016). "Pseudo-Clefts and Semi-Clefts". Kato, M.A.; Ordóñez, F. (eds), *The Morphosyntax of Portuguese and Spanish in Latin America*. New York: Oxford University Press, 286-306. https://doi.org/10.1093/acprof:oso/9780190465889.003.0012.

Kayne, R. (1994). *The Antisymmetry of Syntax*. Cambridge, MA: MIT Press.

Konietzko, A.; Winkler, S. (2010). "Contrastive Ellipsis: Mapping Between Syntax and Information Structure". *Lingua*, 120(6), 1436-57. https://doi.org/10.1016/j.lingua.2008.08.009.

Kratzer, A.; Selkirk, E. (2020). "Deconstructing Information Structure". *Glossa: A Journal of General Linguistics*, 5(1). https://doi.org/10.5334/gjgl.968.

Lacerda, R. (2023). "On the Absence of Low Focus Movement in Brazilian Portuguese". *Natural Language & Linguistic Theory*. https://doi.org/10.1007/s11049-023-09582-5.

Lacerda, R. (2025). "Focalization In Situ and the Absence of Covert Focus Movement in Brazilian Portuguese". *Probus*. https://doi.org/10.1515/probus-2025-0004.

Larson, R.K. (1988). "On the Double Object Construction". *Linguistic Inquiry*, 19(3), 335-91.

Méndez Vallejo, D.C. (2009). "Some Syntactic Considerations Regarding the Focalizing SER ('to Be') Construction in Colombian Spanish". Grosvald, M.; Soares, D. (eds), *Proceedings of the Thirty-Eighth Western Conference on Linguistics*. Vol. 19. Davis, CA: Department of Linguistics, University of California, 208-19.

Méndez Vallejo, D.C. (2015). "Changing the Focus: An Empirical Study of "Focalizing Ser" ('to Be') in Dominican Spanish". *Isogloss*, 1(1), 67. https://doi.org/10.5565/rev/isogloss.2.

Méndez Vallejo, D.C. (2019). "TP-Internal Focus and Dialectal Variation: The Case of the Focalizing Ser". *Linguistics Vanguard*, 5(1), 1-19. https://doi.org/10.1515/lingvan-2018-0001.

Merchant, J. (2008). "An Asymmetry in Voice Mismatches in VP-Ellipsis and Pseudogapping". *Linguistic Inquiry*, 39(1), 169-79. https://doi.org/10.1162/ling.2008.39.1.169.

Mioto, C. (2012). "Reduced Pseudoclefts in Caribbean Spanish and Brazilian Portuguese". Bianchi, V.; Chesi, C. (eds), *Enjoy Linguistics! Papers Offered to Luigi Rizzi on the Occasion of His 60th Birthday*. Siena: CISCL, 287-302.

Ndayiragije, J. (1999). "Checking Economy". *Linguistic Inquiry*, 30(3), 399-444. https://doi.org/10.1162/002438999554129.

Puskás, G. (2000). *Word Order in Hungarian*. Amsterdam: John Benjamins. https://doi.org/10.1075/la.33.

Quarezemin, S. (2009). *Estratégias de focalização no português brasileiro: uma abordagem cartográfica* [PhD Dissertation]. Florianópolis: Universidade Federal de Santa Catarina. https://repositorio.ufsc.br/handle/123456789/92341.

Resenes, M.; Den Dikken, M. (2012). "Semi-Clefts as a Window on the Syntax of Predication, Modification, and Complementation". *Proceedings of the Annual Meeting of the Chicago Linguistic Society*, 48(1), 519-33.

Rizzi, L. (1997). "The Fine Structure of the Left Periphery". Haegeman, L. (ed.), *Elements of Grammar. A Handbook of Generative Syntax*. Dordrecht: Kluwer, 281-337. https://doi.org/10.1007/978-94-011-5420-8_7.

Rizzi, L. (2015). "Notes on Labeling and Subject Positions". Di Domenico, E.; Hamann, C.; Matteini, S. (eds), *Structures, Strategies and Beyond. Studies in Honour of Adriana Belletti*. Amsterdam: John Benjamins, 17-46. https://doi.org/10.1075/la.223.02riz.

Sailor, C.; Thoms, G. (2014). "On the Non-Existence of Non-Constituent Coordination and Non-Constituent Ellipsis". Santana-LaBarge, R.E. (ed.), *Proceedings of the 31st West Coast Conference on Formal Linguistics. Vol. 31*. Somerville, MA: Cascadilla Proceedings Project, 361-70.

Sedano, M. (1990). *Hendidas y otras construcciones con ser en el habla de Caracas*. Caracas: Universidad Central de Venezuela, Facultad de Humanidades y Educación.

Shlonsky, U. (2024). "From Bantu Subject-Object Reversal to Inverted Copular Sentences: How "Low" Focalization and Smuggling Circumvent Relative Minimality Violations". Bocci, G.; Botteri, D.; Manetti, C.; Moscati, V. (eds), *Rich Descriptions and Simple Explanations in Morphosyntax and Language Acquisition*. Oxford: Oxford University Press, 438-64. https://doi.org/10.1093/oso/9780198889472.003.0017.

Shlonsky, U.; Rizzi, L. (2018). "Criterial Freezing in Small Clauses and the Cartography of Copular Constructions". Hartmann, J.; Jäger, M.; Kehl, A.; Konietzko, A.; Winkler, S. (eds), *Freezing*. Berlin: Mouton de Gruyter, 29-65. https://doi.org/10.1515/9781501504266-002.

Stockwell, R. (2020). *Contrast and Verb Phrase Ellipsis. Triviality, Symmetry, and Competition* [PhD dissertation]. Los Angeles: University of California.

Thoms, G. (2016). "Pseudogapping, Parallelism, and the Scope of Focus". *Syntax*, 19(3), 286-307. https://doi.org/10.1111/synt.12122.

Toribio, A.J. (2002). "Focus on Clefts in Dominican Spanish". Lee, J.F.; Geeslin, K.L.; Clements, C. (eds), *Structure, Meaning and Acquisition in Spanish*. Somerville, MA: Cascadilla Press, 130-46.

Van der Wal, J. (2015). "Bantu Syntax". *Oxford Handbooks Online*. New York: Oxford University Press. https://doi.org/10.1093/oxfordhb/9780199935345.013.50.

Watters, J.R. (1979). "Focus in Aghem". Hyman, L. (ed.), *Aghem Grammatical Structure*. Los Angeles: University of Southern California, 137-97. Southern California Occasional Papers in Linguistics 7.

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# Clitics Versus Modularity

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**Abstract** The core syntactic properties of clitics seem to universally covary with the core phonological properties of clitics and with the core semantic properties of clitics. In a truly modular world, that should be impossible. If the mind is in fact modular, what are those properties of clitics telling us? What used to be considered 'semantic' properties of clitics (such as animacy) are now widely considered syntactic, resolving the tension on the semantics side. This contribution explores the idea that the tension on the phonological side is resolved identically: the so-called phonological properties of clitics are in fact syntactic properties. This makes all properties of clitics syntactic, trivially satisfying modularity. It also entails that the syntactic functional sequence grows to integrate projection such as WordStressP, just like it grew to integrate projections such as AnimacyP.

**Keywords** Clitics. Modularity. Syntax. Stress. Focus. Universals.

**Summary** 1 Introduction. – 2 Clitics Versus Modularity. – 3 The Evolution of Semantics Shows a Way Out. – 4 Phonology: Rhythmic Versus Melodic. – 5 Conclusion.

## 1 Introduction

Cardinaletti and Starke (1999), henceforth C&S, emphasize the cross-modular nature of (syntactic) clitics: The peculiar syntactic behaviour of clitics has generated a rich literature, but so has their phonological behaviour, and C&S document that their semantic behaviour is no less unorthodox. What has been less emphasized is the challenge this creates for modularity. The syntactic, phonological and semantic behaviours of clitics correlate systematically across languages: in language after language, the same set of syntactic behaviours (of

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clitics) correlates with the same set of phonological behaviours, which in turn correlates with the same set of semantic behaviours. Language thus seems to have a way to enforce that a given property inside syntax *systematically* corresponds to a given property inside phonology (which *systematically* corresponds to a given property inside semantics). That should not exist, in a modular world.[1]

In a truly modular world, what happens inside one module is inaccessible to what happens inside another module. This is a core property of modules, which Fodor (1983) calls 'encapsulation'. The only way to relate two distinct modules is through a 'dictionary' (lexicon) translating the output of one module into the language of the next module. The content of such translations, the lexicon, is however notoriously language-specific while the essence of the generalisation about clitics is language-invariant. There is thus no way to capture the facts about clitics in a strictly modular world (with language-specific lexica).[2,3]

What do we do with the facts of clitics then? It turns out that if we bite the bullet and pursue the modularity logic to its conclusion, we land in a place that may feel uncomfortable at first, but quickly becomes intriguing and hopefully insightful: some parts of phonology are in fact syntax; there may be functional projections of the type 'wsP', 'wordStressPhrase'. Let's get there step by step.

## 2 Clitics Versus Modularity

Perhaps the most discussed property of syntactic clitics is that they occur in different positions than the non-clitic members of their word class. In (1), the noun *Jean* and the strong pronoun *lui* have access to the same position, but the clitic *le* cannot occur there:

| | | | | | | |
|---|---|---|---|---|---|---|
| (1) | C'est | { Jean / lui / *le } | que | tu | vois |
| | *It's* | *J/him* | *that* | *you* | *see* |

**1** The work on this chapter was supported by Czech Science Foundation (GAČR) grant no. GF23-04856K.

**2** There is a second fact preventing generalisations spanning the content of two modules, what Fodor (1983) calls 'domain specificity'. I will elide this important issue to keep the discussion focused, but see footnote 5.

**3** The McGurk effect, whereby the processing of colors interferes with the verbal processing of color words can be interpreted as a challenge to encapsulation. This is however only true if it can be shown that the processing of colors interferes with the *inner* working of the verbal processing module. What the McGurk effect shows however is not that: it shows that the output of verbal processing is affected, which can also be due to the difficulty of higher level integration of the information when color processing tells you something (apparently) incompatible with what verbal processing is telling you.

Conversely, the clitic has access to a position unavailable to either the noun or the strong pronoun:

(2) Tu { *Jean / *lui / le } vois
*It's J/him see*
*"You see John/him"*

This syntactic distinction correlates with a seemingly arbitrary difference inside semantics: strong (personal, non-demonstrative) pronouns must be +human/animate, whereas clitics don't need to. As a result, the pronoun in the previous example can refer to either an animate or an inanimate entity:

(3) a. **Jean** tu **le** vois
*J, you him see*
*"You see John"*

b. ***ce*** ***livre***, *tu* ***le*** vois
*this book, you him* see
*"You see this book"*

The initial clefted example on the other hand cannot refer to the book:

(4) a. **Jean** c'est **lui** que j'ai vu hier soir
*J, it's him that I've seen yesterday evening*

b. ****ce livre*** *c'est* ***lui*** que j'ai vu hier soir
*this book it's him that I've seen yesterday evening*

This is also true of what looks like one and the same pronoun: *lui* in its clitic distribution allows inanimate referents, but disallows them in its strong pronoun distribution, a classical case of syncretism.

(5) a. ***ce livre***, je **lui** ai fait une place dans l'armoire
*this book, I him have made a space in the cupboard*
*"I made space in the cupboard for this book"*

b. **** ce livre***, *c'est* ***lui*** *que* j'ai vu hier soir
*this book, it's him that I've seen yesterday evening*

What happens inside syntax thus correlates with what happens inside interpretation. This correlation goes far beyond clefting and animacy. C&S document a range of other semantic distinctions between clitics and strong pronouns, and the syntax of clitics goes well beyond their special positioning. The question is how to capture these correlations between syntax and interpretation.

The cross-modular issue becomes perhaps more salient when the correlation is extended to phonology. The most celebrated property of clitics on the phonological side is their lack of word stress.[4] The clitic use of *lui* in French for instance does not induce any accentuation in unmarked spoken language (indicated below by the apostrophe linking the contraction of 'que' and 'son'), whereas the strong pronoun use of apparently the same *lui* does induce a pitch accent. Let's start with an unaccented baseline such as a possessive *son* in the initial position of a coordination, (6a).

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| (6) | a. | … qu' | son | frère | et | sa | soeur |
| | | *… that* | *his* | *brother* | *and* | *his* | *sister* |
| | b. | … que | lui, | et | sa | soeur | |
| | | *… that* | *him,* | *and* | *his* | *sister* | |

When that initial position is substituted by a pronoun, the pronoun surfaces as a strong pronoun, since coordination disallows clitic pronouns (and more generally deficient pronouns). That strong pronoun comes with a slight accentuation to my ear, indicated by the underline on *lui* in (6b). The clitic use of the same-looking *lui* however doesn't induce any accentuation:

| | | | | |
|---|---|---|---|---|
| (7) | Jean | lui | parlera | demain |
| | *John* | *him* | *will.speak* | *tomorrow* |
| | *"John will speak to him tomorrow"* | | | |

It is thus specifically a property of the clitic nature of *lui* to lose word-stress. While the above facts are particular to French, the general description is recurrent across languages. The Slovak 3.sg.acc clitic *ho* is for instance also stressless and uncoordinable while its strong pronoun counterpart *jeho* has both word stress and the capacity to enter coordination. Clitichood thus has phonological behaviour acting in lockstep with syntactic behaviour – and with semantic behaviour. How can the inner working of phonology know about the

**4** C&S document that clitics are in fact capable of carrying phrasal stress, and even a certain subtype of contrastive stress. But not word stress.

inner working of semantics, what's more in an apparently language-invariant manner?[5]

## 3 The Evolution of Semantics Shows a Way Out

Once upon a time, theories of natural language syntax were entirely made out of arbitrary, non-interpreted symbols, such as S, NP, etc. designed to capture word-order.[6] In that world, the fact that the ability of clitics to coordinate or appear in particular positions correlates with their ability to refer to a *[-animate]* entity is a modularity scandal. Two modules see the insides of each other.

Fairy tales are however not known to be particularly realistic, and neither is this 'once upon a time' story. Syntax has never been free of semantically interpreted elements. Including within schools of thought which emphasize the autonomy of syntax, such as generative grammar. The semantically interpreted notion of tense has for instance been a key player inside syntax right from the start of the generative tradition, Chomsky (1957). The presence of semantically interpreted properties inside syntactic computation only grew from there. In the sixties and seventies, notions such as negation and questions took a more central and ever growing role in capturing word-order generalisations; and that trend accelerated sharply since the late eighties, incorporating notions such as focus, aspect, definiteness, specificity, plurality, etc. as generalisations about syntax became more fine-grained.

In the real (contemporary) world then, animacy is not clearly a notion outside of syntax. In fact, the word-order facts of various languages suggest that it very much is a syntactic notion, on the same level as negation, tense, definiteness, questions, aspect and many others. This was already clear enough back in the nineties that C&S didn't hesitate to assign the animacy/human feature to a particular functional projection of the noun phrase, within syntax. Very much the same story holds of other semantically interpreted properties of

**5** One may object that lexical stress is not about 'what happens inside the phonological module', but is rather about static lexical representations. That may or may not be true, given that what looks like the same lexical entry gains or loses word stress depending on its use as a clitic or a strong pronoun. Supposing it is true however simply shifts the issue from encapsulation to domain specificity, leaving the modularity puzzle intact – see footnote 2. Either way, these facts shouldn't exist if modularity is correct, the lexicon is language-specific, and phonology is a distinct module.

**6** One could claim that this is the very definition of syntax, as opposed to semantics. The term 'syntax' is however used here as the name of the mechanism responsible for word order in humans, making it an empirical question whether that mechanism is distinct or not from (some of the) mechanisms responsible for interpretation in humans.

the clitic/strong distinction such as their generic and expletive (non-referential) uses, focus, etc.

In that world, the modularity problem between the syntactic and semantic properties of clitics doesn't arise: all of the 'semantic' properties under discussion turn out to live inside the syntax module.

Does that mean that all of what we think of as semantics lives inside syntax? It turns out that 'semantics' splits into two, along traditional lines. On one side we find semantic properties that are recurrently relevant to word order generalisations – those largely correspond to formal, compositional semantics (and involve notions such as animacy, tense, quantification, specificity, modality, etc). On the other side, a large amount of semantic distinctions are never relevant to syntactic generalisations – those correspond to what is sometimes called lexical (or conceptual) semantics (and involve notions such as tables, carburettors, compassion or chickpeas). The historical change is that formal, structural, semantics notions have been gradually absorbed by syntax. Whereas conceptual semantics notions stayed out.

## 4 Phonology: Rhythmic Versus Melodic

What about the correlation of phonological word-stress with animacy, coordination, movement, etc? That looks like a deeply phonological property working hand in hand with non-phonological properties.

Let's start by noticing that the phonologically relevant properties of clitics are always about "structural" phonology, never about melodic phonology: they are always about stress (relative prominence of different chunks) and maybe syllabification (if clitics are always monosyllabic). There is no universal about the fricative, or labial, or nasal properties of clitics. The phonological properties relevant to clitics are also well-known to regularly interact with syntax: there are many generalisations about syntactic domains affecting stress assignment (or syllabification). On the other hand, the melodic properties of phonology, which are irrelevant to clitics, also never interact with syntax – there are famously no generalisations linking syntactic behaviour to being a fricative or labial, or nasal (Zwicky, Pullum 1986). There is thus an interesting correlation: phonological properties that are relevant to clitics are also relevant to syntax, those that are not relevant to clitics are also not relevant to syntax. Why? Why is only the more 'syntax-interacting side of phonology' relevant to clitics, and what does it mean that phonology has a more 'syntax-interacting', structural, side?

This empirical picture is very similar to the semantic picture: just like the naive notion of semantics empirically splits into two parts, a more structural part (formal, compositional semantics) deeply

intertwined with syntax, and a more contentive non-structural side which is separate from syntax (lexical, or conceptual, semantics) – so does phonology divide into two parts, a structural side deeply intertwined with syntax, and a contentive (melodic) side, independent of syntax. The cross-modular generalisation about clitics suggests an important strengthening of this formulation: 'deeply intertwined' in fact means 'inside the syntactic module': just like the structural side of semantics turned out to be an integral part of syntax, the structural, rhythmic, side of phonology is in fact part of core syntax. If that is true, the modularity puzzle disappears on the phonological side too: the 'phonological' properties of clitics co-varying with syntax are in fact syntactic properties of clitics.

Since stress is part of the 'structural' side of phonology, this translates into a different way of approaching the relationship between syntactic structure and stress. Just like 'definiteness' or 'tense' have grown to be *bona fide* syntactic entities, the generalisation about clitics suggests that entities such as (word) stress should also be viewed as *bona fide* syntactic objects. Not in the traditional derivative way: traditionally the link between syntax and e.g. stress would be interpretational, derivative, calculated (perhaps in part) on the basis of the syntactic structure. Either directly as in eg. Cardinaletti (1993) and Cinque (1993), or indirectly, as in eg. Selkirk (1984) and many after her.[7] The modularity reasoning about clitics suggests going one big step further: just like definiteness or tense are not 'derived' from syntactic structures but rather have their own position within the syntactic functional projections, rhythmic/structural properties of phonology such as stress are also not interpreted or derived from syntax, but rather they have their home inside syntax, in their own positions in the syntactic fseq, perhaps as a wsP – a word-stressPhrase.

Once seen in this light, it becomes conspicuous that the syntactic fseq already has a projection that is closely related to wsP: FocusP. The relevant phonological properties of clitics come close to lackOfFocusP, i.e. *[-focus]*. If that is so, a clitic is a lexeme whose lexical representation lacks the projection wsP (or has a negative value for FocusP, in the relevant sense).

The suggestion is then that either the nominal FocusP or some projection around it host a feature that is *universally* interpreted as word stress in the same way that DefP is *universally* interpreted with the semantics of definiteness.

**7** These derivative approaches to stress suffer from the same modularity problem: they postulate that stress, or prosody more generally, interfaces with syntax. In a modular world, this means being their own module, and thereby reproducing the paradox that both sides of the interface are universally correlated in the generalisations about clitics, while modularity doesn't allow them to be correlated.

## 5 Conclusion

The fact that some semantic and phonological properties of (syntactic) clitics universally correlate with syntactic behaviour indicates that those parts of semantics and of phonology are in fact syntax. This is a lesson that has been gradually incorporated into syntax during the last three decades. In that vein, the behaviour of clitics suggests that the rhythmic side of phonology has its own dedicated functional projections in very much the same way as many formal semantics properties have acquired their own dedicated functional projections.

## Appendix: Syncretism

The core of the reasoning above has remained largely theory neutral, assuming only strong modularity (its conclusions are phrased in terms of a particular theory, that of functional projections, but the reasoning itself is independent of that.) Once a theory of syncretism is adopted, as is the case implicitly in C&S and explicitly in Nanosyntax (eg. Starke 2002; 2009; Caha, De Clercq, Vanden Wyngaerd 2025), it becomes all but unavoidable to grant word stress its own position in the functional sequence (or more generally, to whatever the phonological properties of syntactic clitics are).

Recall that the same-looking pronoun induces word-stress when used as a strong pronoun, but doesn't when used as a clitic. C&S argued that strong pronouns are clitics with two additional layers of functional projections on top of them. Nanosyntax extends this to a principled theory of syncretism: syncretic readings are one and the same base syntactic structure, with additional layers of functional projections present or missing – those layers expressing the differential semantics of the syncretic readings. If that is so, the fact that a pronoun 'loses' its word stress when used as a clitic derives from the fact that it 'loses' its top functional projection(s) when used as a clitic. Word stress must therefore live in those top functional projections.

More generally, both the apparently semantic and the apparently phonological differences between clitic(, weak) and strong pronouns come from those top layers. Which in turn means that *all* phonological-looking behaviour differentiating between clitic and strong pronouns must live in those top-layers of functional projections inside the strong pronouns. Since word-stress is one such behaviour, it follows that word-stress must be represented inside one of those top layers of nominal structure, included in strong pronouns but absent in clitics. Ergo 'wsP'.

## Bibliography

Caha, P.; De Clercq, K.; Vanden Wyngaerd, G. (2025). *Nanosyntax and the Lexicalization Algorithm*. Oxford: Oxford University Press.

Cardinaletti, A. (1993). "The Affrication of [s] in a Central Italian Variety: Syntactic Conditions on a 'Sandhi' Rule". Belletti, A. (ed.), *Syntactic Theory and the Dialects of Italy*. Turin: Rosenberg & Sellier, 99-129.

Cardinaletti, A.; Starke, M. (1999). "The Typology of Structural Deficiency: A Case Study of the Three Classes of Pronouns". Van Riemsdijk, H. (ed.), *Clitics in the Languages of Europe*. Berlin: Mouton de Gruyter, 145-233.

Chomsky, N. (1957). *Syntactic Structures*. The Hague: Mouton.

Cinque, G. (1993). "A Null Theory of Phrase and Compound Stress". *Linguistic Inquiry*, 24(2), 239-98.

Fodor, J.A. (1983). *The Modularity of Mind. An Essay on Faculty Psychology*. Cambridge, MA: MIT Press.

Selkirk, E. (1984). *Phonology and Syntax. The Relation Between Sound and Structure*. Cambridge, MA: MIT Press.

Starke, M. (unpublished). "The Day Syntax Ate Morphology". EGG Summerschool Seminar (Novi Sad, 22 July - 3 August 2002).

Starke, M. (2009). "Nanosyntax: A Short Primer to a New Approach to Language". *Nordlyd*, 36, 1-6.

Zwicky, A.M.; Pullum, G.K. (1986). "The Principle of Phonology-Free Syntax". *Ohio State University Working Papers in Linguistics*, 32, 63-91.

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# Argumenthood and Syntactic Optionality
## The Case of Instruments

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**Abstract** Instruments are peculiar elements that blur the argument/adjunct distinction: they can be semantically obligatory or optional, yet are always syntactically optional. This study replicates Barbu's (2020) cross-linguistic work in Italian to examine whether instruments are perceived as necessary participants at the semantic and syntactic levels, also depending on their semantic obligatoriness. The results confirm that perception varies with semantic obligatoriness and that instruments are often syntactically omitted, even when judged semantically necessary.

**Keywords** Optionality. Instrumental role. Argumenthood. Semantics. Syntax. Psycholinguistics.

**Summary** 1 Introduction. – 2 Obligatory but Optional: When Semantics and Syntax Don't Match. – 3 The *Semantic* and *Syntactic* Experiments. – 4 Discussion. – 5 Conclusions.

## 1 Introduction

Instruments are a fascinating thematic role: they are not easily classified as arguments or adjuncts, as they are semantically required by certain verbs (*require*-verbs) but semantically optional for others (*allow*-verbs) (Koenig et al. 2003; 2008; Rissman 2013; Suozzi et al. 2024). They are also always syntactically optional, regardless of their semantic obligatoriness. Studying this element can therefore provide valuable insights into the argument/adjunct distinction and into the semantic representation of verbs.

In this work, we adapt Barbu's (2020) cross-linguistic study on instruments to the Italian language. Building on her work, we design

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two experiments: one probing Italian speakers' semantic intuitions, and the other examining their syntactic intuitions. The experiments aim to determine whether instruments are perceived as necessary participants at both semantic and syntactic levels, and whether Italian speakers recognize the distinction between *require-* and *allow*-verbs. This paper is structured as follows: Section 2 outlines the main issues concerning instrument behavior and previous studies on this element; Section 3 presents the experiments; Sections 4 and 5 discuss the results and offer a few concluding remarks.

## 2 Obligatory but Optional: When Semantics and Syntax Don't Match

### 2.1 Obligatoriness and Argumenthood: The Case of Instruments

Obligatoriness at the semantic and syntactic levels is a central criterion for determining whether a linguistic element functions as an argument or as an adjunct. This property is rooted in the principle that a verb's semantic structure determines its syntactic behavior (e.g., Gruber 1965; Chomsky 1981, 1986; Grimshaw 1990; Jackendoff 1990; Levin, Rappaport-Hovav 2005; Van Valin 2005).

Although the distinction between arguments and adjuncts may seem intuitive and straightforward, it is actually challenging to delineate, as certain elements resist clear classification. This is especially true for semantically obligatory but syntactically optional arguments, which cause a misalignment between a verb's conceptual structure and its syntactic behavior.

Instruments – the focus of this study – are a case in point. Consider (1): although a cutting instrument is always required semantically, it is always possible to omit the prepositional phrase or the clitic pronoun encoding this participant. Noteworthy, instruments behavior is similar across different languages (Koenig et al. 2003; 2008; Rissman 2013; Barbu 2020).

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| (1) | Gianni | (ci) | taglia | il | pane | (con | un | coltello) |
| | 'Gianni | (with it =) | cuts | the | bread | (with | a | knife)' |

Because of this mismatch between semantic and syntactic obligatoriness, and because traditional semantic and syntactic diagnostics of argumenthood are not conclusive, the status of instruments with respect to the argument/adjunct distinction has long been debated. They have been classified as arguments (Bresnan 1982;

Schütze 1995), secondary complements (e.g., Speas 1990; Cardinaletti 2016; 2019), but – more often – adjuncts (a.o. Dowty 1982; Rissman 2013). They have also been used to support a non-dichotomous, gradual representation of the argument/adjunct distinction (Choi 2010; Rissman et al. 2015) or viewed as semantic arguments but syntactic adjuncts (Barbu, Toivonen 2016; Rissman, Rawlins 2017). However, a clear consensus regarding their nature has yet to be reached.

## 2.2 Instruments Are Not (Always) Semantically Optional

To make the picture even more complex, a survey conducted on a large sample of English verbs (Koenig et al. 2003; 2008) showed that instruments, with respect to semantic obligatoriness, "fall into two categories: they are sometimes semantically required by the meaning of the verb, and they are sometimes not semantically required but merely permitted" (Koenig et al. 2008, 177). The authors further hypothesize that the existence of these two variants is endemic to the instrumental role and thus holds cross-linguistically.

The survey of Koenig et al. (2008) was later replicated on a sample of 762 Italian verbs (Suozzi et al. 2024), and the findings confirmed that the existence of two classes of instruments holds for Italian as well. Specifically, some verbs semantically require the presence of an instrument (*require*-verbs), while other verbs semantically allow, but do not require, the presence of an instrument (*allow*-verbs). Examples of *require*-verbs include *sparare* 'to shoot' and *tagliare* 'to cut', while *colpire* 'to hit' exemplifies the class of *allow*-verbs: one can hit something with a bat, but also by falling on it unintentionally.

The authors propose to classify semantically obligatory instruments as arguments, and semantically optional ones as adjuncts. They also conclude that the difficulty in classifying instruments stems from treating these two distinct classes as a single category.

## 2.3 The starting point: Barbu's (2020) experiments

The study conducted by Barbu (2020) specifically aims to investigate the status of instruments as arguments or adjuncts, considering both (a) semantic and syntactic obligatoriness and (b) the distinction between *require*- and *allow*- verbs. Her goal was to determine whether instruments are perceived as necessary participants at the semantic and syntactic levels, and whether differences emerge between *require*- and *allow*-verbs in this respect. To this purpose, she conducted two experiments, one aimed at "tapping into the speakers' semantic intuitions, and one into their syntactic intuitions" (Barbu 2020, 67).

Her study – replicated in English, Spanish, Turkish, and Romanian – shows that (a) semantically, instruments are perceived as necessary participants more frequently with *require*-verbs than with *allow*- ones, thus confirming the psychological validity of this distinction; and (b) even when instruments are mentioned as necessary participants semantically, they are not realized as necessary elements syntactically, confirming the aforementioned mismatch between the two levels.

She obtained consistent results across all the investigated languages, supporting the cross-linguistic validity of these characteristics of instruments.

## 3 The *Semantic* and *Syntactic* Experiments

Following Barbu (2020), we conducted one semantic and one syntactic experiment to investigate how Italian speakers perceive instruments at both levels. Our research questions (adapted from Barbu 2020) are:

I. Are instruments perceived as necessary participants or not, at the semantic and syntactic levels?
II. Do verbs licensing an instrument encode this participant in the same way that ditransitive verbs encode an indirect object?
III. Do speakers' (semantic and syntactic) intuitions confirm the existence of two verb classes, *require*- and *allow*-verbs? In other words, do verbs licensing an instrument pattern as a unified class, or do they divide into verbs that semantically require versus verbs that allow, but not require, an instrument?

Questions (I) and (II) are closely related: if instruments are perceived as arguments, we expect a high degree of similarity between their encoding and that of indirect objects in ditransitive verbs, either at the semantic or syntactic level, or both.

Finally, Barbu (2020, 66) formulated an additional research question: Does these instrument characteristics hold cross-linguistically? As mentioned above, she conducted her study in four languages, obtaining comparable results. By replicating her study in Italian, our research contributes to addressing this cross-linguistic question as well.

### 3.1 Design and instructions

The semantic experiment is conceived as an *empty box* task. Respondents are presented with a verb in isolation (in the infinitive form), and an empty box below it. They are asked to fill the box with any elements (people, objects or places) that must necessarily be present for the event described by the verb to take place, without any

time or space limits **[fig. 1]**. Since our respondents are naïve speakers with no formal training in linguistics, we provided two examples of possible completions in the general instructions of the experiments. Respondents were also reminded that certain elements, although they may be syntactically omitted, are nevertheless semantically required, and should therefore be listed. General instructions for the semantic experiment, together with their English translation, are reported in Table 1.

**Table 1** General Instructions for the semantic experiment and their English translation

| **General Instructions:**<br>**Quali persone, oggetti o luoghi devono necessariamente essere presenti perché l'evento descritto dal verbo abbia luogo?** |
|---|
| Ad esempio, pensi ad un evento di **divorare**: un evento di **divorare** è completo e può accadere solo se c'è ***qualcuno che divora*** e ***qualcosa da divorare/che viene divorato***.<br>Se manca uno di questi elementi, l'evento non può accadere.<br>Quindi **"qualcuno che divora"** e **"qualcosa che viene divorato"** possono essere le sue risposte.<br>Allo stesso modo, dato un evento di **regalare**, c'è sempre bisogno di ***qualcuno che regala, qualcosa che viene regalato*** e ***qualcuno a cui viene fatto il regalo***. Solo in questo modo l'evento è completo e può accadere.<br>Quindi **"qualcuno che regala"**, **"qualcosa da servire/che viene regalato"** e **"qualcuno a cui il regalo viene fatto"** possono essere le sue risposte.<br>Le chiediamo di pensare attentamente agli elementi necessari per completare gli eventi, e di scriverli tutti. Tenga a mente, mentre scrive gli elementi necessari, che **alcuni** di questi **possono essere lasciati fuori da una frase** (per esempio, si può dire ***Io ho regalato una sciarpa*** senza dire a chi l'ho regalata), **ma nell'evento sono comunque presenti e necessari** (anche se non si dice, è sempre presente qualcuno a cui il regalo viene fatto). Questi elementi **devono essere scritti**. |
| **'Which people, objects, or places must necessarily be present for the event described by the verb to take place?** |
| For example, think of an event of **devouring**: such an event is complete and can occur only if there is ***someone who devours*** and ***something that is being devoured***.<br>If one of these elements is missing, the event cannot take place.<br>Therefore, **"someone who devours"** and **"something that is devoured"** can be your answers.<br>Similarly, in the case of an event of **giving**, there must always be ***someone who gives, something that is given***, and ***someone to whom the gift is made***. Only in this way is the event complete and can actually occur.<br>Therefore, **"someone who gives"**, **"something that is given"** and **"someone to whom the gift is made"** can be your answers.<br>We ask you to think carefully about the elements necessary to complete each event, and to list all of them. Please keep in mind that **some of these elements may be omitted in a sentence** (for example, one can say ***I gave a scarf*** without specifying to whom it was given), **but they are still present and necessary in the event** (even if it is not mentioned, there is always someone to whom the gift is given). **These elements must be written down**.' |

The syntactic experiment is designed as a sentence completion task. Respondents are presented with an incomplete sentence and asked to

complete it with the words necessary to form a meaningful sentence. As in the semantic experiment, we provided two examples of possible completions. General instructions for the syntactic experiment, together with their English translation, are reported in Table 2.

**Table 2** General Instructions for the syntactic experiment and their English translation

| **General Instructions:** |
|---|
| Date queste frasi incomplete, aggiunga **le parole che servono per creare una frase di senso compiuto**.<br>Ad esempio, data la frase **L'uomo ha divorato…,** possibili risposte sono **una pizza** oppure **un panino**, ecc.:<br>(a) L'uomo ha divorato… **una pizza / un panino /…**Allo stesso modo, data la frase **Il portinaio ha regalato…**, possibili risposte sono:<br>(b) Il portinaio ha regalato… **una sciarpa alla vicina/un pallone al bambino/…** |
| 'Given these incomplete sentences, please add **the words necessary to form a complete and meaningful sentence.** For example, given the sentence **The man devoured…**, possible answers are **a pizza** or **a sandwich**, etc.:<br>(a) The man devoured… **a pizza / a sandwich /…**<br>Similarly, given the sentence **The doorman gave…**, possible answers are:<br>(b) The doorman gave… **a scarf to the neighbor / a ball to the child /…**' |

## 3.2 Materials

Both the semantic and the syntactic experiments consists of 64 experimental stimuli, each containing a different verb. The verbs used in the stimuli are the same across the two experiments. Of these, 16 verbs are transitive; 16 are ditransitive; 16 are *require*-verbs; finally, 16 are *allow*-verbs. The expected participants for each verb type are summarized in Table 3.

**Table 3** Summary of the verb types used for the experiment and the participants they require

| Verb type | Example verb | Agent/Subject | Patient/Object | Third participant/Argument | Instrument |
|---|---|---|---|---|---|
| Transitive (16 verbs) | Baciare 'to kiss' | ✓ | ✓ | × | × |
| Ditransitive (16 verbs) | Regalare 'to give' | ✓ | ✓ | ✓ | × |
| Require (16 verbs) | Tagliare 'to cut' | ✓ | ✓ | × | ✓ |
| Allow (16 verbs) | Uccidere 'to kill' | ✓ | ✓ | × | ? |

The original version of the study (Barbu 2020) included 19 verbs for each verb type. Based on existing classifications of Italian verbs, and a pilot study (completed by 58 respondents, 34 for the semantic experiment and 24 for the syntactic one), we modified the verb sample, which – in the final version of the study – contains 16 verbs for each verb type, for a total of 64 verbs. The complete list of verbs is displayed in Figure 1.

| **Transitive** | **Ditransitive** | **Require** | **Allow** |
|---|---|---|---|
| Baciare 'to kiss' | Dare 'to give' | Disegnare 'to draw' | Superare 'to overtake' |
| Leccare 'to lick' | Consegnare 'to deliver' | Spazzare 'to sweep' | Sollevare 'to lift' |
| Annusare 'to sniff' | Vendere 'to sell' | Affettare 'to slice' | Bere 'to drink' |
| Mordere 'to bite' | Inviare 'to send' | Scolpire 'to sculpt' | Difendere 'to defend' |
| Afferrare 'to grab' | Portare 'to bring' | Dipingere 'to paint' | Pulire 'to clean' |
| Tirare 'to pull' | Raccontare 'to tell' | Scavare 'to dig' | Uccidere 'to kill' |
| Pizzicare 'to pinch' | Chiedere 'to ask' | Scrivere 'to write' | Affascinare 'to charm' |
| Abbracciare 'to hug' | Mostrare 'to show' | Tagliare 'to cut' | Aprire 'to open' |
| Calciare 'to kick' | Dire 'to say' (from transitive to ditransitive) | Tritare 'to chop' | Rompere 'to break' |
| Incontrare 'to meet' | **Regalare 'to give'** | Dissezionare 'to dissect' | Raccogliere 'to pick up' |
| Possedere 'to possess' | **Rubare 'to steal'** | Lavare 'to wash' (from *allow* to *require*) | Calcolare 'to calculate' |
| Credere 'to believe' | **Estrarre 'to extract'** | **Tosare 'to shear'** | Guardare 'to look at' |
| Rovesciare 'to spill' | **Togliere 'to remove'** | **Condire 'to season'** | Mangiare 'to eat' |
| Seguire 'to chase' | **Spedire 'to ship'** | **Cuocere 'to cook'** | Ispezionare 'to inspect' |
| **Picchiare 'to beat'** | **Mettere 'to put'** | **Arrostire 'to roast'** | Colpire 'to hit' (from *require* to *allow*) |
| **Offendere 'to insult'** | **Dedicare 'to dedicate'** | **Intagliare 'to carve'** | **Curare 'to cure'** |

**Figure 1** Verbs used in the semantic and syntactic experiments; new verbs are **bolded**, reassigned verbs are underlined

In the semantic experiment, each verb was presented in isolation. An example item is provided in Figure 2.[1]

**1** Since no additional context was provided, we could not control for the polysemy of the verbs. In particular, two verbs that could have elicited different responses due to their multiple senses were *seguire* 'to chase' but also 'to follow someone on social networks' and *colpire* 'to hit' but also 'to impress/affect'. Crucially, both verbs belong to the same class (i.e., Transitive for *seguire*, and Allow for *colpire*) regardless of their interpretation. Furthermore, none of our respondents interpreted these verbs in a sense different from the one we intended.

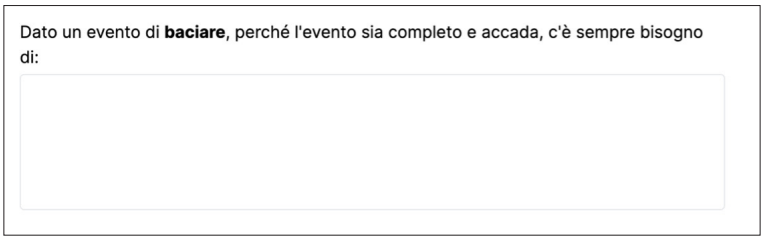



**Figure 2** Example item for the semantic task. English translation: 'Given an event of **kissing**, for the event to be complete and to take place, there must always be:'

In the syntactic experiment, each verb was inserted into an incomplete sentence consisting of an agent/subject and the verb. To select a subject for each verb, we examined which nouns most frequently occur with that verb in the ItTenTen20 corpus (Jakubíček 2013) (e.g., *artigiano~scolpire* 'craftsman~sculpt', *corriere~consegnare* 'courier~deliver', etc.). Highly associated subjects (i.e., nouns that most frequently co-occur as subject of our experimental verbs) were chosen to construct sentences that were as natural as possible. An example item is shown in Figure 3.

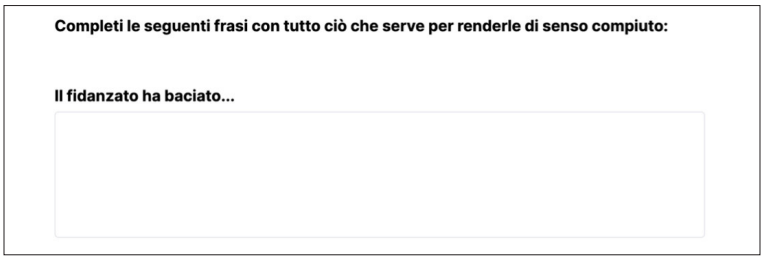



**Figure 3** Example item for the syntactic task. English translation: 'Complete the following sentences by adding everything that is needed to make them complete and meaningful. **The boyfriend kissed...**'

## 3.3 Participants and Procedure

56 Italian adult speakers (29F, 26M, 1NB; M(age) = 34.71, SD(age) = 11.02) took part in the semantic experiment. Of these, 44.64% held a high school diploma, 21.43% a bachelor's degree, and 33.93% a master's degree. All participants reported Italian as their L1.

As for the syntactic experiment, the sample consists of 61 Italian adult speakers (26F, 33M, 2NB; M(age) = 33.88, SD(age) = 10.13). Of these, 1.64% held a middle school diploma, 40.98% a high school diploma, 26.23% a bachelor's degree, 27.87% a master's degree and 3.28 a PhD. All participants reported Italian as their L1.

The experiment was conducted online, using Gorilla Experiment Builder (Anwyl-Irvine et al 2018) to create and host both experiments.[2] Participants were recruited via Prolific, an online research platform that facilitates participant recruitment and management for online studies.[3] There was no time limit for completing the task, and participants received monetary compensation in accordance with Prolific's policies.

Before starting the experiment, each prospective participant read and accepted an informed consent, in compliance with the regulation (EU) 2016/679. After having accepted the consent form, they completed a demographic questionnaire, through which we collected information on their age, gender, education level, and first language.

For both experiments, participants were automatically redirected to one of the four experimental lists after completing the demographic questionnaire. Each list contained 16 items balanced for verb type, presented in a randomized order. Each participant saw only 16 items to prevent the task from becoming too long or demanding. Each experimental session lasted approximately 20 minutes.

Each list of the semantic experiment was completed by 14 participants. In the syntactic experiment, three lists were completed by 15 participants each, while one list was completed by 16 participants.

## 3.4 Results

### 3.4.1 Necessary participants

We started by examining how instrument verbs (*require-* and *allow-*) behave relative to ditransitive and transitive verbs. Ditransitive verbs are expected to require, and therefore elicit, a higher number of participants, while transitive verbs are expected to elicit the fewest. The behavior of *require-* and *allow-* verbs depends on whether instruments are mentioned as necessary semantic participants (in the semantic experiment) and/or as arguments (in the syntactic experiment).

The distribution of realized semantic participants/arguments by verb type and experiment is displayed in Figure 4. It should be noted that the maximum expected number of necessary participants is 2 (expected for ditransitive and possibly *require*-verbs, **[fig. 4]**. Indeed, since in the syntactic task the subject was already provided in the

**2** https://www.gorilla.sc/.

**3** https://www.prolific.com/.

stimuli, we followed Barbu (2020) in excluding the agent from the computation of produced arguments in this task.[4]

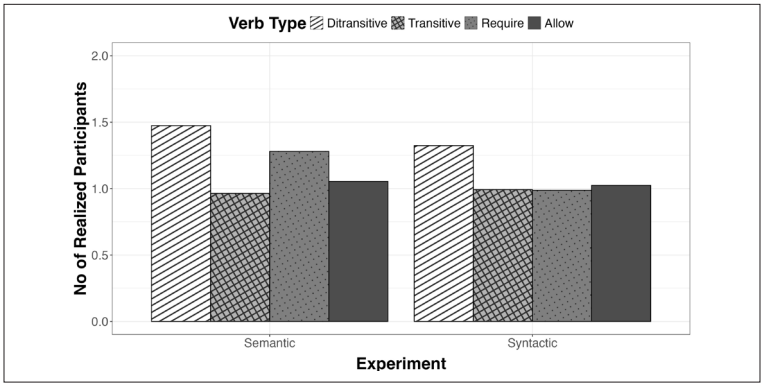



**Figure 4** Distribution of necessary participants mentioned, by verb type and experiment

Overall, a similar number of necessary participants was produced in the two experiments (semantic: M = 1.18, SD = 0.48; syntactic: M = 1.08, SD = 0.34). Ditransitive verbs consistently elicited the highest number of participants (semantic: M = 1.47, SD = 0.58; syntactic: M = 1.32, SD = 0.49). The number of participants mentioned for transitive verbs was also consistent across the two experiments (semantic: M = 0.96, SD = 0.19; syntactic: M = 0.99, SD = 0.09), although slightly higher in the syntactic experiment, and is the lowest among all types.

Concerning instrument verbs, fewer participants were produced for *allow*-verbs in the syntactic experiment (semantic: M = 1.05, SD = 0.34; syntactic: M = 1.02, SD = 0.25). This decrease was more pronounced for *require*-verbs, which elicited a mean of 1.28 participants in the semantic experiment (SD = 0.55) but only 0.98 in the syntactic experiment (SD = 0.26). In the semantic experiment, ditransitive and *require*-verbs behave more similar to each other in terms of the number of participants produced, whereas in the syntactic experiment, *require*-verbs patterned with transitive and *allow*-verbs, eliciting a lower number of participants.

To further explore the behavior of each verb type across the two experiments, we analyzed the data using a linear mixed-effects model. The analyses were conducted in the R computing environment

**4** For example, for the verb *abbracciare* 'to hug', the necessary semantic participants mentioned were *qualcuno che abbraccia* and *qualcuno che è abbracciato* 'someone who hugs' and 'someone who is hugged'. We only counted the patient as a produced argument.

(R Core Team 2025), employing the *lme4* (Bates et al. 2015) and *emmeans* (Lenth 2023) packages.

Experiment type (semantic vs. syntactic) and verb type (ditransitive, transitive, require, and allow) were included as fixed effects, while participants and items were modeled as random effects. The dependent variable was the number of semantic participants (arguments) produced. The model, therefore, predicts the number of participants as a function of the two fixed effects and their interaction. We also computed the estimated marginal means **[fig. 5]** and conducted *post hoc* pairwise comparisons with Tukey correction.

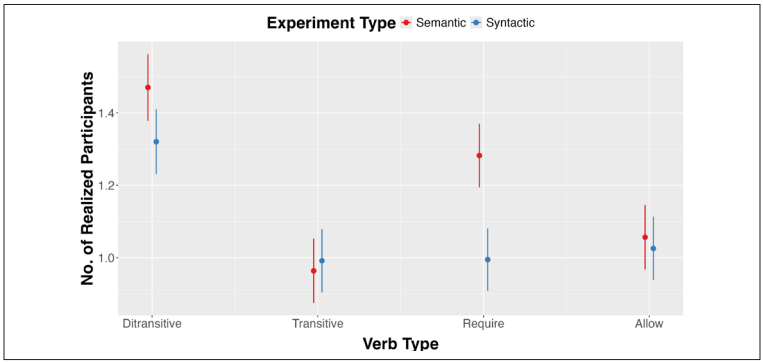



**Figure 5** Estimated Marginal Means of number of participants, for all verb types and both experiments

This analysis revealed a significant interaction between verb type and experiment ($p < 0.001$), indicating that the number of realized participants depends strongly on both factors. Pairwise comparisons further clarify these patterns.

Comparing verb types, ditransitive verbs elicited a significantly higher number of participants than all other verb types in both the semantic (all $p_s < 0.001$) and the syntactic experiment (all $p_s < 0.001$). Transitive verbs, in contrast, elicited significantly fewer participants than all other verb types in the semantic experiment (all $p_s < 0.001$). However, in the syntactic experiment, transitive verbs differed significantly only from ditransitive verbs ($p < 0.001$) and not from *require-* ($p = 1.00$) or *allow*-verbs ($p = 0.99$).

*Require*-verbs elicited significantly more participants than *allow*-verbs only in the semantic task ($p = 0.005$), whereas the two verb types were comparable in the syntactic task ($p = 0.99$). Finally, ditransitive verbs elicited fewer participants in the syntactic than in the semantic experiment ($p = 0.005$). The decrease is even larger decrease for *require*-verbs ($p < 0.001$). No significant differences were observed for transitive or allow verbs across experiments ($p = 0.99$).

In summary, *require*- and *allow*-verbs elicit more participants in the semantic task – particularly *require* verbs, although they elicit less participants than ditransitive ones – positioning themselves between ditransitive and transitive verbs. Transitive verbs elicit fewer participants in both tasks. In the syntactic task, the difference between transitive and instrument verbs is minimal, while the difference between them and ditransitive increases.

### 3.4.2 Mentions of instruments

After having overviewed the behavior of *require*- and *allow*-verbs relative to ditransitive and transitive verbs, we can now focus exclusively on the mention of instruments. Figure 6 shows the distribution of instruments mentions in *require*- and *allow*-verbs by experiment.

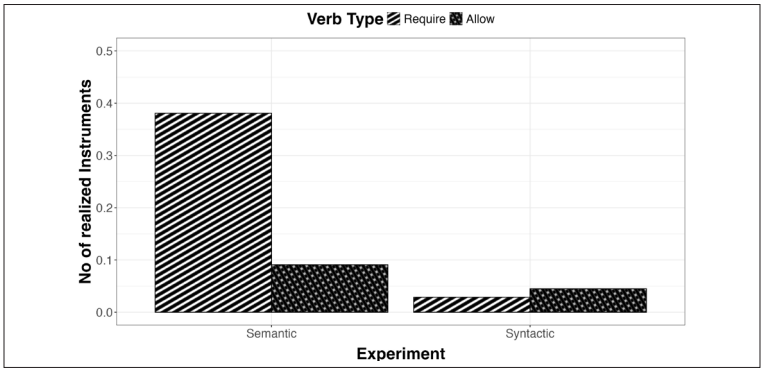



**Figure 6** Distribution (%) of Instruments mentioned by experiment, for require and allow verbs

In the semantic experiment, *require*-verbs elicited 36.62% of responses containing an Instrument, whereas *allow*-verbs elicited only 9.22%. In the syntactic experiment, both *require* and *allow* verbs elicited fewer instruments than in the semantic experiment; notably, *require* verbs elicited even fewer instruments than *allow* verbs (4.23% vs. 5.00%).

To examine whether verb and experiment type significantly affect the realization of instruments, we used a generalized linear mixed-effects model fitted by maximum likelihood via Laplace approximation. Verb type and experiment type were treated as predictors, and the number of instruments produced was the dependent variable. We then calculated the estimated marginal means to perform pairwise comparisons with Tukey correction. All analyses were conducted in R

(R Core Team 2025), using the *lme4* (Bates et al. 2015) and *emmeans* (Lenth 2023) packages.

The analysis revealed a significant interaction between verb and experiment type ($p < 0.001$), indicating that the number of instruments produced depends strongly on both factors. Pairwise comparisons showed that, in the semantic experiment, *require*-verbs elicited significantly more instruments than in the syntactic experiment ($p < 0.001$) and more instruments than *allow*- verbs in both experiments ($p < 0.001$). In contrast, *allow*-verbs in the semantic experiment did not elicit significantly more instruments than *require*-verbs in the syntactic experiment ($p = 0.69$). Finally, *allow*-verbs did not differ significantly between the semantic and syntactic experiments ($p = 0.77$), and *require*- and *allow*-verbs did not differ in the syntactic experiment ($p = 0.99$).

In summary, *require*-verbs elicited significantly more instruments than *allow*-verbs in the semantic experiment, as well as more instruments than both verb types in the syntactic experiment, where instruments were rarely produced.

Finally, we compared the frequency of instrument mentions in instrument verbs with that of third arguments/indirect objects in ditransitive verbs and patients/direct objects in transitive verbs. The corresponding percentages for each experiment type are reported in Table 4.

**Table 4** Mentions (%) of instruments and third arguments/indirect objects by verb and experiment type.

| Verb Type | Semantic Experiment | Syntactic Experiment |
|---|---|---|
| Require | 38.97% | 4.12% |
| Allow | 9.21% | 5.00% |
| Ditransitive | 53.46% | 30.51% |
| Transitive | 96.24% | 99.53% |

In the semantic experiment, *require*-verbs pattern more closely with ditransitive verbs than with *allow*-verbs, although instruments for *require*-verbs are produced slightly less frequently than third participants for ditransitive verbs. In the syntactic experiment, however, both *require*- and *allow*- verbs elicit far fewer instruments than ditransitive verbs with indirect objects. By contrast, patients and direct objects – prototypical semantic and syntactic arguments *par excellence* – are mentioned with frequencies close to 100% in both experiments.

## 4 Discussion

The results of our experiments provide answers to the research questions (I-III) outlined in Section 3. First, at the semantic level, instruments are perceived as necessary participants of *require*-verbs, whereas they are rarely mentioned in the case of *allow*-verbs. At the syntactic level, by contrast, they are not mentioned as necessary participants for either class. This finding answers our first research question (*Are instruments perceived as necessary participants at the semantic and syntactic levels?*) as well as our third one (*Do speakers' (semantic and syntactic) intuitions confirm the existence of two verb classes, require- and allow-verbs?).* Instrument verbs, indeed, do not behave as a unified class, particularly at the semantic level. At the syntactic level, on the other hand, the two classes are indistinguishable. These results also confirm the mismatch between the semantic and syntactic behavior of instruments, highlighting that they tend to be syntactically omitted even when they are perceived as necessary participants semantically.

With regard to the second research question, namely *Do verbs licensing an instrument encode this participant in the same way that ditransitive verbs encode an indirect object?*, we observed a similar behavior between ditransitive and require-verbs in the semantic experiment, although instruments were mentioned less frequently than third participants for ditransitive verbs.

This difference also represents the main divergence between our findings and those reported by Barbu (2020), which are otherwise highly similar. In her study, instruments were mentioned as semantically necessary participants of *require*-verbs more frequently than third participants for ditransitive verbs, and this pattern held consistently across all four languages investigated. This discrepancy could be due to the specific verbs we selected for Italian, or to our sample of participants.

Finally, Barbu (2020) interprets her results as evidence that instruments function as semantic arguments of *require*-verbs but not *allow*-verbs, while acting as syntactic adjuncts in both classes. More recently, accounts for Italian have linked instrument omission to their semantic recoverability, treating it as a case of argument omission (Suozzi et al. 2024). Future work will examine the *require*- and *allow*-verbs that elicited instrument production in both experiments, to assess whether their production patterns align with these accounts.

## 5 Conclusions

In this study, we replicated Barbu's (2020) semantic and syntactic experiments to investigate the status of semantically obligatory and

semantically optional instruments as arguments or adjuncts. Overall, our results closely replicate those of Barbu (2020). Specifically, our findings confirm the distinction between *require-* and *allow*-verbs, with the former eliciting a higher number of instruments than the latter in the semantic task. Moreover, the misalignment between semantic and syntactic behavior is maintained: instruments occur significantly more frequently in the semantic experiment but are rarely produced in the syntactic one. In conclusion, the debated status of instruments with respect to the argument/adjunct distinction is also observed in Italian and is tightly linked to the existence of the two verb classes, *require-* and *allow-*, as well as to the mismatch between instruments' semantic and syntactic behavior.

## Bibliography

Anwyl-Irvine, A.L.; Massonnié, J.; Flitton, A.; Kirkham, N.; Evershed, J.K. (2020). "Gorilla in our Midst: an Online Behavioural Experiment Builder". *Behavior Research Methods*, 52, 388-407. https://doi.org/10.3758/s13428-019-01237-x.

Barbu, R.M.; Toivonen, I. (2016). "Arguments and Adjuncts: at the Syntax-Semantics Interface". *Florida Linguistics Papers (Proceedings of the Florida Linguistics Yearly Meeting)*, 3, 13-25.

Barbu, R.M. (2020). *On the Psycholinguistics of Argumenthood* [PhD Dissertation]. Ottawa: Carleton University.

Bates, D. et al. (2015). *Fitting Linear Mixed-Effects Models Using Lme4* (Version 1.1-35) [R package]. *Journal of Statistical Software,* 67(1), 1-48. https://doi.org/10.18637/jss.v067.i01.

Cardinaletti, A. (2016). "Sui Limiti dei Pronomi Clitici: Inventario ed Estrazione". Ledgeway, A.; Cennamo, M.; Mensching, G. (eds), *Actes du XXVIIe Congrès international de linguistique et de philologie romanes. Section 4: Syntaxe.* Nancy: ATILF/SLR, 49-62.

Cardinaletti, A. (2019). "Cliticization as Extraction: the Big DP Hypothesis Revisited". *Revista da Associação Portuguesa De Linguística*, 5, 1-16. https://doi.org/10.26334/2183-9077/rapln5ano2019a1.

Choi, H.-W. (2010). "The Distinction of Arguments and Adjuncts as a Gradient Notion". *Language and Information*, 14(1), 26-48.

Chomsky, N. (1981). *Lectures on Government and Binding*. Dordrecht: Foris.

Chomsky, N. (1986). *Knowledge of Language*. New York: Praeger.

Dowty, D.R. (1982). "Grammatical Relations and Montague Grammar". Jacobson, P.; Pullum, G.K. (eds), *The Nature of Syntactic Representations*. Dordrecht: Reidel, 79-130. https://doi.org/10.1007/978-94-009-7707-5_4.

Grimshaw, J. (1990). *Argument Structure*. Cambridge: MIT Press.

Gruber, J.S. (1965). *Studies in Lexical Relations* [PhD Dissertation]. Boston: Massachusetts Institute of Technology.

Jackendoff, R. (1990). *Semantic Structures*. Cambridge: MIT Press.

Jakubíček, M. et al. (2013). "The Tenten Corpus Family". *7th International Corpus Linguistics Conference*, 125-7.

Koenig, J.-P.; Mauner, G.; Bienvenue, B. (2003). "Arguments for Adjuncts". *Cognition*, 89, 67-103. https://doi.org/10.1016/s0010-0277(03)00082-9.

Koenig, J.-P. et al. (2008). "What With? The Anatomy of a (Proto)-Role". *Journal of Semantics*, 25(2), 175-220. https://doi.org/10.1093/jos/ffm013.

Lenth, R.V. (2024). *Emmeans: Estimated Marginal Means, aka Least-Squares Means* (Version 1.10.3) [R package]. https://cran.r-project.org/package=emmeans.

Levin, B.; Rappaport-Hovav, M. (2005). *Argument Realization*. Cambridge: Cambridge University Press.

R Core Team. (2025). *R: A Language and Environment for Statistical Computing (Version 4.4.2)* [Computer software]. R Foundation for Statistical Computing. https://www.R-project.org/.

Rissman, L. (2013). *Event Participant Representations and the Instrumental Role: A Cross-Linguistic Study* [PhD Dissertation]. Baltimore: Johns Hopkins University.

Rissman, L.; Rawlins, K.; Landau, B. (2015). "Using Instruments to Understand Argument Structure: Evidence for Gradient Representation". *Cognition*, 142, 266-90. https://doi.org/10.1016/j.cognition.2015.05.015.

Rissman, L.; Rawlins, K. (2017). "Ingredients of Instrumental Meaning". *Journal of Semantics*, 34(3), 507-37. https://doi.org/10.1093/jos/ffx003.

Schütze, C.T. (1995). "PP Attachment and Argumenthood". Schütze, C.; Ganger, J.; Broihier, K. (eds), *Papers on language processing and acquisition*. Cambridge: MIT Press, 95-151.

Suozzi, A.; Cardinaletti, A.; Lebani, G.E. (2024). "On the Argument Status of Instruments in Italian". Batinić Angster, M.; Angster, M. (eds), *The Verbal Kaleidoscope: Perspectives on the Syntax and Semantics of Verbs*. Zadar: University of Zadar, 261-301. https://doi.org/10.15291/9789533314884.10.

Van Valin, R.D. Jr. (2005). Exploring the Syntax-Semantics Interface. Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511610578.

# Sociolinguistics and Language Variation

**Language Optionality and Variation**
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# Successive Cyclic Movement and Subject Positions
## A Contrastive Study of Embedded Subjects in Italian and Spanish

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**Abstract** This paper investigates subject distribution in biclausal wh-questions in Italian and Spanish through a crosslinguistic web-based acceptability judgement experiment. We tested the effects of successive cyclic movement, subject position, and verb type in the two languages. The results show that long-distance wh-movement triggers subject inversion in the embedded clause in both languages, with postverbal subjects rated more acceptable than preverbal ones. In short movement contexts, when no wh-extraction takes place from the embedded clause, Spanish allows both SV and VS, while Italian favours SV. These results provide experimental evidence for the syntactic effects of successive cyclic movement and show that the wh-verb adjacency requirement banning subject interpolation is structural rather than merely superficial.

**Keywords** Subject inversion. Subject position. Wh-movement. Acceptability judgement experiments. Italian. Spanish.

**Summary** 1 Introduction: Subject Inversion in Wh-Questions. – 2 The Experiment: Methodology. – 3 Experimental Results. – 4 Discussion: Assessing the Experimental Hypotheses. – 5 Permissive and Restrictive Romance Languages: Spanish vs Italian. – 6 Conclusions.

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## 1 Introduction: Subject Inversion in Wh-Questions

Subject position has been a central issue in generative syntax since early work on the subject's movement from its thematic position within VP to higher functional projections. In Romance languages, however, the alternation between preverbal and postverbal subjects is closely linked to information structure, with postverbal subjects typically associated with focus (e.g., Belletti 2004; Bentley, Cruschina 2018; Cruschina 2022). Within the Cartographic framework, preverbal subjects occupy higher discourse-related positions, while postverbal subjects remain in lower vP/IP positions.[1] This paper examines a syntactically determined instance of subject placement, namely obligatory subject inversion in wh-questions (cf. Rizzi 1996; 2001; Cardinaletti 2007; Goodall 2010). Focusing on long-distance wh-movement in Italian and Spanish, and building on earlier observations by Calabrese (1982) and Torrego (1983; 1984), we investigate whether subject inversion extends to embedded clauses through two parallel acceptability judgement experiments.

Both in Italian and in Spanish direct wh-questions with bare wh-elements, no constituent can intervene between the wh-phrase and the main verb; so, when it is not null or left dislocated, the matrix subject typically occurs postverbally. See Cardinaletti (2007; 2021) for Italian. Since Calabrese (1982) and Torrego (1983; 1984), it has been observed that this type of subject inversion triggered by wh-movement occurs not only in the matrix clause of wh-questions, with short movement, but also in embedded clauses with long-distance wh-movement, that is, when a wh-phrase extracted from an embedded clause transits through the embedded CP and moves successive cyclically towards its final landing site. With wh-movement from an embedded clause, the embedded subject must be postverbal, as shown in (1b) for Italian and (2b) for Spanish:

(1) Italian (Calabrese 1982, 39-40)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| a. | ?? | Che cosa | gli | hai | detto | che | Carlo | ha | fatto? |
| | | what thing | him.DAT | have.2SG | said | that | Carlo | has | done |
| b. | | Che cosa | gli | hai | detto | che | ha | fatto | Carlo? |
| | | what thing | him.DAT | have.2SG | said | that | has | done | Carlo |

'What did you say Carlo has done?'

**1** See Cardinaletti 2004; Rizzi 2005; Rizzi, Shlonsky 2006; Bocci 2013, and Rizzi, Bocci 2017.

(2) Spanish (Torrego 1984, 109)

a. * ¿Qué pensaba Juan que Pedro le había
what thought John that Peter him.DAT had.3SG
dicho que la revista había publicado?
told that the journal had.3SG published

b. ¿Qué pensaba Juan que le había dicho
what thought John that him.DAT had.3SG told
Pedro que había publicado la revista [*t*] ?
Peter that had.3SG published the journal
'What did John think that Peter had told him that the journal had published?'

Judgements about subject positions in embedded contexts, however, are not as clear-cut as for matrix subjects. We therefore decided to conduct two acceptability judgement experiments, one for Spanish and one for Italian, to investigate the acceptability of preverbal and postverbal subjects in different types of biclausal wh-questions.

Building on Calabrese (1982) and Torrego (1983), we hypothesize that in long-distance wh-questions, postverbal subjects in the embedded clause should be rated as more acceptable than preverbal subjects (Hypothesis 1, H1) in both Italian (H1a) and Spanish (H1b). We also investigated subject distribution in biclausal wh-questions where the wh-element is extracted directly from the matrix clause. Since no wh-copy/trace occurs in the embedded CP, nothing is expected to trigger inversion of the embedded subject. Even so, a Spanish-Italian contrast is predicted by Leonetti (2017), whose account of the syntax-information-structure mapping is detailed in Section 5: Spanish allows preverbal and postverbal subjects interchangeably, whereas Italian – where inversion must be licensed by a trigger, either a wh-element or focus on the subject (see Belletti 2004) – prefers the unmarked SV order. The same patterns are expected in the complement clauses of short-movement wh-questions, where no wh-element is extracted (Hypothesis 2, H2): in Spanish the embedded subject should be acceptable both preverbally and postverbally (H2b), while in Italian it should be preferred preverbally (H2a). This pattern was indeed observed for Italian by Bocci and Cruschina (2018), through a forced-choice task.

## 2 The Experiment: Methodology

We conducted a cross-linguistic acceptability judgement experiment based on written stimuli, designed to test the acceptability of biclausal wh-questions featuring preverbal or postverbal subjects in the embedded clause in both Italian and (European) Spanish. Target

questions were embedded in short fictional scenarios that provided a plausible discourse context. Native speakers of Italian and Spanish were asked to rate the acceptability of the target questions (presented in blue) on a 7-point Likert scale (-3 = completely unnatural, +3 = perfectly natural).

## 2.1 Design and Experimental Materials

The experiment crossed four binary factors: (i) *wh-dependency* type (*short extraction from matrix clause* vs. *long extraction from embedded clause*), (ii) embedded *subject position* (*preverbal* vs. *postverbal*), (iii) *verb type* in the embedded clause (*transitive* vs. *intransitive*), and (iv) *language* (*Italian* vs. *Spanish*). The factors *wh-dependency* and *subject position* were manipulated within items, whereas *verb type* was manipulated between items.

The combination of the first three linguistic factors resulted in sixteen experimental conditions (8 per language). Examples of the experimental items are shown here below, with an embedded transitive verb in Italian (cf. 3-4) and with an intransitive verb in Spanish (cf. 5-6):

(3) CONTEXT: 'Francesco is the new philosophy teacher at a high school in Catania. On his first day at work, a colleague tells him about an unpleasant incident that has not been addressed. Feeling puzzled, Francesco asks:'

a. A chi hai detto che gli studenti ti (short/SV)
to who have.2SG said that the students you
hanno insultato?
have.3PL insulted

b. A chi hai detto che ti hanno insultato (short/VS)
to who have.2SG said that you have.3PL insulted
gli studenti?
the students
'Who did you tell that the students insulted you?'

(4) CONTEXT: as in (3).

a. Chi hai detto che gli studenti hanno (long/SV)
who have.2SG said that the students have.3PL
insultato?
insulted

b. Chi hai detto che hanno insultato (long/VS)
who have.2SG said that have.3PL insulted
gli studenti?
the students
'Who did you say the students insulted?'

(5) CONTEXT: 'Pablo's marriage has come to an end. The arguments at home have now given way to disputes in court. Pablo is talking with a friend, who, to avoid misunderstandings and plan the next steps, asks:'

a. ¿A quién han dicho que el abogado te ha mentido? (short/SV)
to who have.3PL said that the lawyer you have.3SG lied

b. ¿A quién han dicho que te ha mentido el abogado? (short/VS)
to who have.3PL said that you have.3SG lied the lawyer
'Who did they tell that the lawyer lied to you?'

(6) CONTEXT: as in (5)

a. ¿A quién te han dicho que el abogado ha mentido? (long/SV)
to who you have.3PL said that the lawyer have.3SG lied

b. ¿A quién te han dicho que ha mentido el abogado? (long/VS)
to who you have.3PL said that have.3SG lied the lawyer
'Who did they tell you that the lawyer lied to?'

The same introductory scenario was used for all variants of an item. The matrix verb was always 'say' (Italian *dire*, Spanish *decir*). With transitive embedded verbs, the wh-phrase was the matrix indirect argument in short extraction and the embedded direct object in long extraction; with intransitive verbs, it was always an indirect complement, of either the matrix or the embedded verb.[2] To make the extraction site unambiguous, a clitic pronoun saturated the relevant argument position in the matrix or embedded clause. Crucially, apart from the subject in the relevant conditions, no constituent (argument or adjunct) followed the embedded verb, preventing any interaction between subject inversion and postverbal constituents. This control was particularly relevant for Italian, where postverbal constituents, especially direct objects, are known to heavily constrain subject inversion (see Belletti 2001; 2004; Cardinaletti 2001; 2007, a.o.).

**2** In both languages, inversion in wh-questions depends on the type of wh-phrase: non-D-linked arguments strongly favour it, while some adjuncts ('why', 'how come') and D-linked phrases more readily allow non-inverted orders (Torrego 1983; 1984; Suñer 1994; Rizzi 1997; 2001; Goodall 2010). We thus restricted our materials to argument wh-phrases, leaving other types for future work.

Furthermore, the scenarios introducing the target questions were constructed so as not to favour a topic interpretation of the embedded subject, thus preventing participants from interpreting postverbal subjects as right-dislocated topics.[3] Indeed, under appropriate discourse conditions, topical subjects can undergo right dislocation, overriding the syntactic constraints that normally govern subject inversion (Belletti 2004; Cardinaletti 2001; 2007). For the same reason, in the written stimuli, postverbal subjects were never preceded by a comma separating them from the immediately preceding verb. Right-dislocated constituents typically form independent intonational phrases (Bocci 2013; Bocci, Avesani 2015), and a comma is commonly used in writing to signal their prosodic phrasing as independent prosodic constituents. The materials tested in Spanish and Italian were designed to be as similar as possible, differing only in minor adjustments required to ensure naturalness in each language version.

Following this design, we created 24 items for each language: 12 with a transitive verb in the embedded clause and 12 with an intransitive verb. Each item was manipulated for embedded subject position and type of wh-movement, resulting in four distinct variants and yielding a total of 96 experimental stimuli per language. The 96 stimuli were distributed across four lists following a Latin Square design. Each list included twenty-four experimental trials, to which we added 48 filler trials. Like the experimental items, fillers were embedded in short contexts. The target sentences in the filler trials were declarative sentences in which the surface position of the focused constituent varied. As a result, each list contained 72 trials in total. On average, the experiment lasted approximately twenty minutes.

## 2.2 Procedure and Recruitment

The experiment was created and hosted on PCIbex (Zehr, Schwarz 2022). Each session began with a brief description of the study and the task, followed by a consent form. Participants then completed a short questionnaire on their linguistic background. In particular, we asked whether they were native speakers of Italian/Spanish, whether they were living in Spain/Italy at the time, and whether they suffered from any reading, speech, or hearing disorders. After this, they received a more detailed explanation of the task and took

**3** Following Cardinaletti (2007; 2018; 2021; 2024), we assume that, in the contexts under consideration, postverbal subjects are not right-dislocated, but remain in their first-merge position, namely, in Spec-vP.

part in a short familiarization phase consisting of three practice trials, analogous to the filler items. Then, the experimental phrase started and each participant was randomly assigned to a list and presented with 72 trials. The experiment ended with a debriefing page illustrating the hypothesis of the experiment.

The cross-linguistic experiment involved two groups of native speakers, Italian and Spanish, who were tested with equivalent materials and procedures. The only difference concerned the recruitment method: Spanish participants were contacted through social media and took part voluntarily, whereas Italian participants were recruited on Prolific.com and received a £3 compensation for their participation.

## 3 Experimental Results

In total, we collected responses from 214 participants tested in their native language. Two Italian participants who reported that Italian was not their native language were excluded, leaving 110 Italian and 102 Spanish participants (N = 212), all native speakers residing in the relevant country and reporting no language-related difficulties.

Given the nature of our hypotheses, which concern both shared and language-specific effects, we adopted a single cross-linguistic model. Modelling the two languages jointly is essential because the predicted cross-linguistic contrasts (H2) reside in the interactions: it allows us to test directly whether, under short extraction, subject position has an effect in Italian (H2a) but not in Spanish (H2b) – a comparison difficult to assess if each language were analyzed separately, since the Spanish hypothesis would coincide with the statistical null hypothesis.

The acceptability ratings were analyzed using a linear mixed-effects model including all main effects and their interactions (*wh-dependency* × *subject position* × *verb type* × *language*). All categorical predictors were deviation-coded (±0.5), so that the intercept represents the grand mean and coefficients correspond to deviations from it; each contrast expresses the difference between *short* and *long* wh-dependency, *preverbal* and *postverbal* subjects, *intransitive* and *transitive* verbs, and *Italian* and *Spanish*. The model included random intercepts for *participants* and *items*, and uncorrelated random slopes for *wh-dependency*, *subject position*, and *verb type* by *participant*, and for *wh-dependency* and *subject position* by *item*; since the two language groups were tested on distinct materials (24 items per language), *item* was nested within *language*. Model fitting was performed with the lme4 package (Bates et al. 2015) in R, with p-values obtained via lmerTest (Kuznetsova et al. 2017).

The mixed-effects model revealed significant main effects of *subject position* (β = −0.48, p <.001), with postverbal subjects rated more acceptable than preverbal ones, and of *verb type* (β = −0.68, p <.001), with transitive verbs rated higher than intransitives; *language* showed no main effect (β = −0.23, p =.17). These were qualified by significant interactions of *wh-movement* with *subject position* (β = 1.25, p <.001) and with *verb type* (β = −0.75, p <.001), and by two cross-linguistic interactions, *wh-movement* × *language* (β = −0.73, p <.001) and *verb type* × *language* (β = −0.42, p =.025). Crucially for our hypotheses, the three-way interaction of *wh-movement* × *verb type* × *language* was significant (β = 1.26, p <.001), and that of *wh-movement* × *subject position* × *language* approached significance (β = −0.32, p =.054); both are decomposed through the estimated marginal means below. Figure 1 offers a visual overview of the model's predicted means for each condition.

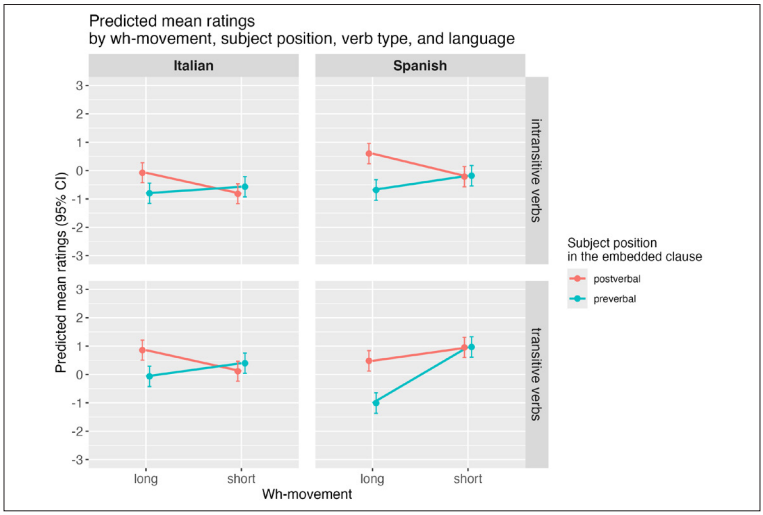



**Figure 1** Predicted mean ratings for wh-questions by wh-movement type (short vs. long), embedded subject position (preverbal vs. postverbal), embedded verb type (transitive vs. intransitive), and language

We decomposed the two significant higher-order interactions using estimated marginal means (EMMs; emmeans, Lenth 2024), with Holm's correction for multiple testing. Collapsing across subject position, the *wh-movement* × *verb type* × *language* interaction revealed a divergence between the two languages: in Italian, *short* and *long* wh-movement were statistically comparable for both verb classes (all contrasts n.s., absolute differences < 0.2, p >.1), whereas in Spanish short questions with *transitive* verbs were rated substantially higher than their long counterparts (diff = 1.22, p <.001),

a difference absent with *intransitive* verbs (diff = 0.22, p =.67). This transitive-only advantage of short over long movement, observed only in Spanish, is addressed in Section 4.2; since it emerged averaging across *subject position*s, it should be interpreted with caution.

We then examined the *wh-movement* × *subject position* × *language* interaction, which bears directly on H1-H2. As predicted by H1, in both languages postverbal subjects were rated more acceptable than preverbal ones under long-distance extraction (Italian: −0.08 vs. −0.80, diff = −0.82, p <.001; Spanish: 0.60 vs. −0.68, diff = −1.39, p <.001). In line with H2, a cross-linguistic divergence emerged in short wh-questions: in Italian preverbal subjects were rated higher than postverbal ones (−0.57 vs. −0.82, diff = 0.27, p =.015), whereas in Spanish the two configurations did not differ reliably (−0.18 vs. −0.21, diff = 0.02, p =.82). See Figure 2.

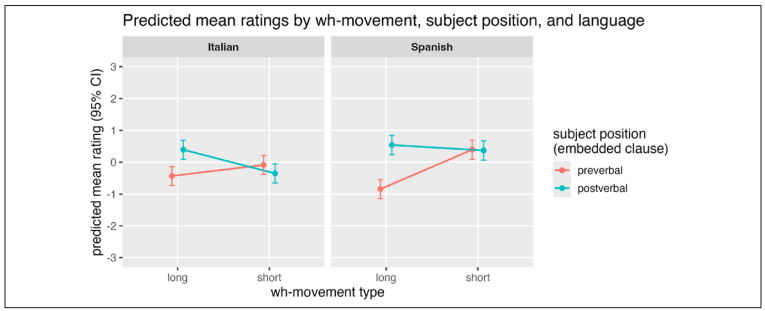



**Figure 2** Predicted mean ratings by subject position (preverbal vs. postverbal) across wh-movement type (short vs. long) and language, illustrating the three-way interaction, averaged across embedded verb type

This pattern supports the predicted cross-linguistic asymmetry: both languages prefer postverbal subjects under long extraction, but only Italian reverses this preference under short extraction, as expected from H2. A direct contrast-of-contrasts between the two language-specific short-extraction effects did not reach significance (p =.11), best interpreted as limited statistical power rather than evidence against the asymmetry. A Bayesian estimation (brms; Bürkner 2017) confirmed the same direction, with 94% of posterior samples favouring a larger preverbal-postverbal difference in Italian than in Spanish (median Δ = 0.24, 95% HPD = [−0.06, 0.53]).

## 4 Discussion: Assessing the Experimental Hypotheses

Our findings show that in biclausal wh-questions, successive cyclic movement triggers subject inversion in both Italian and Spanish, in line with H1 (see §1). The presence of intermediate chain links

in the embedded CP favours postverbal over preverbal subjects in both languages, confirming the generalizations of Torrego (1983) for Spanish and Calabrese (1982) and Cardinaletti (2021) for Italian. Under short movement, by contrast, the distribution diverges: as expected under H2b, in Spanish the embedded subject is equally acceptable preverbally and postverbally, whereas Italian conforms to H2a, with the unmarked SV order judged significantly more acceptable than VS.

### 4.1 Acceptability Effects of Inversion and Non-Inversion

Besides the evidence supporting our main hypotheses, the results invite two broader considerations.

First, the lack of subject inversion in an embedded clause from which wh-movement originates leads to a marked decrease in acceptability in both languages, an effect that appears even stronger in Spanish than in Italian. This finding suggests that the adjacency requirement between the wh-phrase and the verb is enforced not only when the wh-element is overtly realized but also when it is represented by an intermediate trace or copy. The constraint therefore cannot be reduced to a purely surface condition.

At the same time, the presence of an intervening preverbal subject in an embedded clause appears to have impact on acceptability not as strong as an equivalent intervention in the matrix clause – that is, between the final landing site of the wh-phrase and the verb. Although our experiment did not directly compare these configurations, native-speaker intuitions – and the descriptive tradition – converge on the idea that the adjacency requirement is stricter in matrix contexts. For instance, leaving aside why-questions and D-linked wh-phrases, Rizzi (1996) and Cardinaletti (2007) judge preverbal subjects in matrix wh-questions unacceptable in Italian.[4]

Second, our findings reveal an asymmetry in the strength of inversion-related effects in Italian embedded clauses: the lack of subject inversion under long-distance wh-movement – i.e., in the presence of a structural trigger – leads to a sharp drop in acceptability, whereas the presence of inversion under short movement, where no such structural trigger occurs, results in a milder but still significant penalty. Although we do not yet have a formal account of this asymmetry, we do not think it should be

**4** The milder deviance of preverbal subjects under long-distance wh-movement, compared to matrix questions, may relate to indirect questions, where the lack of inversion likewise lowers acceptability, though less sharply than in direct questions (Bocci, Pozzan 2014; Bocci, Cruschina 2018). We leave this for future research.

attributed to a reinterpretation strategy whereby postverbal subjects are reanalysed as right-dislocated constituents to rescue acceptability. As discussed in Section 2, our design discouraged such an interpretation, since the contexts did not favour right dislocation and the stimuli lacked the comma that typically signals its prosody; moreover, as native speakers of Italian, we share the intuition that a postverbal subject without a structural trigger is not as degraded as the lack of inversion when a trigger is present. If this intuition is on the right track, a plausible formal explanation should be sought in the featural content encoded in SubjP (Cardinaletti 2004; Rizzi 2005) and in the mechanisms through which the Subject Criterion is satisfied in Italian (Rizzi 2006).

### 4.2 Acceptability of Short and Long-Distance Wh-Questions

Tangentially to our main goal, the data reveal an unexpected pattern in the overall acceptability of short- vs. long-distance wh-questions. On psycholinguistic grounds, shorter dependencies impose lower processing costs, so short movement should be rated more acceptable than long, regardless of subject position. Our results do not confirm this: no general short-movement advantage emerged, except in Spanish with transitive embedded verbs, and scores were unexpectedly low for unambiguous short-distance questions in Italian. The puzzle is thus why short questions scored so low, not why long ones scored so high. We can only speculate.

The matrix verb in our stimuli was always 'say' (*decir*), reported to promote closure of a wh-dependency less effectively than other, more complex verbs (Lassotta et al. 2016, 2024). Participants may therefore have delayed closing the dependency after the verb, waiting for the morphosyntactic cue – a clitic in the embedded clause – that disambiguated the extraction site. Such delayed closure runs against parsing principles like the Active Filler Strategy (Frazier, Clifton 1989), Late Closure, and Minimal Attachment (Frazier 1979), but the weak closure-promoting force of 'say' makes it plausible; if so, the low ratings for short-distance questions would reflect processing-related uncertainty rather than grammatical deviance. For Italian, we cannot exclude an effect of implicit prosody (Fodor 2002): Bocci et al. (2021; 2024) show that long-distance wh-questions have a specific disambiguating prosody, which some participants may have projected during silent reading and then revised.

## 5 Permissive and Restrictive Romance Languages: Spanish vs Italian

Having established experimentally that the two languages converge under long-distance movement but diverge under short movement – Italian preferring preverbal subjects, Spanish showing no SV/VS asymmetry – we can now address a broader question: why does Spanish tolerate postverbal subjects more freely than Italian? This contrast, observed when no structural trigger for inversion is present, can be interpreted in light of Leonetti's (2017) distinction between restrictive and permissive Romance languages, which captures systematic differences in how syntax interfaces with information structure (see also Cruschina, Mayol 2025a; 2025b).

Leonetti proposes that Romance languages fall into two groups according to how syntactic structures are mapped to information structure. Restrictive languages, such as Italian, enforce a tight correspondence: marked syntactic structures are permitted only when a specific informational partition exists, and given partitions are typically realized through marked word orders, including dislocations and inversions. By contrast, permissive languages like Spanish allow a more flexible relationship, granting greater freedom in how informational partitions are expressed and in the conditions under which marked word orders may appear.

Among the phenomena Leonetti (2017) discusses is the availability of postverbal subjects in broad-focus configurations in simple matrix clauses, not limited to unaccusative verbs.[5] Our data show that this availability extends to embedded contexts. In Italian, by contrast, postverbal subjects are acceptable only under specific conditions: with unaccusative verbs, when the subject is narrowly focused or heavy (see Belletti 2004; Bianchi, Bocci, Cruschina 2018; Cardinaletti 2018), or, as our results show, under wh-extraction (see Calabrese 1982; Cardinaletti 2021). Consequently, postverbal subjects are excluded – judged less acceptable – in embedded contexts under short movement.

## 6 Conclusions

In this paper, we have shown that successive cyclic movement has tangible syntactic effects, yielding postverbal subjects not only in simple direct wh-questions but also in the embedded clause

**5** The distinction between restrictive and permissive Romance languages is further supported by the studies on the position of the subject in why-questions. See Bianchi et al. 2017 and Krieger 2024.

of biclausal wh-questions under long-distance movement, where intermediate chain links trigger inversion in both Spanish and Italian. Under short movement, where no such links are present, the two languages diverge: Italian prefers the unmarked SV order, confirming Bocci, Cruschina (2018), whereas in Spanish preverbal and postverbal subjects are equally acceptable. We have related this difference to Leonetti's (2017) distinction between restrictive languages such as Italian and permissive languages such as Spanish in the mapping between syntax and information structure.

Our findings also have important theoretical implications for broader issues that remain open to debate. In particular, the observation that subject inversion occurs even in embedded clauses under long-distance movement suggests that the adjacency requirement between the wh-phrase and the verb cannot be reduced to a merely superficial condition or linear constraint (see Cardinaletti 2007). Instead, this pattern points to a deeper syntactic source related to the mechanisms governing successive cyclic movement.

## Bibliography

Bates, D.; Mächler, M.; Bolker, B.; Walker, S. (2015). "Fitting Linear Mixed-Effects Models Using lme4". *Journal of Statistical Software*, 67(1), 1-48. https://doi.org/10.18637/jss.v067.i01.

Belletti, A. (2001). "Inversion as Focalization". Hulk, A.; Pollock, J.-Y. (eds), *Subject Inversion in Romance and the Theory of Universal Grammar*. Oxford: Oxford University Press, 60-90. https://doi.org/10.1093/oso/9780195142693.003.0003.

Belletti, A. (2004). "Aspects of the Low IP Area". Rizzi, L. (ed.), *The Structure of CP and IP. The Cartography of Syntactic Structures, Vol. 2*. Oxford: Oxford University Press, 16-51. https://doi.org/10.1093/oso/9780195159486.003.0002.

Bentley, D.; Cruschina, S. (2018). "The Silent Argument of Broad Focus: Typology and Predictions". *Glossa: A Journal of General Linguistics*, 3(1), 118, 1-37. https://doi.org/10.5334/gjgl.677.

Bianchi, V.; Bocci, G.; Cruschina, S. (2017). "Two Types of Subject Inversion in Italian Wh-Questions". *Revue roumaine de linguistique*, 62(3), 233-52.

Bianchi, V.; Bocci, G.; Cruschina, S. (2018). "The Syntactic and Prosodic Effects of Long-Distance Wh-Movement in Italian". *Italian Journal of Linguistics*, 30(2), 59-78.

Bocci, G. (2013). *The Syntax–Prosody Interface: A Cartographic Perspective with Evidence from Italian*. Amsterdam: John Benjamins. https://doi.org/10.1075/la.204.

Bocci, G.; Avesani, C. (2015). "Can the Metrical Structure of Italian Motivate Focus Fronting?". Shlonsky, U. (ed.), *Beyond Functional Sequence: The Cartography of Syntactic Structures*. Oxford: Oxford University Press, 23-41. https://doi.org/10.1093/acprof:oso/9780190210588.003.0002.

Bocci, G.; Cruschina, S. (2018). "Postverbal Subjects and Nuclear Pitch Accent in Italian Wh-Questions". Petrosino, R.; Cerrone, P.; van der Hulst, H. (eds), *From Sounds to Structures: Beyond the Veil of Maya*. Berlin: De Gruyter, 467-94. https://doi.org/10.1515/9781501506734-017.

Bocci, G.; Pozzan, L. (2014). "Some Questions (and Some Experimental Answers) about Italian Subjects: Subject Positions in Main and Embedded Questions in L1 and Attrition". Contemori, C.; Dal Pozzo, L. (eds), *Inquiries into Linguistic Theory and Language Acquisition. Papers Offered to Adriana Belletti*. Siena: CISCL Press, 28-44. https://www.ciscl.unisi.it/ad60/.

Bocci, G.; Bianchi, V.; Cruschina, S. (2021). "Focus in Wh-Questions". *Natural Language and Linguistic Theory*, 39(2), 405-55. https://doi.org/10.1007/s11049-020-09483-x.

Bocci, G., Bianchi, V.; Cruschina, S. (2024). "Mapping Focus to Prosody in Italian: The Case of Wh-Questions". *Isogloss. Open Journal of Romance Linguistics*, 10(7)/4, 1-25. https://doi.org/10.5565/rev/isogloss.422.

Bürkner, P.-C. (2017). "brms: An R Package for Bayesian Multilevel Models Using Stan". *Journal of Statistical Software*, 80(1), 1-28. https://doi.org/10.18637/jss.v080.i01.

Calabrese, A. (1982). "Alcune ipotesi sulla struttura informazionale della frase in italiano e sul suo rapporto con la struttura fonologica". *Rivista di Grammatica Generativa*, 13, 489-526.

Cardinaletti, A. (2001). "A Second Thought on *Emarginazione*: Destressing vs 'Right Dislocation'". Cinque, G.; Salvi, G. (eds), *Current Studies in Italian Syntax. Essays offered to Lorenzo Renzi*. Amsterdam: Elsevier, 117-35. https://doi.org/10.1163/9780585473949_008.

Cardinaletti, A. (2002). "Against Optional and Null Clitics: Right dislocation vs. Marginalization". *Studia Linguistica*, 56(1), 29-57. https://doi.org/10.1111/1467-9582.00086.

Cardinaletti, A. (2004). "Towards a Cartography of Subject Positions". Rizzi, L. (ed.), *The Structure of CP and IP. The Cartography of Syntactic Structures, Vol. 2.* Oxford: Oxford University Press, 115-65. https://doi.org/10.1093/oso/9780195159486.003.0005.

Cardinaletti, A. (2007). "Subjects and Wh-Questions: Some New Generalizations". Camacho, J. et al. (eds), *Romance Linguistics 2006: Selected Papers from the 36th Linguistic Symposium on Romance Languages (LSRL)*. Amsterdam: John Benjamins, 57-79. https://doi.org/10.1075/cilt.287.06car.

Cardinaletti, A. (2018). "On Different Types of Postverbal Subjects in Italian". *The Italian Journal of Linguistics*, 30(2), 79-106.

Cardinaletti, A. (2021). "The Position of Subjects in Germanic and Romance Questions". Wolfe, S.; Meklenborg, C. (eds), *Continuity and Variation in Germanic and Romance*. Oxford: Oxford University Press, 44-69. https://doi.org/10.1093/oso/9780198841166.003.0003.

Cardinaletti, A. (2024). "Cleft Wh-Questions as Biclausal Structures: A Comparison with Simple Wh-Questions, Cleft Declaratives, and Focalizations". Bonan, C.; Ledgeway, A. (eds), *It-Clefts: Empirical and Theoretical Surveys and Advances*. Berlin: De Gruyter Mouton, 11-34. https://doi.org/10.1515/9783110734140-002.

Cruschina, S. (2022). "Focus and Focus Structures in the Romance Languages". *Oxford Research Encyclopedia of Linguistics*. Oxford/New York: Oxford University Press, 1-48. https://doi.org/10.1093/acrefore/9780199384655.013.649.

Cruschina, S.; Mayol, L. (2025a). "The Distribution of Focus and the Mapping between Syntax and Information Structure". *Journal of Linguistics*, 61(3), 535-69. https://doi.org/10.1017/s0022226724000264.

Cruschina, S.; Mayol, L. (2025b). "Gradience and Optionality in the Syntactic Realization of Focus". *Isogloss. Open Journal of Romance Linguistics*, 11(1), 5, 1-32. https://doi.org/10.5565/rev/isogloss.547.

Fodor, J.D. (2002). "Prosodic Disambiguation in Silent Reading". Hirotani, M. (ed.), *Proceedings of the North East Linguistic Society 32*. Amherst: GSLA, 113-32.

Frazier, L. (1979). *On Comprehending Sentences: Syntactic Parsing Strategies* [PhD Dissertation]. Storrs: University of Connecticut.

Frazier, L.; Clifton, C. (1989). "Successive Cyclicity in the Grammar and the Parser". *Languages and Cognitive Processes*, 2(4), 93-126. https://doi.org/10.1080/01690968908406359.

Goodall, G. (2010). "Experimenting with Wh-Movement in Spanish". Arregi, K.; Fagyal, Z.; Montrul, S.A.; Tremblay, A. (eds), *Romance Linguistics 2008, Interactions in Romance*. Amsterdam: John Benjamins, 223-48. https://doi.org/10.4324/9781003160144–17.

Krieger, S. (2024). *Word Order Variation in Italian and Spanish Why-Interrogatives: An Empirical Perspective*. Berlin: De Gruyter. https://doi.org/10.1515/9783111615769.

Kuznetsova, A.; Brockhoff, P.B.; Christensen, R.H.B. (2017). "lmerTest Package: Tests in Linear Mixed Effects Models". *Journal of Statistical Software*, 82(13), 1-26. https://doi.org/10.18637/jss.v082.i13.

Lassotta, R., Omaki, A.; Franck, J. (2016). "Developmental Changes in Misinterpretation of Garden-Path wh-Questions in French". *Quarterly Journal of Experimental Psychology*, 69(5), 829-54. https://doi.org/10.1080/17470218.2015.1054845.

Lassotta, R.; Panizza, D.; Omaki, A.; Franck, J. (2024). "Syntactic Revision in Wh-Questions: Developmental Trajectory and the Role of Cognitive Control". *Language, Cognition and Neuroscience*, 39(6), 713-34. https://doi.org/10.1080/23273798.2024.2355218.

Lenth, R.V. (2024). *emmeans: Estimated Marginal Means, aka Least-Squares Means*. https://CRAN.R–project.org/package=emmeans.

Leonetti, M. (2017). "Basic Constituent Orders". Dufter, A.; Stark, E. (eds), *Manual of Romance Morphosyntax and Syntax*. Berlin: De Gruyter, 887-932. https://doi.org/10.1515/9783110377088–024.

Rizzi, L. (1996). "Residual Verb Second and the Wh-Criterion". Belletti, A.; Rizzi, L. (eds), *Parameters and Functional Heads: Essays in Comparative Syntax*. Oxford/New York: Oxford University Press, 63-90. https://doi.org/10.1093/oso/9780195087932.003.0003.

Rizzi, L. (1997). "The Fine Structure of the Left Periphery". Haegeman, L. (ed.), *Elements of Grammar*. Dordrecht: Kluwer, 281-337. https://doi.org/10.1007/978–94–011–5420–8_7.

Rizzi, L. (2001). "On the Position 'Int(errogative)' in the Left Periphery of the Clause". Cinque, G.; Salvi, G. (eds), *Current Studies in Italian Syntax: Essays Offered to Lorenzo Renzi*. Amsterdam: Elsevier, 287-96. https://doi.org/10.1163/9780585473949_016.

Rizzi, L. (2005). "On Some Properties of Subjects and Topics". Bruge, L.; Giusti, G.; Munaro, N.; Schweikert, W.; Turano, G. (eds), *Contributions to the thirtieth Incontro di Grammatica Generativa* (Venice, February 26-28, 2004). Venice: Cafoscarina, 203-24.

Rizzi, L. (2006). "On the Form of Chains: Criterial Positions and ECP Effects". Cheng, L.-S.; Corver, N. (eds), *Wh-Movement: Moving On*. Cambridge, MA: MIT Press, 97-134. https://doi.org/10.7551/mitpress/7197.003.0010.

Rizzi, L.; Bocci, G. (2017). "Left Periphery of the Clause: Primarily Illustrated for Italian". Everaert, M.; van Riemsdijk, H.C. (eds), *The Wiley Blackwell Companion*

*to Syntax.* Oxford: Wiley, 1-30. https://doi.org/10.1002/9781118358733.wbsyncom104.

Rizzi, L.; Shlonsky, U. (2006). "Satisfying the Subject Criterion by a Non-Subject: English Locative Inversion and Heavy NP Shift". Frascarelli, M. (ed.), *Phases of Interpretation.* Berlin: De Gruyter, 341-61. https://doi.org/10.1515/9783110197723.5.341.

Suñer, M. (1994). "V-Movement and the Licensing of Argumental Wh-Phrases in Spanish". *Natural Language & Linguistic Theory*, 12(2), 335-72. https://doi.org/10.1007/bf00993148.

Torrego, E. (1983). "More Effects of Successive Cyclic Movement". *Linguistic Inquiry*, 14, 561-5.

Torrego, E. (1984). "On Inversion in Spanish and Some of its Effects". *Linguistic Inquiry*, 15, 103-29.

Zehr, J.; Schwarz, F. (2022). *PennController for Internet Based Experiments (IBEX).* https://doi.org/10.17605/OSF.IO/MD832.

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# The Syntax of '(an)other' in Anconetano

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**Abstract** Unlike its Italian counterpart, the item meaning 'other' in Anconetano 'altro' is not a self-standing adjective. It can only occur as part of complex determiners: *staltro* ('this-other'), *qualtro* ('the-other/that-other'), *naltro* ('another'). We observe that a variant with nasalization of /l/ only appears in the indefinite determiner *nantro*, which can be plural and forms complex cardinals *naltri/nantri tre* ('three other') and combines with the quantity noun *po'* ('bit') agreeing with the plural nominal: *naltri/nantri po' de fioli* ('a bit more children').

**Keywords** Anconetano. Another. Complex determiners. Complex quantifiers. Quantity nouns.

**Summary** 1 Introduction. – 2 The Categorial Status of 'Other'. – 3 Indefinite 'Another'. – 4 Complex Quantifiers. – 5 Conclusions.

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## 1 Introduction

In Romance languages, the lexical item meaning 'other' is a source of variation in interpretive values and categorial status.[1] From the interpretive viewpoint, it is a context-dependent word, in that a nominal modified by 'other' may refer to entities added to those previously introduced in the discourse or different from those previously mentioned.[2] From the syntactic viewpoint, 'other' modifying a nominal must, may, or cannot be preceded by a determiner, a behavior that suggests it can be a prenominal adjective preceded by a determiner or a determiner itself.

In this paper, we study the morphosyntax of 'other' in Anconetano, a central Italoromance variety.[3] We do not address interpretive issues here because Anconetano does not display the varied orders typically associated with them. The contribution is structured as follows. Section 2 first presents Brugè and Giusti's previous work on *altro* in Italian, setting the diagnostics for complex determiners and quantifiers (Brugè, Giusti 2021; 2022; 2025). Then, it applies the diagnostics to Anconetano complex determiners *staltri* (these-other), *qualtri* (those-other) and *jaltri* (the-others). Section 3 focuses on the singular indefinite forms *naltro/nantro* ('another'), which display properties of a complex quantifier, like Italian *un altro*, and on plural *naltri/nantri*, which is absent in Italian and whose syntax varies across speakers. Section 4 examines the combinations of *naltri/nantri* with cardinals and existential quantifiers *tanti* ('many') and *poghi* ('few'). Only the orders <another.PL Card> and <another.PL few> are possible and behave as complex quantifiers, while the combination with 'many' is ungrammatical in either order. This gap in the paradigm is filled by the combination of 'another' with the functional noun *pò* 'bit'. Interestingly, in this case, 'another' may concord with masculine singular *pò* (*naltro pò de fioli* 'another.M.SG bit.M.SG of children.M.PL') like in Italian, or with the plural noun (*naltri pò de fioli* 'another.M.PL bit.M.SG of children.M.PL'), unlike in Italian.

**1** This contribution is dedicated to Anna Cardinaletti, a fellow student, a colleague, a co-author of both of us, and a speaker of Anconetano herself. May our friendship and collaboration endure for many years to come, as they have in the past. Thank you, dear, for your expertise and great commitment.

**2** Cinque (2015) defines these two readings as "further token(s) of x (where x is some substance/entity/measure)" and "further type(s)/kind(s) of x (where x is some substance/entity/measure)" respectively and proposes that each of them is linked to different positions in which 'other' is merged in the structure with respect to a cardinal.

**3** We wish to thank 15 native speakers (age 24-80), who responded to a grammaticality judgement task sent out by email in written form in June 2025. Many issues that arose during interactions with individual consultants have inspired the discussion here. Due to space limitations, we do not include the survey. All consultants agreed to share their judgments anonymously.

A structural analysis is attempted at the end of section 4. Section 5 summarizes the results that crucially distinguish Anconetano from Italian and sets future lines of research in comparative dialectology.

## 2 The Categorial Status of 'Other'

### 2.1 'Other' in Italian

In Italian, the lexical item 'other' is generally considered an adjective because it can appear in prenominal, postnominal, or predicate positions (1), like other adjectives. The prenominal position in (1a) is unmarked and is ambiguous between the additivity and alterity interpretations, while the postnominal and predicate positions in (1b-c) are more marked, being only found in the high, formal register and being restricted to the alterity interpretation:

(1) a. Ho un altro problema.
'I have another problem.'
b. Ho un problema altro rispetto a quello che hai tu.
I have a problem other than the one you have
'I have a problem, different from yours.'
c. Il mio problema è altro rispetto al tuo.
the my problem is other respect to-the yours
'My problem is different from yours.'

The adjectival status of *altro* is confirmed by the fact that even when prenominal, its position can vary, preceding or following a possessor (2a-a'), a cardinal (2b-b'), or an ordinal adjective (2c-c'):

(2) a. gli altri tuoi amici
the other your friends
'your other friends'
a'. i tuoi altri amici
the your other friends
b. gli altri tre concorrenti
the other three contestants
'the three other contestants'
b'. i tre altri concorrenti
the three other contestants
c. gli altri primi iscritti alle gare
the other first enrolled to-the races
c'. i primi altri iscritti alle gare
the first other enrolled to-the races
'the other first ones enrolled in the races.'

This makes *altro* similar to other adjectives, such as *simpatico* 'nice' in (3a) or *bravissimo* 'very good, excellent' in (3b):

(3) a. i simpatici tuoi amici
the nice your friends
'your nice friends'

a'. i tuoi simpatici amici
the your nice friends

b. i bravissimi tre concorrenti
the good.SUP three contestants
'the three excellent contestants'

b'. i tre bravissimi concorrenti
the three good.SUP contestants

Note, however, that while in (2) the unmarked position of *altro* is to precede the possessive or the cardinal (2a-b), in (3) the unmarked position of the adjective is to follow them (3a'-b').

Furthermore, unlike adjectives (4-7b) and like existential quantifiers, such as *molti* 'many' (4-7c), plural *altri/altre* can introduce a prenominal subject (4a), license elliptic nominals (5a), and appear in *ne*-constructions with postverbal subjects (6a) or direct objects (7a):

(4) a. Altre ragazze sono arrivate dopo.
'Other girls arrived later'
b. *?Simpatiche ragazze sono arrivate dopo.
nice.F.PL girls are arrived.F.PL later
'Nice girls arrived later.'
c. Molte ragazze sono arrivate dopo.
'Many girls arrived later.'

(5) a. Altre sono arrivate dopo.
'Others arrived later.'
b. *Simpatiche sono arrivate dopo.
nice.F.PL are arrived.F.PL later
'Nice ones arrived later.'
c. Molte sono arrivate dopo.
'Many arrived later.'

(6) a. Dopo, ne sono arrivate altre.
later, NE are arrived.F.PL other.F.PL
'Later, others arrived'
b. *Dopo, ne sono arrivate simpatiche.
later, NE are arrived.F.PL nice.F.PL
c. Dopo, ne sono arrivate molte.
later, NE are arrived.F.PL many.F.PL
'Later, many arrived'

(7) a. Ne ho conosciute altre.
NE I.have met.F.PL others.F.PL
'I met others.'
b. *Ne ho conosciute simpatiche.
NE I.have met.F.PL nice.F.PL
c. Ne ho conosciute molte
NE I.have met.F.PL many.F.PL
'I met many of them.'

Notably, determiner *altro* is only possible with plural count nouns, as in (4)-(7), or singular mass nouns, as in (8a), parallel to existential quantifiers, as the sentence in (8b) with *molto* shows:

(8) a. Voglio comprare altra frutta / altre mele.
I.want to buy other fruit / other.PL apples
'I want to buy more fruit.'
b. Voglio comprare molta frutta / molte mele.
I.want to buy much fruit / many apples
'I want to buy a lot of fruit / apples.'

With a singular count noun, *altro* cannot function as a determiner (9a) and must be preceded by an indefinite article (9b):

(9) a. *Voglio comprare altra / molta mela.
I.want to buy other / much apple
b. Voglio comprare un'altra mela.
'I want to buy another apple.'

For singular count nouns, Brugè (2018); Brugè, Giusti (2021; 2022; 2025) argue that the string *un altro/un'altra* 'another' is not formed by an indefinite article followed by adjectival *altro*, but is a complex quantifier, which behaves like cardinal *uno* 'one'. Support for this claim is the fact that *un altro* licenses elliptic nominals (10a), appears in *ne*-constructions (11-12a), and can select a partitive complement (13a). These four constructions are not allowed with the remnant

chunk formed by the indefinite article *un* and a prenominal adjective, as shown in (11-13b):[4]

(10) a. Un altro è arrivato dopo.
another.M.SG is arrived.M.SG later
'Another one arrived later.'
b. *Un simpatico è arrivato dopo.
a nice.M.SG is arrived.M.SG later

(11) a. Dopo, ne è arrivato un altro.
later, NE is arrived.M.SG another.M.SG
'Later, another one arrived.'
b. *Dopo, ne è arrivato un simpatico.
later, NE is arrived.M.SG a nice.M.SG

(12) a. Ne ho conosciuto un altro.
NE I.have met.M.SG another.M.SG
'I met another one.'
b. *Ne ho conosciuto un simpatico.
NE I.have met.M.SG a nice.M.SG

(13) a. Ho conosciuto un altro dei tuoi amici.
I.have met an other of-the your friends
'I met another one of your friends.'
b. *Ho conosciuto un simpatico dei tuoi amici.
I.have met another a nice.M.SG of-the your friend.M.PL

Brugè and Giusti further propose that *altro* also forms complex quantifiers with cardinal numbers in the order <'other' Card> and

**4** The ungrammatical sentences in (8b), (9b), (10b) become grammatical if we replace *un* with *uno*:

(i) a. Uno simpatico è arrivato dopo.
'A nice one arrived later'
b. Dopo, ne è arrivato uno simpatico.
later, NE is arrived one nice
'Later, a nice one arrived.'
c. Ne ho conosciuto uno simpatico.
NE have met one nice
'I met a nice one.'

This is because in these cases, *uno* is not a determiner, but a pronominal form modified by a postnominal adjective (Rizzi 1979; Cardinaletti, Giusti 2006; 2017).

with existential quantifiers in the order <Q 'other'> as shown, for example, by ellipsis (14)-(15) and *ne*-extraction (16)-(17):

(14) a. Altri due sono arrivati tardi.
other.M.PL two are arrived.M.PL late
b. *Due altri sono arrivati tardi.
two other.M.PL are arrived.M.PL late
'Two others arrived late.'

(15) a. Molti/Pochi altri sono arrivati tardi.
many.M.PL /few.M.PL other.M.PL are arrived.M.PL late
b. *Altri molti/pochi sono arrivati tardi.
other.M.PL many.M.PL /few.M.PL are arrived.M.PL late
'Many/a few others arrived late.'

(16) a. Ne ho conosciuti altri due.
NE I.have met.M.PL other.M.PL two
'I met two others.'
b. *Ne ho conosciuti due altri.
NE I.have met.M.PL two other.M.PL

(17) a. Ne ho conosciuti molti/pochi altri.
NE I.have met.M.PL many.M.PL/few.M.PL other.M.PL
b. *Ne ho conosciuti altri molti/pochi.
NE I.have met.M.PL other.M.PL many.M.PL/few.M.PL
'I met many/a few others.'

Brugè and Giusti also show that the marked orders in (14-17b) are grammatical (though marked as high register) in full nominals, as in (18), suggesting that the adjectival status of 'other' coexists with the quantifier status:

(18) a. Ho conosciuto due altre persone.
I.have met two other.F.PL person.F.PL
'I met two other people.'
b. Ho conosciuto altre molte / poche persone.
I.have met other.F.PL many.F.PL /few.F.PL person.F.PL
'I met a few other people.'

## 2.2 'Other' in Anconetano.

Anconetano is a central Italian variety at the north-eastern border of the so-called "area perimediana" (cf. Loporcaro, Paciaroni 2016, 238). Current studies on dialect-regional Italian bilectalism treat the dialects of this area, which include Tuscan varieties, as part of a continuum with Italian (cf. Cerruti, Regis 2020, 24-31). In this perspective, also keeping in mind that *altro* in Italian is not dissimilar to its counterparts in other Romance languages, we may expect to find the same categorial ambiguity and positional variation in Anconetano. More precisely, we may suppose that *altro* is a high prenominal adjective when it appears after a definite article (19a), or a demonstrative (19b-c), or an indefinite article (19d):[5]

| | | | | | |
|---|---|---|---|---|---|
| (19) | a. | j | altri | amighi | mii |
| | | DEF.ART.M.PL | other.M.PL | friend.M.PL | my.M.PL |
| | | 'my other friends' | | | |
| | b. | st' | altre | amighe | tue |
| | | PROX.DEM | other.F.PL | friend.F.PL | your.F.PL |
| | | 'these other female friends of yours' | | | |
| | c. | qul' | altro | amigo | tuo |
| | | DIST.DEM | other.M.SG | friend.M.SG | your.M.SG |
| | | 'that other friend of yours' | | | |
| | d. | n' | altra | amiga | mia |
| | | INDEF.ART. | other.F.SG | friend.F.SG | my.F.SG |
| | | 'another friend of yours' | | | |

However, if this were the case, we would expect definite articles to merge with 'other' without restrictions, obeying the same prosodic and morphological properties they display in other combinations. But, contrary to expectations, singular masculine and singular and plural feminine definite articles cannot precede 'other'. The nominals in (20) are judged as Italianized versions of Anconetano. The genuine Anconetano equivalents are given in (21):[6]

**5** The orthography in (19) mimics Italian orthography, which captures the independent status of *altro* in the standard. We will see that this independence is absent from the Anconetano lexicon. Consequently, from (22) on, we will use one-word transcription for these complex determiners in the rest of the paper.

**6** We use the transcription *qul* instead of *quel* 'that' for the demonstrative since in Anconetano the vowel /e/ is evanescent in these cases.

(20) a. #l' altro amigo tuo
DEF.ART.SG other.M.SG friend.M.SG your.M.SG
'your other [male] friend'
b. #l' altra amiga tua
DEF.ART.SG other.F.SG friend.F.SG your.F.SG
'your other [female] friend'
c. #le altre amighe tue
DEF.ART.F.PL other.F.PL friend.F.PL your.F.PL
'your other [female] friends'

(21) a. qul' altro amigo tuo
DIST.DEM other.M.SG friend.M.SG your.M.SG
'your other [male] friend'
b. qul' altra amiga tua
DIST.DEM other.F.SG friend.F.SG your.F.SG
'your other [female] friend'
c. qul' altre amighe tue
DIST.DEM other.F.PL friend.F.PL your.F.PL
'your other [female] friends'

We propose that in (19) above, we are dealing with complex determiners: *jaltri*, *staltro*, *qualtro*, *naltro*. Therefore, from now on, we will write them as one-word forms (cf. fn. 5). We also propose that singular *laltro* (20) is not part of the Anconetano lexicon. The only definite alterity/additive determiner with a full gender and number paradigm is *qualtro*. Plural *jaltri* / *laltre* in (22) is however in free variation with *qualtri* / *qualtre* (21):

(22) a. jaltri amighi tui
the-other.M.PL friend.M.PL your.M.PL
'your other [male] friends'
b. laltre amighe tue
the-other.F.PL friend.F.PL your.F.PL
'your other [female] friends'

Finally, note that the paradigm of *qualtro* displays overabundance (Thornton 2019) in the masculine plural cell, realized as *qualtri* or

*quejaltri*, while the reduced form without *que-* is defective, missing the singular and the plural masculine *laltri*, as shown in Tab. 1:[7]

| | | | | |
|---|---|---|---|---|
| M.SG | qu(e)laltro | | *laltro | |
| F.SG | qu(e)laltra | | *laltra | |
| M.PL | qu(e)laltri | qu(e)jaltri | *laltri | jaltri |
| F.PL | qu(e)laltre | | laltre | |

**Table 1** The paradigm of the complex determiner 'the other' in Anconetano

Finally, note that masculine plural *jaltri* in (23a) but not feminine plural *latre* in (23b) can license elliptic nominals. In other words, the presence of the overt noun in the feminine is mandatory:

(23) a. Ha lasciato tuto al primo fiolo e gnente a qulaltri / quejaltri / jaltri (fioli).
has left everything to-the first son and nothing to the-other.M.PL (sons)
b. Ha lasciato tuto a la prima fiola e gnente a qulaltre (fiole) / laltre *(fiole).
has left everything to-the first daughter and nothing to the-other.F.PL (daughters)
'He/She left all their inheritance to their first son/daughter and nothing to the others.'

To conclude this section, unlike what is found in Italian, there is no occurrence of 'other' in Anconetano that displays an adjectival nature. Not only is 'other' ungrammatical in postnominal or predicate positions, which are admittedly limited to the high register in Italian, but the unexpected phenomena arising with prenominal 'other' could not be accounted for if plural 'other' were taken as an independent element (adjective or quantifier). Instead, we proposed that it is part of a complex determiner with its own paradigm and restrictions.

## 3 Indefinite 'Another'

In this section, we concentrate on indefinite nominals. Like Italian (10)-(13), in singular count nouns, Anconetano 'other' is apparently

**7** According to Thornton (2019) "Overabundance is the situation in which two (or more) inflectional forms are available to realize the same cell in the inflectional paradigm of a lexeme".

preceded by the indefinite article, which in Anconetano is weaker than in Italian and does not display the initial vowel *u-* (24):[8,9]

(24) a. Ho cumprato (#u)na maja / (#u)n majó.
'I bought a T-shirt / a jumper.'
b. Ho cumprato (#u)naltra maja / (#u)naltro majó.
'I bought another T-shirt / another jumper.'

*Naltro* complies with the diagnostics for quantifier status observed for Italian *un altro* in (10)-(13) above. In (25), *naltro* introduces an elliptic nominal (25a); it allows for *ne*-extraction from the postverbal subject of an unaccusative verb (25b) and from a direct object (25c); and it appears with a partitive complement (25d):

(25) a. Uno è partito e naltro è rivato.
one.M.SG is left and another.M.SG is arrived
'One left and another one arrived.'
b. N'è rivato naltro.
NE is arrived another.M.SG
'Another one arrived.'
c. N'ho conosciuto naltro.
NE I.have met another.M.SG
'I met another one.'
d. È rivato naltro dej amighi tui.
is arrived another.M.SG of-the.M.PL friend.M.PL your.M.PL
'Another one of your friends arrived.'

**8** In Anconetano, when *un/uno* has the status of an indefinite article, it always apocopates the initial *u-* (22), while the vowel *u-* does not apocopate when uno is a pronoun.

(i) N'ho comprata una / *na.
NE I.have bought.F.SG one.F.SG
'I bought one.'

**9** On a par with definite determiners above, and with Italian *un altro*, we consider Anconetano *naltro* as a complex indefinite determiner and will transcribe it in one word.

A second interesting property of *naltro* is its covariance with *nantro*, which represents the only case we found so far of preconsonantal nasalization of [l] in Anconetano.[10]

*Nantro* displays all the properties of *naltro* and is considered by some of our consultants as "more genuinely Anconetano". In (26), we replicate (25), without providing glosses or translations:[11]

(26) a. Uno è partito e nantro è rivato.
b. N'è rivato nantro.
c. N'ho conosciuto nantro.
d. È rivato nantro dej amighi tui.

A third noteworthy property distinguishing Anconetano from Italian (3)-(7) above is that no bare *altro* (in any form) is available in Anconetano. The sentences in (27a-b) are judged as Italianized Anconetano by our consultants. As said in fn. 9, *antro* is totally excluded in (27a'-b'):

(27) a. #È rivate altre fiole,
a'. *È rivate antre fiole,
is arrived other girls[12]
'Other girls arrived.'
b. #Ho cumprato altre melangole.
b'. *Ho cumprato antre melangole.
I.have bought other cucumbers
'I bought other cucumbers.'

**10** We thank an anonymous reviewer for pointing out that according to Rohlfs' (1966, §245), in several Italian dialects some words including *altro* display nasalization of preconsonantal /l/. Notably, in Anconetano none of the other lexical items mentioned by Rohlfs display /l/ nasalization, e.g. as *polso* 'wrist', *falso* 'fake', *gelso* 'mulberry' vs. *ponso, fanso,* or *genso* found in some Sicilian varieties. More interestingly, *antro* is not an independent item in Anconetano and does not appear in any other complex determiner: **stantro*, **qulantro*, **jantri*, or pronoun **niantri* (vs. *nialtri*, 'we/us', AIS 1607, 539 Ancona) **vojantri* (vs. vo*ialtri*, 'you', AIS 661, 539 Ancona), unlike what is found in other (unspecified) Marche dialects in *noantri* (lit. we-other, 'we'), or as reported by AIS 444 'the other one' *kwell'andro* for 584 Amelia (Terni), consulted through NavigAIS, Tisato (2009).

Neither are we dealing with a phono-syntactic phenomenon triggered by the indefinite article *n* 'a'. For example, the equivalent of It. *un altruista* 'an altruist' is *n'altruista* and not ***n'antruista*, or It. *un altarino* 'an altar' is *n'altarì*, and by no means ***n'antarì*. These peculiarities of *nantri* further support our hypothesis that *naltro* and *nantro* are listed in the Anconetano lexicon as complex determiners.

**11** Femmine *naltra* / *nantra* behaves the same.

**12** In Anconetano, *esse* 'be' displays a syncretic form *è* 'he/she is /they are' in the third person singular and plural, like other lexical verbs *va* 'he/she goes /they go' *magna* 'he/she eats /they eat'. The distinct plural forms *ène*, *vane*, *magnane* are less common. A third-person plural syncretic with the first-person singular *sò* is also present, parallel to Italian *sono* 'I am / they are'.

A fourth surprising property is that, at least for some speakers, *naltro* (or *nantro*) can appear in the plural. We give examples in subject (28a) and object positions (28b):[13]

(28) a. %M'hai da dà naltre matite / naltri foji.
me.DAT you.have to give another.F.PL pencil.F.PL / another.M.PL sheet.M.PL
'You must give me other pencils / paper sheets.'
b. %Me ce vole naltre matite / naltri foji.
me.DAT LOC it.wants another.F.PL pencil.F.PL / another.M.PL sheet.M.PL
'I need other pencils / paper sheets.'

The examples in (28) are unexpected from two perspectives. On the one hand, it is surprising to find *naltro* in the plural, given that Anconetano does not display plural indefinite articles (29):[14]

(29) a. **M'hai da dà (u)ne matite / (u)ni foji.
me.DAT you.have to give one.F.PL pencil.F.PL / one.M.PL sheet.M.PL
'You must give me (some) pencils / (some) sheets.'
b. **Me ce vole (u)ne matite / (u)ni foji.
me.DAT LOC it.wants one.F.PL pencil.F.PL / one.M.PL sheet.M.PL
'I need (some) pencils / (some) paper sheets.'

On the other hand, plural *naltri/naltre* or *nantri/nantre* are judged as fully grammatical by all our consultants when combined with a cardinal (30) and by many of them when combined with the (masculine singular) quantity noun *pò* (31):

**13** The examples in (28) were judged as acceptable by some consultants and unacceptable by others. This is marked by %.

**14** That is to say that Anconetano, like all Italoromance varieties, misses the equivalent of *unos / unas N* in Spanish (or other Iberoromance and Eastern Romance varieties). To express plural indefinites, Anconetano allows the partitive article with specific interpretation (i), and resorts to the definite article for weak indefinite interpretation, since it lacks bare nouns (ii), cf. Cardinaletti, Giusti 2015; 2016; Giusti 2021:

(i) Ho cumprato dele matite/ dei foji.
I.bought PART.D.F.PL pencils / PART.D.M.PL sheets
(ii) Io, de solito, nun compro *(le) matite / *(i) penareli.
I usually NEG buy ART.F.PL pencils / ART.M.PL markers

(30) a. M'hai da dà naltre dó matite / naltri dò foji.
a'. M'hai da dà nantre dó matite / nantri dò foji.
me.DAT you.have to give another.F.PL two pencil.F.PL / another.M.PL two sheet.M.PL
'You must give me another two pencils / paper sheets.'
b. Me ce vole naltre dó matite / naltri dó foji
b'. *Me ce vole nantre dó matite / nantri dó foji.
me.DAT LOC it-wants another.F.PL two pencil.F.PL / another.M.PL two sheet.M.PL
'I need two other pencils / paper sheets.'

(31) a. M'hai da dà naltre pò de matite
a'. M'hai da dà nantre po' de matite
me.DAT you.have to give another.F.P bit.M.SG of pencil.F.PL
/ naltri pò de foji.
/ nantri po' de foji.
/ another.M.PL bit.M.SG of sheet.M.PL
'You must give me another two pencils / paper sheets.'
b. Me ce vole naltre pò de matite
b'. *Me ce vole nantre pò de matite
me.DAT LOC it.wants another.F.PL bit.M.SG of pencil.F.PL
/ naltri pò de foji
/ nantri pò de foji.
/ another.M.PL bit.M.SG of sheet.M.PL
'I need two other pencils / paper sheets.'

Thus, the marginality of (28) above is not due to the plural feature appearing on a lexical item formed with the indefinite article, but to the fact that only for some speakers is plural *naltri/naltre* (or *nantri/natre*) a self-standing determiner or quantifier, that is a determiner that does not need to appear in combination with a cardinal or a quantity noun. We focus on these forms in section 4.

## 4 Complex Quantifiers

Plural *naltri* (or *nantri*) combined with a cardinal number fulfills the complex quantifier diagnostics, presented in (8)-(11). It licenses an elliptic subject in (32a), it appears with *ne*-extraction from postverbal subject (32b) and object (32c) positions, and can occur with a partitive complement (29d):

(32) a. Uno è partito e naltri/nantri dó è rivati.
one.M.SG is left and another.M.PL two is arrived.M.PL
'One left and another two arrived.'

b. N'è rivati naltri/nantri dó.
NE is arrived.M.PL another.M.PL two
'Another two arrived.'

c. N'ho conosciuti naltri/nantri dó.
NE I.have met.M.PL another.M.PL two
'I met another two'

d. È rivati naltri/nantri dó dej amighi tui.
is arrived.M.PL another.M.PL two of-the.M.PL friend.M.PL your.M.PL
'Another two of your friends arrived'

Given the suggested complex determiner status for *staltro, qualtro,* and *jaltri* (section 2.2) and singular *naltro/nantro* (section 3), we posit that plural *naltri/nantri* is a complex quantifier. Not all speakers accept it in the function of an indefinite determiner introducing a full nominal expression (28). But for all speakers, plural *naltri/nantri* can form complex quantifiers with cardinal numbers, as in (32).[15]

Note that unlike Italian (33a), Anconetano only displays the order <'other' Card> shown in (32). The order <Card 'other> in Italian analyzed by Brugè and Giusti as the sequence of the cardinal quantifier and the prenominal adjective *altro*, is not present. In (33b), either form *naltri* or *nantri* following the cardinal is ungrammatical. This reinforces the hypothesis that *altro* (or *naltro*) is not an adjective. Note that *dó altri* in (33c), parallel to Italian (18) above, is judged by our consultants as Italianized Anconetano, as signaled by the # diacritic:

(33) a. It. Sono arrivati altri due bambini / due altri bambini.
are arrived.M.PL other.M.PL two children.M.PL / two other.M.PL children.M.PL

b. An. *È rivati dó naltri / nantri fioli.
is arrived.M.PL two other.M.PL children.M.PL

c. An #È rivati dó altri fioli
is arrived.M.PL two other.M.PL children.M.PL
'Another two children arrived'

Existential quantifiers 'many' and 'few' can form complex existential quantifiers with 'other' in many Romance languages, including Italian (cf. Brugè, Giusti 2021; 2022; 2025). Before delving deeper into the

**15** The same diagnostics apply to *nantri/nantre dó*. We omit the relevant data, which are *mutatis mutandis* identical to (29).

matter, let us note that like many central Italian dialects, Anconetano does not express numerosity with *molti/e* but with *tanti/e,* which is also available to Italian, cf. (34a) and (34b):

(34) a. It. Sono arrivate molte / tante bambine.
b. An. È rivate *molte / tante fiole.
'Many girls arrived'

The complex quantifier *tante altre* ('many other'), which is unmarked in Italian (35a), is judged by our consultants as Italianized Anconetano (35b). Note crucially that the more genuine forms *naltre* or *nantre* give ungrammatical results in (35b):

(35) a. It. Sono arrivate tante/ molte altre bambine.
are arrived.F.PL many.F.PL other.F.PL children.F.PL
b. An. #È rivate tante altre/ *naltre/*nantre fiole
is arrived.F.PL many.F.PL other.F.PL children.F.PL

The reverse order with *tanti* is ungrammatical in both languages (36), unlike Italian *molti/e* (35a):[16]

(36) a. It. Sono arrivati altri molti / *tanti bambini.
are arrived.M.PL other.M.PL many.M.PL children.M.PL
b. An. *È rivati altri/naltri/nantri tanti fioli.
is arrived.M.PL other.M.PL many.M.PL children.M.PL
'Many other children arrived.'

Let us now observe the combinations arising with 'few'. In Italian, both orders are possible, though (37a) is unmarked, while (37b) is

**16** Note that both Italian and Anconetano have the comparative complex quantifier It. *altrettanti* An. *naltritanti* 'as many':

(i) It. a. Sono arrivati altrettanti bambini.
An. b. È rivati naltritanti fioli.
are arrived.M.PL as-many.M.PL children.M.PL
'As-many children arrived'
(ii) It. a. Ne sono arrivati altrettanti
An. b. N'è rivati naltritanti.
are arrived.M.PL as-many.M.PL
'As-many [of them] arrived'

The overlap with this quantifier is probably the reason why the order <'other' *tanti*> is not allowed in any form.

marked. Brugè, Giusti (2021; 2022; 2025) analyse *pochi altri* in (37a) as a complex quantifier, and *altri pochi* in (37b) as the sequence formed by the existential quantifier *altri* and the quantity adjective *pochi*. The diagnostics of *ne*-extraction in (37c) support this hypothesis, since it is only possible with the order *pochi altri*:

| | | | | | | |
|---|---|---|---|---|---|---|
| (37) | a. It. | Sono arrivati | pochi | altri | / altri | pochi |
| | | are arrived.M.PL | few.M.PL | other.M.PL | / other.M.PL | few.M.PL |
| | | bambini. | | | | |
| | | children.M.PL | | | | |
| | | 'A few other children arrived.' | | | | |
| | b. It. | Ne sono arrivati | pochi altri | | / altri pochi. | |
| | | NE are arrived.M.PL | few.M.PL other.M.PL | | other.M.PL few.M.PL | |
| | | 'A few others arrives.' | | | | |

In Anconetano, the order <Q 'other'> (38a) with *altri* is judged as Italianized. Unlike Italian, the order <other Q> with *naltri/nantri* is grammatical (though marginal, as signaled by the ? diacritic) (38b). In (38c), *naltri/nantri poghi* behaves as a complex quantifier allowing *ne*-extraction:

(38) a. An. #È rivati poghi altri fioli.
is arrived.M.PL few.M.PL other.M.PL children.M.PL

b. An. ?È rivati naltri/nantri poghi fioli.
is arrived.M.PL nother.M.PL few children
'A few other children arrived'

c. An. ?N'è rivati naltri/nantri poghi
NE is arrived.M.PL nother.M.PL few.M.PL

A last interesting property of *naltri/nantri* is that when it combines with the functional noun *pò* 'bit', selecting a pseudo-partitive complement with *de* 'of', it may either concord with the masculine singular features of *pò* as in (39a) or with the plural (masculine or feminine) features of the lexical noun, as in (39b-c):[17]

| | | | | | |
|---|---|---|---|---|---|
| (39) | a. | È rivati/e | naltro | pò | de fioli / fiole. |
| | | is arrived.M.PL/F.PL | nother.M.SG | bit.M.SG | of boys / girls |
| | b. | È rivati | naltri | pò | de fioli. |
| | | is arrived.M.PL | nother.M.PL | bit.M.SG | of boys |

**17** Note that the concording forms of 'other' in (36b-c) are ungrammatical in Italian:

(i) Sono arrivati/e un altro pò di bambini/e vs. *Sono arrivati/e (un) altri/e pò di bambini/e

| | | | | |
|---|---|---|---|---|
| c. | È rivate | naltre | pò | de fiole. |
| | is arrived.F.PL | nother.F.PL | bit.M.SG | of girls |
| | 'A few other boys/girls arrived' | | | |

These forms admit *ne*-extraction in (40), suggesting that they are complex quantifiers:

| | | | | |
|---|---|---|---|---|
| (40) | a. | N'è rivati/e | naltro | pò |
| | | NE is arrived.M.PL/F.PL | another.M.SG | bit.M.SG |
| | b. | N'è rivati | naltri | pò |
| | | NE is arrived.M.PL | another.M.PL | bit.M.SG |
| | c. | N'è rivate | naltre | pò |
| | | NE is arrived.F.PL | another.F.PL | bit.M.SG |
| | | 'A few arrived' | | |

With feminine mass nouns, like *pasta*, we observe the same alternation: concord for masculine singular *pò* covaries with concord for feminine singular *pasta* only for some informants. In (41a), we find the basic sentences; in (41b), we apply *ne*-extraction:

| | | | | | |
|---|---|---|---|---|---|
| (41) | a. | Ciò fame. | Da-me naltro | %naltra | pò de pasta. |
| | | I.have hunger. | Give-me another.M.SG | another.F.SG | bit.M.SG of pasta |
| | | 'I'm hungry. Give me more pasta.' | | | |
| | b. | Voi la pasta? | Scì! Da-me-ne | naltro | %naltra pò. |
| | | you.want the pasta? | Yes! Give-me-NE | another.M.SG | another.F.SG bit.M.SG |
| | | 'Would you like pasta? Yes! Give me more.' | | | |

In (42), we provide a structural analysis of <'other' Card> where cardinal *dó* is the head of a QP selecting a bare noun in SpecQP and merging to little *q* to form the complex quantifier *naltri dó*, which concords for gender and number features with the bare DP in SpecQP. In (42b), we propose a parallel structure for *naltri pò*, with the minimal difference in the category of *pò*, which is a functional quantity noun according to Cardinaletti, Giusti (2025). The FqN *pò* selects an indefinite DP with the overt indefinite determiner *de* in SpecFqN. The FqN remerges with little *q* forming a complex quantifier that retains the selectional features of *pò* and the concord feature of *naltri*. In (42c), we give the structure of non-concording *naltro pò* in which *naltro* is the complex indefinite determiner modifying the FqN *pò*:

(42) a. $[_{qP}\ [_{q}\ naltri{+}dó]\ [_{QP}\ [_{DP}\ 0\ fioli]\ [_{Q'}\ [_{Q}\ dó]]]]$
b. $[_{qP}\ [_{q}\ naltri{+}pò]\ [_{FqNP}\ [_{DP}\ de\ D\ [_{NP}\ fioli]]]\ [_{FqN'}\ [_{FqN}\ pò]]]]$
c. $[_{DP}\ [_{D}\ naltro]\ [_{FqNP}\ [_{FqN}\ pò]\ [_{FqNP}\ [_{DP}\ de\ D\ [_{NP}\ fioli]]]\ [_{FqN'}\ [_{FqN}\ pò]]]]]$

## 5 Conclusions

*Altro* in Anconetano is only present as a borrowing from Italian. Anconetano does not display the adjective *altro*, either prenominal or postnominal. The occurrences of *altro* in Anconetano are found as parts of complex determiners or quantifiers, namely:

- the proximate demonstrative *staltro*;
- the distal demonstrative *qulaltro,* which has an overabundant paradigm;
- the definite determiner *jaltri*, which displays a defective paradigm;
- the indefinite determiner *naltro/nantro*, which can also function as an existential quantifier and is the only one displaying /l/ nasalization.

Unlike in Italian, none of these forms can be segmented. For this reason, we represented them as orthographic units.

Also, unlike Italian, *naltro/nantro* is possible in the plural, confirming that it is not a sequence of an indefinite article and a prenominal adjective *altro*. Plural *naltre/naltri* displays the following properties:

- For all speakers, it forms a complex quantifier with any cardinal number.
- For some speakers, it can be an autonomous determiner or quantifier.
- For many speakers, it can form a complex quantifier with the quantity noun *pò*.
- For some speakers, it can form a complex quantifier with *poghi* 'few' (but not with *tanti* 'many') crucially in the order <'other' Q>, which is the same order displayed with the cardinal and with the functional noun *pò* and not the order found in Italian.

This short paper zooming in on a niche of Italoromance, as is the morphosyntax of 'other' in a variety belonging to the 'area perimediana', provides food for thought on some general issues.

Considering both the distance between Italian and individual Italoromance varieties, and the distance across neighboring local varieties, further dialectological research should pin down the forms and positions of complex determiners and quantifiers, and

the possibility of plural 'another' across non-standard Italoromance varieties.

Our study attests to the vitality of Anconetano, an under-resourced local variety with low prestige among both its speakers and the surrounding linguistic area. Our consultants were able to identify grammatical and ungrammatical stimuli, thereby distinguishing the effects of contact with Italian from those of more genuine Anconetano expressions.

Finally, our analysis of complex quantifiers formed with *pò* suggests a grammaticalization path from a functional quantity noun to a complex quantifier that has never been observed or envisaged before.

## Bibliography

AIS: Jaberg, K.; Jud, J. (1928-40). *Sprach- und Sachatlas Italiens und der Südschweiz*, 8 voll. Zofingen: Ringier. https://doi.org/10.2307/410191.

Brugè, L. (2018). "*Otro*: Consideraciones a favor de su no inclusión en la categoría Determinante". *Borealis*, 7(2), 109-34. https://doi.org/10.7557/1.7.2.4582.

Brugè, L.; Giusti, G. (2021). "Some Notes on Outro in Portuguese". *Revista de Estudos Linguísticos da Universidade do Porto - N.º Especial*, 441-71. https://doi.org/10.21747/16466195/lingespa20.

Brugè, L.; Giusti, G. (2022). "Romanian Alt in a Pan-Romance Perspective". Alboiu, G.; Isac, D.; Nicolae, A.; Tanase-Dogaru, M.; Tigau, A. (eds), *A Life in Linguistics. A Festschrift for Alexandra Cornilescu on her 75th birthday*, 111-21. Bucharest: Editura Universităţii din Bucureşti.

Brugè, L.; Giusti, G. (2025). "A Protocol for the Syntax of 'Other' in Indefinite Nominal Expressions Across Romance Languages". Amaral, P. (ed.), Syntax and Semantics. Other: Ambiguity, Constraints, vol. 45, 25-62. Leiden; Boston: BRILL. https://doi.org/10.1163/9789004744196_003.

Cardinaletti, A.; Giusti G. (2006). "The Syntax of Quantified Phrases and Quantitative Clitics". Everaert, M.; van Riemsdijk, H. (eds), *The Blackwell Companion to Syntax*, vol. 5, ch. 71. London: Blackwell. https://doi.org/10.1002/9780470996591.ch71.

Cardinaletti, A.; Giusti, G. (2015). "Cartography and Optional Feature Realization in the Nominal Expression". Shlonsky, U. (ed.), *Beyond Functional Sequence. The Cartography of Syntactic Structures,* vol. 10, 151-72. Oxford; New York: Oxford University Press. https://doi.org/10.1093/acprof:oso/9780190210588.003.0009.

Cardinaletti, A.; Giusti, G. (2016). "The Syntax of the Italian Indefinite Determiner *dei*". *Lingua*, 181, 58-80. https://doi.org/10.1016/j.lingua.2016.05.001.

Cardinaletti, A.; Giusti G. (2017). "Quantified Expressions and Quantitative Clitics". Everaert M.; van Riemsdijk, H. (eds), *The Wiley-Blackwell Companion to Syntax,* vol. 4, 3409-69. Hoboken, NJ: John Wiley & Sons. https://doi.org/10.1002/9781118358733.wbsyncom063.

Cardinaletti, A.; Giusti, G. (2025). "The Cartography of Quantity Nouns in Italian". Baunaz, L.; Bocci G.; Nevins, A. (eds), *The Ziggurat of Grammar. In Honor of Ur Shlonsky*, 279-302. Amsterdam: Benjamins. https://doi.org/10.1075/lfab.20.14car.

Cerruti, M.; Regis, R. (2020). *Italiano e Dialetto*. Roma: Carocci.

Cinque, G. (2015). "A Note on 'Other'". Brandner, E.; Czypionka, A.; Freitag C.; Trotzke, A. (eds), *Charting the Landscape of Linguistics*. *Webschrift for Josef Bayer*, 22-7. Konstanz: Universität Konstanz.

Cornilescu, A.; Nicolae A. (2011). "On the Syntax of the Romanian Indefinite Pronouns *unul* and *altul*". Zafiu, R.; Uşurelu, C.; Bogdan-Oprea, H. (eds), *Limbă română – Ipostaze ale variaţiei lingvistice*, 67-94. Bucharest: Editura Universităţii din Bucureşti.

Eguren, L.; Sánchez, C. (2004). "Contrast and Addition in Romance: A Case Study in Microvariation". Auger, J.; Clancy, C.J.; Vance, B. (eds), *Contemporary Approaches to Romance Linguistics: Selected papers from the 33rd Linguistics Symposium on Romance Languages. Bloomington, Indiana, April 2003*, 159-76. Amsterdam: Benjamins. https://doi.org/10.1075/cilt.258.09egu.

Giusti, G. (2021). "A Protocol for Indefinite Determiners in Italian and Italo-Romance". Ihsane, T. (ed.), *Disentangling Bare Nouns and Nominals Introduced by a Partitive Article*, 262-300. Amsterdam: Brill. Syntax & Semantics 43. https://doi.org/10.1163/9789004437500_009.

Loporcaro, M.; Paciaroni, T. (2016). "The Dialects of Central Italy". Ledgeway, A.; Maiden M. (eds), *The Oxford Guide to the Romance Languages*. Oxford: Oxford University Press, 228-45. https://doi.org/10.1093/acprof:oso/9780199677108.003.0015.

Rizzi, L. (1979). "Teoria della traccia e processi fonosintattici". *Rivista di Grammatica Generativa* 4, 165-81.

Rohlfs, G. (1966). *Grammatica storica della lingua italiana e dei suoi dialetti. Vol. 1 Fonetica*. Torino: Einaudi. https://doi.org/10.2307/3726157.

Thornton, A.M. (2019). "Overabundance in Morphology". *Oxford Research Encyclopedia of Linguistics.* https://doi.org/10.1093/acrefore/9780199384655.013.554.

Tisato, G. (2009). NavigAIS. AIS Digital Atlas and Navigation Software. https://navigais.pd.istc.cnr.it/.

Van Peteghem, M. (1999). "L'indéfini 'autre': déterminant ou adjectif? Etude comparée français- espagnol-italien-roumain". Cahiers de l'Institut de linguistique de Louvain, 25(1/2), 235-50. https://doi.org/10.2143/cill.25.1.2002581.

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# Accounting for Semantic Micro-Variation in the Interpretation of the Conditional in Spanish and Catalan

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**Abstract** Sentences with the simple conditional in Spanish (Sp. *cantaría*) and Catalan (Cat. *cantaria*) share functions but differ significantly: Spanish can express conjecture about past situations, while most Catalan varieties do not allow this (Sp.: *Serían las tres*. Cat.: **Serien les tres*). This paper explains the contrast through micro-parametric variation, proposing that Spanish and Catalan share a common core meaning but differ in additional micro-parameters that determine the location of eventualities. This approach provides a principled and coherent explanation for the observed semantic contrasts.

**Keywords** Conditional. Spanish. Catalan. Procedural meaning. Micro-parameters.

**Summary** 1 Introduction. – 2 Background. – 3 Accounting for Semantic Micro-Variation. – 4 Extensions. – 5 Conclusions.

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## 1 Introduction

As is well known, Spanish and Catalan conditionals (Sp. *cantaría*, Cat. *cantaria*, 'I would sing') share many uses, such as future-in-the-past, hypothetical, attenuative/polite and reportative readings (see §2.1). However, a key difference is that Spanish can express the speaker's conjecture about a past situation, whilst this is ungrammatical in (most varieties of) Catalan. This contrast is illustrated in (1) and (2), intended as responses to the question "What time was it when those things happened?".

(1) *Serían las tres.* (Sp.)

(2) **Serien les tres*. (Cat.)
'It was probably three o'clock.'

This intriguing fact highlights that, although Spanish and Catalan are closely related languages with similar morphosyntactic features in their conditional forms (§2), the conjectural reading appears only in Spanish. This raises questions about why this variation exists; specifically, how different interpretations relate to Tense semantics and whether the range of variation can be systematically constrained. These issues are examined through the lens of micro-parametric variation in the framework of Tense semantics (Escandell-Vidal 2010; 2014; 2022; 2024). The main hypothesis is that the divergence arises from differences in the dimensions in which eventualities can be located.

The paper is organised as follows: Section 2 offers the descriptive and theoretical background. Section 3 presents the proposed analysis and provides supporting evidence. Section 4 briefly discusses some implications. Finally, Section 5 summarises the main conclusions.

## 2 Background

### 2.1 Facts

Conditionals are an innovation in Romance verbal systems.[1] In Spanish, Catalan, French and Portuguese, they derive from the enclisis of the ancient forms of the imperfective past tense of the auxiliary HABERE ('have') to the infinitive: CANTARE HABEBAM > *cantar + hía* > *cantaría*.[2,3] Etymologically, the conditional relates to both the future (formed from the periphrasis of the present of HABERE plus the infinitive: CANTARE HABEO > *cantar + he* > *cantaré*) and the imperfective past, a relative tense requiring an anchor in a past situation.

The interpretations of the conditional in Spanish and Catalan are usually grouped into two main categories: temporal and modal readings.[4]

According to RAE/ASALE (2009; 2025, §§23.15.j-23.15.l), the Spanish conditional of conjecture (also called the 'conditional of probability' or 'epistemic conditional') expresses a speculative judgment about a past eventuality (*Tendría entonces treinta años*, 'He would have been thirty years old at that time'). It situates non-actual situations within a past-oriented frame, often made explicit by subordinating verbs (*Supongo que tendría unos cuarenta y cinco años a la sazón*, 'I suppose he would have been about forty-five years old at the time'). The use and syntactic distribution of the conditional of conjecture parallel those of the future of conjecture, differing only in temporal orientation.

**1** The classification of the conditional as either a tense of the indicative or a different mood remains debated. The main reference grammars of Spanish (RAE/ASALE 2009, §23.15) and Catalan (IEC 2016, §24.4.8) favour the consideration as a form of the indicative based on its occurrence in environments requiring the indicative (e.g., *Prometió que iría, 'S*/he promised s/he would go'), not the subjunctive (e.g., *Deseamos que {*$^{OK}$*fueran*/**irían}*, 'We wished that they would go'). This supports the indicative status, though it only proves that it is not a subjunctive form. However, like the future tense, it cannot appear in the protasis of hypothetical constructions due to its prospective nature. While both grammars indicate that it is related to hypothetical situations, they also note it is not the only tense that can have modal values along with temporal ones. Italian grammars, by contrast (Bertinetto 1991), favour the modal option. Here I leave this question aside.

**2** Pérez Saldanya 2003; Squartini 2004; Company 2006; RAE/ASALE 2009; 2025; Vatrican 2016; IEC 2016; Rivero, Arregui 2018; Rasico 2020; Bouzouita, Sentí 2022.

**3** The Italian conditional, by contrast, comes from the perfective past tense: CANTARE HABUI > *cantare + ei* > *canterei*, which has important consequences for the availability of interpretations. See Rivero, Arregui 2018. I will not pursue this issue here.

**4** RAE/ASALE 2009, 2025, §23.15; IEC 2016, §24.4.8; Vatrican 2016; Wheeler et al. 1999, §17.1.5; Pérez Saldanya 2002; Rivero, Arregui 2018; Lara Bermejo 2021.

Historically, normative grammars of Catalan rejected conjectural readings as Spanish borrowings (Wheeler et al. 1999, 354). GBU (2019, §27.5) banned their use in formal registers: "In formal registers, the simple conditional for probability or concession in the past is not acceptable. Modal verbs *deure*, 'must' and *poder*, 'can' or adverbs of probability or possibility are used instead". Recent updates (GBU online 2025, §27.5) make this a recommendation. This change is marked as an official modification.

## 2.2 Brief Literature Review

Various proposals exist in the literature regarding the features that define the semantics of conditionals.

For RAE/ASALE (2009; 2025, §23.15o), the most distinctive feature of the conditional is its capacity to denote a state of affairs explicitly or implicitly linked to non-actual situations. These include past scenarios, such as in *Me dijo que vendría* ('He told me he would come') and desires, as in *Me encantaría viajar a la Patagonia* ('I would love to travel to Patagonia'). Similarly, sentences like *Se lo preguntaría, pero no me atrevo* ('I would ask him/her, but I don't dare') express unrealised intentions constrained by external or internal factors. Finally, conditional clauses, such as *Te lo daría si lo tuviera* ('I would give it to you if I had it'), emphasise their dependence on hypothetical premises.

Along similar lines, Vatrican (2016, 10) identifies two features of the conditional: possibility and dependence. The conditional both implies the potential realisation of an action (i.e., the described event is not entirely hypothetical or impossible) and indicates that the realisation of the action is explicitly dependent on another action or situation.

Azzopardi (2016) identifies two temporal features: [+posteriority] and [+past]. The [+posteriority] feature is shared with the future tense, and places the event described as occurring after a reference point. The [+past] feature relates the eventuality to a prior temporal context, even when referring to hypothetical or non-actual scenarios. In addition, two aspectual features are included: [+tension], which presents the event 'in accomplishment' and [±incidence], allowing for either a partial or global perspective.

The proposal in Rivero and Arregui (2018) is compositional, involving three components: PAST (encoding a past topic situation), FUT (a universal future operator with epistemic or temporal 'flavour'), and IMPF (a universal imperfective operator). The authors focus on cross-linguistic variation in the Romance family, though they do not consider Catalan. They note that differences relate to either the morphological composition of the tense (imperfective in Spanish, French and Portuguese; perfective in Italian) or variation in

the categories FUT and IMPF. In Spanish, conjectural readings result from the interaction of PAST (a referential pronoun encoding a past topic situation), FUT (an epistemic modal quantifying over situations compatible with what is known) and IMPF (an imperfective operator with flavours like ongoing or event-inertia).[5]

As for Catalan, the conditional is primarily described in modal terms in Wheeler et al. (1999, §17.1.5): it appears in the consequence clause when the verb in the 'if' clause is not in the present tense. Temporal uses (future-in-the-past) and probability from a past perspective are further extensions of that value.

Pérez Saldanya (2002, §22.5.9), by contrast, favours a characterisation in temporal terms, indicating that the situation expressed by the verb is posterior to a point of reference in the past (see also IEC 2016, §24.4.8; Rigau, Pérez Saldanya 2020). Modal values are stylistic variations, as those occurring in the apodosis of conditional *irrealis* or in implicit conditions related to the present. Nevertheless, these modal uses (counterfactual, surprise, rejection, epistemic, concessive) are more frequent than the temporal value (see also Sentí 2022).

In the comparison between Spanish and French – a language, like Catalan, lacking conjectural readings –, Rivero and Arregui (2018) provide only a descriptive answer: the French future operator (FUT) does not standardly allow an epistemic (i.e., conjectural) reading, hence the conditional does not allow for it either: "Given that inferential readings of conditionals combine a FUT with an epistemic accessibility relation and IMPF, such readings are expected to be absent in French, where epistemic accessibility is not standardly available to FUT" (Rivero, Arregui 2018, 326). However, they do not explain why this occurs.

## 3 Accounting for Semantic Micro-Variation

The literature identifies two semantic properties defining the conditional: past and posteriority, and explores how context influences interpretation choices. Yet the key issue remains: why are conjectural

**5** This is the explanation they provide for the example *Elena estaría contenta* in its inferential interpretation with an ongoing flavour (Rivero, Arregui 2018, 325)
Elena estaría contenta (ayer).
[past$_i$ [ FUT$_{EP}$ [IMPF$_{ongoing}$ [Elena V$_{estar}$ contenta]]]]
The sentence is true iff
∀s': s' is an epistemic alternative to s$_i$,
∃s": s$_i$ ≤$_m$ s" & s" ≤ s' &
∀s'": s'"< s", Elena is happy in s'",
defined only if s$_i$ temporally precedes the speech situation in c.

interpretations possible in Spanish but not in all Catalan varieties? This is the gap I want to address. My main questions are: i) How do different interpretations relate to tense semantics? and ii) Can the range of variation be systematically constrained?

## 3.1 A Framework for Tense Semantics

The idea that Tense expresses the relation between eventualities and specific points and intervals along the timeline is widespread in popular thinking and has also played a central role in most grammatical approaches. Though appealing, this view raises concerns about conflating a functional category with a conceptual one.

Following Blakemore (1987), Escandell-Vidal, Leonetti (2011), de Saussure (2011) and Hinzen (2015), I assume that Tense morphemes do not convey concepts; rather, they provide abstract procedural instructions that constrain inferential processes of interpretation. Hinzen, Martin, Wiltschko (2024) argue that grammatical categories, such as Person and Tense, are unique to language and lack non-grammatical analogues. The grammatical categories of Past, Present and Future, as expressed morphologically in a language, do not correspond to the folk concepts of PAST, PRESENT and FUTURE. "Tense is a specific grammatically mediated way of referring to events. Both forms of reference [Person and Tense] are deictic in nature, reflecting grammatical anchoring of information in context" (Hinzen, Martin, Wiltschko 2024, 1033). Tense is a deictic category (rooted in the speaker's coordinates) that anchors eventualities to the Here and Now of the speech event (Hinzen 2015).

This study adopts the model from Escandell-Vidal (2010; 2014; 2022; 2024), which details the semantic structure of verbal tenses and their interpretations. The model relies on three principles: compositionality, monosemy, and underspecification. Compositionality states that the meaning of an inflected verb results from combining the semantic contributions of its morphological parts, each providing a stable instruction (Escandell-Vidal 2010; 2024; Rivero, Arregui 2018). Monosemy posits that each feature offers a single, context-independent instruction, excluding polysemy. Underspecification indicates that grammatical meaning offers abstract constraints rather than fully specified meanings, allowing for pragmatic interpretation (Frisson 2009; Egg 2010).

## 3.2 Layers of Meaning

Under this view, verbal tenses encode abstract interpretive instructions – conditions that every interpretation must satisfy.

These instructions are invariant and cannot be overridden, and they must be anchored to a reference frame. Interpretive variation arises precisely at this point, not from ambiguity in the encoded meaning, but from the different domains in which the same instruction can be anchored and satisfied.

An adequate semantic account requires distinguishing two complementary layers:

- Core meaning, which contains the semantic features associated with the morphological structure of the tense. The ontology of this layer consists of three types of situations and two binary relations.
- Semantic micro-parameters, which impose additional constraints on the domains in which the encoded instruction can be realised. These domains are defined within a structured three-dimensional space.

At the core layer, the semantics of verbal tenses is modelled as a set of binary relations among three situations, drawing on situation-based approaches developed in the literature on evidentiality (Nikolaeva 1999; Speas 2008; Kalsang et al. 2013). This relational framework goes beyond purely temporal accounts and captures the conditions under which tense morphology constrains access to information.

The three situations and their associated relationships are as follows:

i. Situation of Evaluation (SE): The situation of which the proposition (*p*) is true.
ii. Situation of Information (SI): The situation in which the speaker came to know that the proposition (*p*) holds.
iii. Situation of Discourse (SD): The speech event itself, which includes the time and context of the utterance.

The relations defined over these situations are precedence (ordering between situations) and inclusion or coincidence (if one situation is contained in, or overlaps with, another).

Semantic micro-parameters restrict the domains where relations hold. These domains form a three-dimensional space, crucial when considering the limits of classical tense models. In the Reichenbachian framework, Tense involves relations among E (event), R (reference), and S (speech) along a single temporal axis. Though this captures basic temporal structure, it cannot account for modal and evidential distinctions. Adding modality introduces a second dimension, representing possible worlds as parallel timelines linked to the actual world via accessibility relations (Kaufmann et al. 2006). Explaining evidential and perspectival effects requires a further extension, incorporating the speaker's perceptual coordinates as an additional dimension. The Speaker Perceptual Field (SPF) (Faller

2004) includes locations and situations accessible to the speaker at a specific time. From this view, the 'real world' is a structured set comprising the perceptual fields of different individuals. This predicts that eventualities outside a speaker's perceptual field belong to a separate domain, similar to other times or worlds.

The resulting 3D model – temporal, modal, and spatial/perceptual – allows accessibility relations to be defined not only between times and worlds, but also between the perceptual spaces of different individuals. This provides the structural basis for evidential and conjectural interpretations within a unified semantic framework.

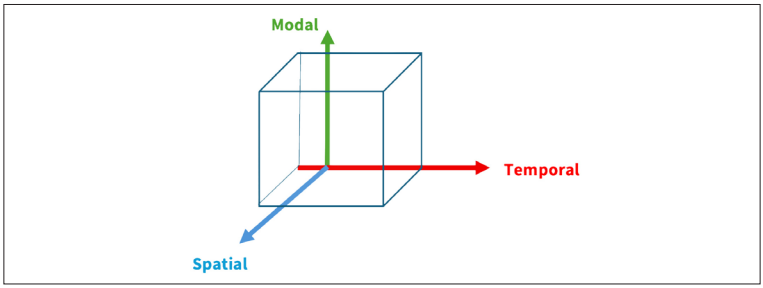



**Figure 1** A 3D space for situations

Within this architecture, core meaning consists of a stable set of shared semantic features that account for cross-linguistic similarities in tense interpretation. Semantic micro-parameters introduce a controlled layer of flexibility: they do not alter the core instruction but regulate how that instruction can be satisfied. Their function is to impose additional constraints on the dimensions along which a situation may be legitimately located. A language may, for instance, restrict the interpretation of a given tense to the temporal axis, thereby licensing only temporal readings; other languages may block access to the spatial dimension, allowing temporal and modal uses only and excluding inferential or conjectural interpretations.

This approach foregrounds the link between morphological form and encoded features, underscoring the grammatical and rule-governed nature of Tense. It is compatible with a procedural view of functional categories, in which morphology provides a toolkit for building interpretations through compositional and context-sensitive processes. A relatively simple architecture thus accounts for cross-linguistic diversity while sharply constraining the space of possible interpretations.

## 3.3 The Semantics of the Conditional

The conditional in Spanish and Catalan, as well as in French and Portuguese, combines properties of the imperfective past and the future, in line with previous accounts (§2; Escandell-Vidal 2010; 2014; 2022; 2024). Its core temporal semantics[6] can therefore be stated as follows:

(3) The conditional. Core semantics

a. SI < SD (Past feature)

b. SI ∩ SE = Ø (SI⊄SE & SE⊄SI) (Anti-experientiality feature)

Clause (a) encodes the past feature inherited from the imperfect, imposing an anteriority relation between the situation of information acquisition (SI) and the discourse situation (SD). The speaker's knowledge of the eventuality is thus anchored in a time prior to the utterance, within the speaker's perceptual trace. Clause (b) encodes anti-experientiality, a feature shared with the future: the eventuality situation (SE) does not overlap with SI and is therefore inaccessible to the speaker's direct experience.

Within the three-dimensional space introduced above, there are exactly three ways of satisfying this disjunction requirement:

1. Temporal disjunction: SE does not overlap with SI because it is in a different temporal interval, typically posterior to SI, which makes SE inaccessible from SI. The formula imposes no further constraint on the relation between SE and SD: although SE is future with respect to SI, it may be anterior, simultaneous or posterior to SD.
2. Modal disjunction: SE does not overlap with SI because it is in a possible world distinct from the speaker's actual world. As a result, it cannot intersect with the SI anchored in the speaker's perceptual space. This configuration underlies conditional, counterfactual and speculative interpretations.
3. Spatial disjunction: SE does not overlap with SI because it is in a perceptual space external to that of the speaker. Inaccessibility arises from lack of perceptual access: SE occurs outside the speaker's field, giving rise to inferential or conjectural interpretations.

**6** In Spanish and Catalan (like in French and Portuguese), the conditional also contains an aspectual feature of imperfectivity, focusing on the ongoing or unbounded nature of the eventuality. Since this feature is not directly relevant to the contrast examined in this paper, I will not consider it here.

The core semantics of the conditional imposes, therefore, two invariant requirements: SI must precede SD, and SE must be disjoint from SI. These constraints are shared across Romance languages. The three-dimensional space provides the domain in which these requirements are satisfied: while SI is necessarily anchored in the temporal dimension, SE may be in any of the three dimensions. Cross-linguistic variation arises from further constraints on which dimensions are licensed for localising SE in each language.

## 3.4 Conjectural Readings

As noted, Spanish and Catalan differ significantly in the availability of conjectural readings (Sp. *Serían las tres*. Cat. **Serien les tres*, 'It was probably three o'clock.'). Within the present framework, conjectural readings arise when the anti-experientiality requirement (SI∩SE=Ø) is satisfied along the spatial dimension. The relevant eventuality lies outside the speaker's perceptual field, which both prevents direct experiential access and triggers inferential processes based on indirect evidence, general world knowledge and contextual cues. In these cases, the information source is the speaker, and the mode of access is abductive inference, oriented towards identifying the most plausible explanation for an unobserved situation.

The contrast between Spanish and Catalan exists at the level of semantic micro-parameters, which regulate the dimensions along which the semantic instructions of the conditional can be satisfied. Both share the core meaning of the conditional, but they differ in the domains they allow for its validation. Spanish (and Portuguese) licenses the spatial dimension as a valid domain for satisfying the anti-experientiality requirement, enabling speakers to locate the eventuality outside their perceptual field and rely on indirect, inferential access. This makes conjectural readings grammatical and structurally grounded.

Catalan (like French), by contrast, does not license the spatial dimension for this verbal form. Thus, the anti-experientiality requirement can only be satisfied along the temporal or modal axes, systematically blocking conjectural interpretations. The lack of conjectural readings is not accidental but results from a grammatical constraint on the available domains.

Crucially, this contrast is about the structural options for satisfying the conditional's instructions, not its semantic content. Micro-parameters do not change core semantics but determine where instructions can be satisfied. Only languages recognising the spatial dimension as a valid domain can produce conjectural readings.

Importantly, micro-parameters are not immutable. Varieties like Valencian Catalan, allowing conjectural conditional uses,

show that diachronic change and contact-induced reconfiguration can expand the set of licensed dimensions. These shifts reflect systematic grammatical change rather than marginal variation: the spatial dimension becomes a legitimate domain for satisfying the disjunction requirement between SI and SE. Such micro-parametric reconfigurations lead to systematic grammar changes, yielding controlled evolution within the verbal system.

This variation maintains the core semantic structure of the conditional, with stable requirements across Romance languages despite surface differences. The semantic content remains constant; what varies is the interpretive domains each grammar licenses. The model explains cross-linguistic stability and controlled variation, showing how a shared semantic core results in diversity through parametric choices in licensing domains. This clarifies patterns of variation in conditional interpretation.

## 4 Extensions

### 4.1 The Conjectural Readings of the Future

The absence of conjectural readings of the conditional in some Catalan varieties sheds light on the parallel absence of such readings in the simple future. Both the future tense and the conditional share a core semantic requirement of anti-experientiality, which enforces a disjunction between SI and SE. This constraint ensures that SE is not directly accessible in the speaker's perceptual field, thereby excluding interpretations based on direct experience.

In varieties where the spatial dimension is not a legitimate interpretive domain, conjectural readings are systematically blocked. Consequently, the anti-experientiality requirement restricts possible interpretations. Catalan appears to further constrain modal readings of the future tense (see Escandell-Vidal 2024). By contrast, languages like Spanish (and Portuguese), which license the spatial dimension, allow speakers to invoke others' perceptual fields, enabling conjectural readings of both the conditional and the future tense.

Thus, the absence of conjectural interpretations in Catalan varieties can be directly traced to micro-parametric settings that exclude the spatial dimension from the set of legitimate interpretive options.

### 4.2 A Simpler Architecture

The model presented here offers a simpler, more principled, and better-motivated account of tense semantics than alternative proposals,

such as Rivero and Arregui (2018). While Rivero and Arregui rely on notions of 'flavour' to distinguish readings – e.g., epistemic, temporal, conditional and imperfective –, the concept remains underdefined. The idea of 'flavour' is sometimes equated with accessibility, but no proper characterisation is provided. As it stands, the proposal seems to rely heavily on a *post hoc* categorisation of the data, rather than emerging from a systematic understanding of the underlying phenomena. There is no clear explanation for how many 'flavours' there are, why they exist, or how they relate to each other. This makes the model harder to apply and raises potential concerns about its predictive power.

By contrast, my proposal relies on a simpler architecture of core relations and semantic micro-parameters that are cross-linguistically valid. The three dimensions – temporal, modal, and spatial – are not arbitrary constructs: they are rooted in well-established and independently motivated principles of cognition. This provides a more coherent, unified framework that captures all relevant data within a language, while also explaining cross-linguistic variation in a more transparent and predictable manner.

The model integrates with existing linguistic theories, particularly those focusing on the grammar-pragmatics interface. The approach can be easily extended to the analysis of other languages and to the explanation of diachronic change. It also presents an explicit proposal about the range of possible variation in the instructions encoded by grammatical categories across human languages, highlighting how micro-parametric settings shape interpretive possibilities without altering the invariant core semantics.

## 5 Conclusions

The approach to the semantics of the conditional presented here provides a principled explanation for why Spanish, but not most varieties of Catalan, allows conjectural readings. In Spanish, the spatial dimension is licensed as a valid domain for satisfying the anti-experientiality requirement, enabling speakers to locate eventualities outside their perceptual field and to rely on indirect, inferential access. In contrast, Catalan excludes the spatial dimension, systematically blocking conjectural interpretations.

The core meaning of the conditional, grounded in its morphological configuration, encodes past anti-experientiality. This core meaning is shared across Romance languages that exhibit the same morphological components, capturing their fundamental linguistic similarities. A layer of semantic micro-parameters further constrains how the core instruction can be fulfilled in each language, specifying the legitimate dimensions available in a given variety. Interpretation

occurs within a 3D space – temporal, modal, and spatial – which provides the structural space in which the anti-experientiality requirement is satisfied. This mechanism explains both synchronic differences – such as the presence or absence of conjectural readings – and diachronic shifts, as in varieties like Valencian where spatial interpretations have become licensed over time.

This proposal offers a simple semantic architecture with strong predictive power, capable of accounting for both general aspects of meaning and language-specific differences. The presence or absence of conjectural readings across languages is systematically explained using a single, well-motivated set of categories, ensuring theoretical consistency. The approach offers a monosemic approach that supports compositionality. The stability of the core meaning across languages is complemented by the flexibility of micro-parameters, which account for variation and provide a coherent explanation for diachronic change. The proposal provides a restrictive framework for cross-linguistic comparison and clarifies the interface between grammatical encoding, pragmatic enrichment, and cognitive constraints.

## Bibliography

Azzopardi, S. (2016). "Análisis pragmático del uso temporal, del uso epistémico y del uso retrospectivo del futuro y del condicional en español moderno". Gaspar García, E. (ed.), *Temps, mode et aspect en espagnol*. Rouen: ERIAC, 203-24. https://eriac.univ-rouen.fr/wp-content/uploads/2017/04/12TMAp205Azzopardi.pdf.

Bertinetto, P.M. (1991). "Il verbo". Renzi, L.; Salvi, G.; Cardinaletti, A. (a cura di), *Grande grammatica italiana di consultazione*, vol. 2. Bologna: il Mulino, 13-161.

Blakemore, D. (1987). *Semantic Constraints on Relevance*. Oxford: Blackwell.

Bouzouita, M.; Sentí, A. (2022). "La gramaticalización del futuro y el condicional en el iberorromance del siglo XIV a partir de traducciones bíblicas paralelas: el caso del castellano y el catalán antiguos". Enrique-Arias, A. (ed.), *Traducción bíblica e historia de las lenguas iberorrománicas*. Berlin: De Gruyter, 243-74. https://doi.org/10.1515/9783110770766-010.

Company, C. (2006). "Los futuros y condicionales". Company, C. (ed.), *Sintaxis histórica de la lengua española*. Ciudad de México: UNAM / Fondo de Cultura Económica, 349-422.

Cunha, L.F. (2023). "Towards a Unified Analysis of Past and Future Tenses: The Case of European Portuguese". *Isogloss*, 9, 1-38. https://doi.org/10.5565/rev/isogloss.308.

Davis, C.; Potts, C.; Speas, M. (2007). "The Pragmatic Values of Evidential Sentences". Gibson, M.; Friedman, T. (eds), *Proceedings of the 17th Semantics and Linguistic Theory Conference.* Ithaca, NY: CLC Publications, 71-88. https://doi.org/10.3765/salt.v17i0.2966.

Egg, M. (2010). "Semantic Underspecification". *Language & Linguistics Compass*, 4, 166-81. https://doi.org/10.1111/j.1749-818X.2010.00188.x.

Escandell-Vidal, V. (2010). "Futuro y evidencialidad". *Anuario de Lingüística Hispánica*, 26, 9-34. http://uvadoc.uva.es/handle/10324/9480.

Escandell-Vidal, V. (2014). "Evidential Futures. The Case of Spanish". de Brabanter, P. et al. (eds), *Future Times, Future Tenses*. Oxford: OUP, 219-46. https://doi.org/10.1093/acprof:oso/9780199679157.003.0010.

Escandell-Vidal, V. (2022). "The Semantics of the Simple Future in Romance: Core Meaning and Parametric Variation". Baranzini, L.; de Saussure, L. (eds), *Aspects of Tenses, Modality and Evidentiality*. Leiden: Brill, 9-31. https://doi.org/10.1163/9789004468184_003.

Escandell-Vidal, V. (2024). "Semantics and Micro-Parametric Variation. The Simple Future in Ibero-Romance". *Annali di Ca' Foscari. Serie Occidentale*, 58, 223-68. https://doi.org/10.30687/AnnOc/2499–1562/2024/12/013.

Escandell-Vidal, V.; Leonetti, M. (2011). "On the Rigidity of Procedural Meaning". Escandell-Vidal, V.; Leonetti, M.; Ahern, A. (eds), *Procedural Meaning: Problems and Perspectives*. Leiden: Emerald, 81-102. https://doi.org/10.1163/9780857240941_005.

Faller, M. (2004). "The Deictic Core of 'Non-Experienced Past' in Cuzco Quechua". *Journal of Semantics*, 21, 45-85. https://doi.org/10.1093/jos/21.1.45.

Foullioux, C. (2006). "Los valores del condicional en francés y su comparación con el español". *Thélème. Revista Complutense de Estudios Franceses*, 21, 63-79. https://revistas.ucm.es/index.php/THEL/article/view/THEL0606120063A.

Frisson, S. (2009). "Semantic Underspecification in Language Processing". *Language and Linguistics Compass*, 3, 111-27. https://doi.org/10.1111/j.1749–818X.2008.00104.x.

GBU, Institut d'Estudis Catalans (2019). *Gramàtica bàsica i d'ús de la llengua catalana.* https://gbu.iec.cat/text/27.5.

Hinzen, W. (2015). "Nothing is Hidden: Contextualism and the Grammar-Meaning Interface". *Mind & Language*, 30, 259-91. https://doi.org/10.1111/mila.12080.

Hinzen, W.; Martin, T.; Wiltschko, M. (2024). "A New Argument for Linguistic Determinants of Human Thought". *Linguistics & Philosophy,* 47, 1027-43. https://doi.org/10.1007/s10988–024–09414–8.

IEC, Institut d'Estudis Catalans (2016). "El condicional i el condicional perfet". *Gramàtica de la llengua catalana*. https://giec.iec.cat/textgramatica/codi/24.4.8.

Kalsang, K. et al. (2013). "Direct Evidentials, Case, Tense and Aspect in Tibetan: Evidence for a General Theory of the Semantics of Evidentials". *Natural Language & Linguistic Theory*, 31, 517-61. https://doi.org/10.1007/s11049–013–9193–9.

Kaufmann, S.; Condoravdi, C.; Harizanov, V. (2006). "Formal Approaches to Modality". Frawley, W. (ed.), *The Expression of Modality*. Berlin: De Gruyter, 71-106. https://doi.org/10.1515/9783110197570.

Kronning, H. (2018). "Epistemic Modality and Evidentiality in Romance: The Reportage Conditional. Semantics and Variation". Guentchéva, Z. (ed.), *Epistemic Modalities and Evidentiality in Cross-Linguistic Perspective*. Berlin: De Gruyter, 69-102. https://www.degruyter.com/document/doi/10.1515/9783110572261/html.

Lara Bermejo, V. (2021). "Futuro y condicional en las lenguas iberorromances: de marca de tiempo a marca de evidencialidad". *Borealis*, 10, 145-62. https://doi.org/10.7557/1.10.1.5753.

Martines, J. (2017a). "El condicional com a marcador epistèmic i evidencial en català antic: el condicional evidencial reportatiu amb verbs de dicció". *Zeitschrift für Katalanistik*, 30, 19-51. https://doi.org/10.46586/ZfK.2017.19–51.

Martines, J. (2017b). "L'émergence des futurs épistémiques romans. L'exemple du catalan médiéval du XIIIème siècle". Baranzini, L. (ed.), *Le futur dans les langues romanes*. Bern: Peter Lang, 133-67. https://doi.org/10.3726/b11370.

Nikolaeva, I. (1999). "The Semantics of Northern Khanty Evidentials". *Journal de la Societé Finno Ougrienne*, 88, 131-59.

Oliveira, T. (2015). "Between Evidentiality and Epistemic Modality. The Case of the Future and the Conditional in European Portuguese". *Belgian Journal of Linguistics* 29, 101-21. https://doi.org/10.1075/bjl.29.05oli.

Pérez Saldanya, M. (2002). "Les relacions temporals i aspectuals". *Gramàtica del català contemporani*. Barcelona: Empúries, 2567-662.

RAE/ASALE, Real Academia Española/Asociación de Academias de la Lengua Española (2009). *Nueva Gramática de la Lengua Española*. Madrid: Espasa.

RAE/ASALE, Real Academia Española/Asociación de Academias de la Lengua Española (2025). *Nueva Gramática de la Lengua Española* (Edición revisada y ampliada). Madrid: Espasa.

Rasico, P.E. (2020). "Early Medieval Catalan". Argenter, J.A.; Lüdtke, J. (eds), *Manual of Catalan Linguistics*. Berlin: De Gruyter, 437-69. https://doi.org/10.1515/9783110450408-017.

Rigau, G.; Pérez Saldanya, M. (2020). "The Simple Sentence". Argenter, J.A.; Lüdtke, J. (eds), *Manual of Catalan Linguistics*. Berlin: De Gruyter, 165-210. https://doi.org/10.1515/9783110450408-007.

Rivero, M.L.; Arregui, A. (2018). "Unconditional Readings and the Simple Conditional Tense in Spanish: Inferentials, Future-Oriented Intentionals, Future-in-the-Past". *Probus*, 30(2), 305-37. https://doi.org/10.1515/probus-2018-0005.

Saussure, L. de (2011). "On Some Methodological Issues in the Conceptual/Procedural Distinction". Escandell-Vidal, V.; Leonetti, M.; Ahern, A. (eds), *Procedural Meaning: Problems and Perspectives*. Bingley: Emerald, 55-79. https://doi.org/10.1163/9780857240941_004.

Sentí, A. (2022). "Evidentiality in Catalan". Wiemer, B.; Marin-Arrese, J.I. (eds), *Evidential Marking in European Languages: Toward a Unitary Comparative Account*, Berlin: De Gruyter, 287-330. https://doi.org/10.1515/9783110726077-007.

Speas, P. (2008). "On the Syntax and Semantics of Evidentials". *Language and Linguistics Compass*, 2, 940-65. https://doi.org/10.1111/j.1749-818X.2008.00069.x.

Speas, M. (2010). "Evidentials as Generalized Functional Heads". Disciullo, A.M.; Hill, V. (eds), *Edges, Heads and Projections: Interface Properties*. Amsterdam: John Benjamins, 127-50. https://doi.org/10.1075/la.156.10spe.

Squartini, M. (2004). "La relazione semantica tra futuro e condizionale nelle lingue romanze". *Revue Romane*, 39, 68-96. https://doi.org/10.1111/j.1600-0811.2004.00004.x.

Vatrican, A. (2010). "La modalité et le «conditionnel de rumeur» en français et en espagnol". *Modèles linguistiques*, 62, 83-94. https://doi.org/10.4000/ml.231.

Vatrican, A. (2013). "El condicional de cortesía en español: la hipótesis como forma de atenuación". Cabedo Nebot, A. et al. (eds), *Estudios de lingüística: investigaciones, propuestas y aplicaciones*. Valencia: Universitàt de Valencia, 469-80. https://hal.science/hal-00830076/document.

Vatrican, A. (2014). "Usos y valores modales del condicional en español". *Archivum* 64, 239-74.

Vatrican, A. (2015). "Evidentiality and Epistemic Modality in the Rumor/Journalistic Conditional in Spanish". *Belgian Journal of Linguistics*, 29, 83-100. https://doi.org/10.1075/bjl.29.04vat.

Vatrican, A. (2016). *El condicional en español*. Madrid: Arco.

Vatrican, A. (2021). "Acercamiento al uso del condicional epistémico en español: tiempo, modalidad y enseñanza". *Revista Nebrija de Lingüística Aplicada a la Enseñanza de Lenguas*, 15(31), 98-123. https://doi.org/10.26378/rnlael1531460.

Veiga, A. (2023) "El llamado «condicional del rumor»: gramaticalmente irreal, no evidencial". *Moenia*, 29. https://doi.org/10.15304/moenia.id9618.

Wheeler, M.; Yates, A.; Dols, N. (1999). *Catalan: A Comprehensive Grammar.* London: Taylor & Francis.

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# Optionality and Variation: Verb-Movement in Old Spanish

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**Abstract** This chapter tackles the question of optionality and variation from the perspective of V(erb)-movement in Romance. After presenting the patterns of verb placement found in modern Spanish, we investigate V-movement in non-V2 embedded environments in old Spanish texts. In addition to filling a gap in the literature, where to date only main clauses have received extensive attention, this study develops a powerful heuristic to assess whether superficial instances of variation constitute a genuine instance of resetting of the V-movement parameter, or whether different causes (viz., a stylistic choice) should be invoked.

**Keywords** Verb-movement. Optionality. Old Spanish. Adverbs. Negation. Auxiliary selection. Participle agreement. DOM.

**Summary** 1 Introduction. – 2 V-Movement in Modern Romance: Types and Correlates. – 3 Verb-mvt and Correlates in Old Spanish. – 4 Conclusions.

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## 1 Introduction

While much attention has been paid to varying patterns of V2 in early Romance, very little is known about verb placement in non-V2 contexts.[1] Here, we address this gap by investigating Verb-movement (V-mvt) across several old Spanish texts. The reasons why this language represents an interesting case study are twofold. First, modern peninsular Spanish exhibits a very low setting of the V-mvt parameter (Schifano 2018, § 3.13), yet no studies have asked whether this is the continuation of a conservative feature or an innovation. Second, modern Spanish shows superficial optionality in verb placement with respect to some low adverbs. However, speaker judgments reveal this optionality is only apparent, inasmuch as V(erb)-Adv(erb) strings represent pragmatically-marked orderings. As such, they are not the output of an optionally higher setting of the parameter, but are derived via focalization of the adverb (Schifano 2018, § 5.1.2; 2026, 525). This raises the question whether the same apparent optionality is observed in earlier stages and, if so, how it is to be analysed. A comparative investigation of two 13$^{th}$-century and one 15$^{th}$-century Spanish texts addresses this empirical gap, combined with an assessment of a number of morphosyntactic phenomena typically correlated with a low setting of the V-mvt parameter (Ledgeway 2020a; 2022), which prove crucial in interpreting an apparent anomalous case of optionality in one of the texts.

## 2 V-Movement in Modern Romance: Types and Correlates

Romance was traditionally assumed to display V-to-I movement in contrast to languages like English (Emonds 1978; Pollock 1989), with the finite lexical verb climbing over VP-adverbs like *souvent/often* in French but not in English.

(1) French
a. Jean fume souvent (*fume).
English
b. John (*smokes) often smokes.

However, a more nuanced cartographic mapping of the internal structure of IP (cf. Cardinaletti 1997; 2004), culminating in Cinque's

**1** We dedicate this chapter to Anna Cardinaletti whose rigorous and insightful work has profoundly advanced and enriched our understanding of syntactic structures and variation.

(1999) seminal work, allows us to investigate the specific landing site of the verb. By comparing the placement of the finite indicative lexical verb with respect to a wide range of adverbs located in the Higher and Lower Adverb Spaces (HAS/LAS; Ledgeway, Lombardi 2005, 83), four different types of 'default' V-mvt can be identified in modern Romance: high, medial, low and very low.[2]

**Table 1** Romance V-mvt

| | |
|---|---|
| high | French, Occitan, Gascon, Romanian$_2$ |
| clause-medial | northern regional Italian, northern Italian dialects |
| low | European Portuguese, southern regional Italian, southern Italian dialects |
| very low | Spanish, Valencian Catalan, Romanian$_1$ |

Here we focus on very low movement in Spanish. Modern Spanish is a very low-movement language where the finite verb in the indicative leaves the *v*-VP, obligatorily occurring to the left of *completamente* (2a) marking the right margin of the LAS, but does not climb higher within the LAS as shown by its position to the right of *casi* (2b). The postverbal placement of low adverbs in the high portion of the LAS is also admitted (cf. bracketed option in 3), but produces a pragmatically-marked interpretation of the adverb (Schifano 2018, § 3.1.3; 2026, 525). Superficial orders such as *conoce ya* are not therefore indicative of a higher case of V-mvt, but represent the output of focusing the adverb in accordance with its marked interpretation. The variation exemplified by (3) is therefore only an apparent case of optionality.

(2) peninsular Spanish

a. Entiendo completamente (*entiendo) lo que dices.
understand.1SG completely the which say.2SG

b. Sergio (*se equivoca) casi se equivoca.
Sergio almost REFL= err.3SG

(3) peninsular Spanish

María (conoce) ya conoce esta historia.
María already know.3SG this story

These distinct settings of the V-mvt parameter do not represent isolated choices, but entail cascading effects manifested in a number of related morphosyntactic phenomena. Glossing over

**2** Cf. Schifano 2015; 2018; Ledgeway, Schifano 2022; 2023a; 2023b; forthcoming a.

details, a broad distinction can be drawn between high-movement varieties of the northern Romània and low-movement varieties of the southern Romània (Ledgeway 2020a; 2022). The former, illustrated by languages such as French, typically combine a high setting of the V-mvt parameter with: (i) retention of non-veridical V-to-C movement (4, 6); (ii) subject clitics (5a) and a dedicated preverbal subject position (5b); (iii) availability of (discontinuous) postverbal negation (5b); (iv) HAVE-BE active-stative split in perfective auxiliation (5b, 6); (v) absence of active participle agreement with in-situ objects (6).

(4) French
Vient-il?
come.3SG=he

(5) (spoken) French
a. *(je) /*(tu) dors /*(il/elle) /*(on) dort
I= you.SG= sleep-1~2SG he/she= one sleep.3SG
/*(vous) dormez /*(ils/elles) dorment (Fr.)
you.PL sleep.2PL they.M/F sleep.3PL
b. Le roi (n') est pas arrivé (/*le roi).
the king NEG be.3SG NEG arrive.PTCP the king

(6) French
As-tu écrit/*-e la lettre?
have.2SG=you.SG write.PTCP.MSG/FSG the.FSG letter.F

Conversely, southern varieties such as Spanish and southern Italian dialects combine a low setting of the V-mvt parameter with: (i) absence of V-to-C movement (7); (ii) differential object marking (DOM) (7) and lack of a dedicated preverbal subject position (8); (iii) Stage I negation (8); (iv) absence of active-stative auxiliary split (9); and (v) active participle agreement with in-situ objects (10).

(7) Spanish
¿Tú has (*tú) visto a Juan?
you.SG have.2SG you.SG see.PTCP DOM Juan

(8) Spanish
No se comieron los niños el pastel.
NEG REFL= eat.PST.PFV.3PL the children the cake

(9) Spanish

| ¿Has | escrito | la | carta? | / He | llegado. |
|---|---|---|---|---|---|
| have.2SG | write.PTCP.MSG | the.FSG | letter.F | have.1SG | arrive.PTCP |

(10) Scorrano, southern Italian dialect (Musio 1995)

| Aggiu | nnutti | ddo | chili. |
|---|---|---|---|
| have.1SG | bring.PTCP.MPL | two | kilos.M |

If the above correlations are correct, a change in the setting of the V-mvt parameter should trigger a cascading effect on the related morphosyntactic phenomena just highlighted. Significantly, these expectations are borne out by several case studies. On the one hand, many Gallo-Romance varieties underwent an endogenous resetting of the V-mvt parameter from low to high, triggering a concomitant shift from Stage I negation to Stages II/III (Ledgeway, Schifano 2023a; 2023b). Similarly, when Rossellonès Catalan moved from a low to a high setting of the V-mvt parameter under the influence of neighbouring French, this was accompanied by a concomitant shift to Stage II/III negation, the development of a French-style active-stative split in perfective auxiliation, a loss of DOM, and a shift towards a rigid word order where all subjects surface preverbally (Ledgeway, Schifano, forthcoming a). On the other hand, Greek varieties spoken in the extreme south of Italy underwent a mirror-image change, moving from a high to a lower setting of the V-mvt parameter triggered by contact with surrounding low-movement southern Italo-Romance varieties. In this case, too, the expected concomitant effects obtain: absence of Stage II/III negation, southern-style patterns of auxiliary selection, reanalysis of an underlying formal syncretism in first- and second-person pronouns as the surface output of DOM, and the lack of a dedicated preverbal subject position (Ledgeway, Schifano, forthcoming b).

In sum, the above correlations provide us with a powerful tool to identify genuine cases of resetting of the V-mvt parameter. Accordingly, when discussing patterns of verb placement across old Spanish, we shall also assess these related phenomena, which prove instrumental in revealing how a case of apparent optionality in V-mvt is, in fact, an illusion.

## 3 Verb-mvt and Correlates in Old Spanish

To address the research questions in §1, we examined the semi-paleographic transcriptions of three old Spanish texts from the *Hispanic Seminary of Medieval Studies*: *Biblia Romanceada* (13th c.),

*Estoria de Espanna* (13th c.), and *Atalaya de las corónicas* (15th c.).[3] For each of these we searched patterns of V-mvt, negation, active perfective auxiliary selection, participle agreement, and DOM. In relation to V-mvt, we manually searched for a selection of high and low adverbs across the entirety of all three texts.[4] The search was restricted to non-V2 embedded contexts featuring a complementizer, followed by an overt (pro)nominal preverbal subject and a finite verb form, either directly preceded or followed by a relevant adverb. In the case of transitive predicates, instances of anteposition of full DP objects were excluded. Below we present the results for each of the phenomena across the three texts.

### 3.1 *Biblia Romanceada*

A pre-Alfonsine translation, the *Biblia romanceada* (henceforth *BR*) is one of the earliest extant Castilian Bibles produced around 1250 (Enrique-Arias 2010, 15). In terms of default V-mvt, *BR* represents a clear case of a low-movement grammar: 31 out of 48 placements involving a relevant low adverb exhibit the order Adv-V (11a). For the remaining 17 opposite orderings (11b), their relatively low frequency matches the situation in modern Spanish (§2). Thus, it is reasonable to extend the same analysis to *BR*, interpreting such orders as involving adverb focalization rather than the output of an exceptional higher placement of the verb. As expected, low V-mvt is accompanied by strict Stage I negation (12).

(11) *BR*, 197r-a

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| a. | assi | que | los | sacerdotes | ya | no | fazien |
| | so | that | the | priests | already | not | do.PST.IPFV.3PL |
| | los | sacrificios | | | | | |
| | the | sacrifices | | | | | |

*BR*, 260r-a

| | | | | | | |
|---|---|---|---|---|---|---|
| b. | ca | yo | fago | siempre | lo | que […] |
| | that | I | do.PRS.IND.1SG | always | that | which |

**3** Cf. https://www.hispanicseminary.org/t&c/bib/index-en.htm, https://www.hispanicseminary.org/t&c/ac/index-en.htm, and https://www.hispanicseminary.org/t&c/cro/index-en.htm.

**4** The data reported below only include results for low adverbs, as the number of suitable high adverbs in the texts examined is extremely limited and our focus was on determining the positioning of the verb within the LAS. Note that our corpus also includes subject relative clauses, traditionally argued to be a very common structural environment for so-called Stylistic Fronting. Reasons of space prevent a discussion of the possible implications for a low V-mvt analysis and why we consider them a suitable testing environment (but see Ledgeway, Schifano 2023a, 161-2).

(12) *BR*, 51r-a

| por | uentura | non | uea | con | sos | oios |
|---|---|---|---|---|---|---|
| for | luck | not | see.PRS.SBJV.3SG | with | his | eyes |

Turning to auxiliary selection, *BR* exemplifies an early active-stative stage where transitives/unergatives (13a) select HAVE and unaccusatives (13b) BE in line with the behaviour observed across medieval Romance (Ledgeway 2012, § 7.3.1.1). As expected, a minority of unaccusative predicates (6 out of 27) exhibit HAVE (14), an incipient change which will eventually lead to generalized HAVE in modern Spanish. Relatedly, the only numerically sufficient pattern of active participle agreement we could extract from the same selection of examples involves in-situ DP objects (15) where agreement remains robustly attested (19 out of 25 examples), exemplifying an early stage consistent with a low-movement grammar.

(13) *BR*, 265r-a

a.

| ha | parido | el | ninno |
|---|---|---|---|
| have.PRS.IND.3SG | give.birth.PTCP.PFV | the | child |

*BR*, 265r-a

b.

| es | nacido | ombre | en | el | mundo |
|---|---|---|---|---|---|
| be.PRS.IND.3SG | be.born.PTCP.PFV | man | in | the | world |

(14) *BR*, 261v-b

| auie | ya | estado | en | el | sepulcro |
|---|---|---|---|---|---|
| have.PST.IPFV.3SG | already | be.PTCP.PFV | in | the | tomb |

(15) *BR*, 285r-a

| ya | perduda | auiemos | toda | esperança |
|---|---|---|---|---|
| already | lose.PTCP.PFV.FSG | have.PST.IPFV.1PL | all | hope |

Finally, DOM in *BR* also complies with the expectations of an early southern Romance text. This marking is already very robustly attested with kinship terms (16a) and proper names (16b) surfacing in 16 out of 21 examples, but remains unstable with specific, animate lexical DPs (12 DOM vs 19 non-DOM), as illustrated in (17), in accordance with a restricted distribution widely observable across conservative stages of Romance.[5]

**5** Cf. Ledgeway 2022; 2023a; 2023b; 2023c.

(16) *BR*, 51v-b

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| a. | ante | que | el | ninno | sepa | llamar | a | so |
| | before | that | the | child | know.PRS.SBJV.3SG | call.INF | DOM | his |
| | padre | e | asu | madre | | | | |
| | father | and | DOM.his | mother | | | | |

*BR*, 49r-b

| | | | | | | |
|---|---|---|---|---|---|---|
| b. | los | que | desampararon | a | dios | |
| | those | who | abandon.PST.PFV.3PL | DOM | God | |

(17) *BR*, 52r-a

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| a. | maldizra | a | su | rey | | | | |
| | curse.FUT.3SG | DOM | his | king | | | | |
| *BR*, 51r-a | | | | | | | | |
| b. | ui | el | rey | sennor | de | las | huestes | |
| | see.PST.PFV.1SG | the | king | lord | of | the | armies | |

In conclusion, *BR* is a 'well-behaved' example of an old Spanish text. First, it clearly exhibits a low setting of the V-mvt parameter. Diachronically, this is expected given that (late) Latin already displayed low V-mvt in embedded clauses (Ledgeway 2012, 182, 219), making a sudden resetting to a high-movement option unlikely. Second, the expected morphosyntactic correlates of a low V-mvt setting are all present: Stage I negation, early weakening of active-stative auxiliation, active participle agreement with in-situ objects, and a robust distribution of DOM with nominals situated at the topmost part of the animacy and specificity hierarchies. Finally, a further remark about participle agreement is in order. Modern Spanish and other low-movement Romance languages, such as (varieties of) Romanian, do not display active participle agreement with in-situ objects. Far from being an exception to the correlation between a low setting of V-mvt and participle agreement, this state of affairs straightforwardly follows from the fact that (most) active participles in these varieties exceptionally have to raise to a position adjacent to the auxiliary (Schifano 2018, § 5.2.2.4) which places them outside of the local agreement configuration with the object (Ledgeway 2020a, 55, 58). All things being equal, the agreement patterns observed in *BR* should therefore follow from a lower placement of the participle in this earlier diachronic stage. Indeed, this is shown by examples such as (18), where interpolation of material between the perfective auxiliary and the active participle, largely disallowed in modern Spanish (Schifano 2018, 87; 2026, 525-6), indicates a lower participle placement licensing the local configuration required for the agreement.

(18) *BR*, 261v-b

| auie | ya | estado | en | el | sepulcro |
|---|---|---|---|---|---|
| have.PST.IPFV.3SG | already | stay.PTCP.PFV | in | the | tomb |

## 3.2 *Atalaya de las Corónicas*

At this point it is instructive to compare the patterns in *BR* with a much later work, the *Atalaya de las corónicas* (henceforth *AC*), a historiographical compilation composed by the royal chaplain Alfonso Martínez de Toledo in the mid-15th century (1443-54). Beginning with V-mvt, *AC* shows continuity with *BR*, inasmuch as Adv-V orders of the verb such as (19a) remain the most frequent (14 out of 20). This again suggests a pragmatically-marked, viz., focalized, interpretation of the adverb in the small number of reverse orders attested in our corpus (19b).

(19) *AC*, 221r

a. […]

| que | los | de | las | aldeas | avn | non | legauan |
|---|---|---|---|---|---|---|---|
| that | those | of | the | villages | still | not | arrive.PST.IPFV.3PL |

*AC*, 119r

b.

| por | que | el | arc'obispo | sabia | ya | que | […] |
|---|---|---|---|---|---|---|---|
| for | that | the | archbishop | know.PST.IPFV.3SG | already | that | |

As expected, negation continues to be at Stage I (20), with no signs of incipient grammaticalization of postverbal elements. Similarly, auxiliary selection in *AC* still displays a robust active-stative alignment (21a-b), though cases of unaccusative HAVE such as (22) show a modest increase in line with its future generalization.

(20) *AC*, 9v

| los | Ricos | non | se | quieren | con | los | pobres | ygualar |
|---|---|---|---|---|---|---|---|---|
| the | rich | not | REFL= | want.PRS.IND.3PL | with | the | poor | make.equal.INF |

(21) *AC*, 16r

a.

| lo | quel | enperador | le | auia | dado |
|---|---|---|---|---|---|
| the | that=the | emperor | him.DAT= | have.PST.IPFV.3SG | give.PTCP.PFV |

*AC*, 49r

b.

| era | venido | nueua mente | de | la | corte |
|---|---|---|---|---|---|
| be.PST.IPFV.3SG | come.PTCP.PFV | again | of | the | court |

(22) *AC*, 192r

| avn | que | auia | venido | tarde |
|---|---|---|---|---|
| even | that | have.PST.IPFV.3SG | come.PTCP.PFV | late |

This incipient extension of HAVE goes hand in hand with the observed patterns of active participle agreement. Agreement with clitic objects has already become unstable in *AC*, witness the presence of 10 examples with agreement (23a) and 10 without (23b), an oscillation occasionally attested even within the same sentence (23c). The ongoing loss of agreement is even clearer with relativized objects (7 with agreement vs 31 without) and in-situ DPs (9 with agreement vs 31 without), as shown by (24) and (25), respectively.

(23) *AC*, 176r

a. los auia dados a otros
them.ACC.MPL= have.PST.IPFV.3SG give.PTCP.PFV.MPL to others

*AC*, 225v

b. gelos auia dado en
him.DAT=them.ACC.MPL= have.PST.IPFV.3SG give.PTCP.PFV.MSG in
cassamiento
marriage

*AC*, 196v

c. su padre la auia ordenado &
his father her.ACC= have.PST.IPFV.3SG order.PTCP.PFV.MSG and
dada
give.PTCP.PFV.FSG

(24) *AC*, 236v

a. muchos lugares de los que el Rey auia
many place.MPL of those that the king have.PST.IPFV.3SG
deixados tomados
leave.PTCP.PFV.MPL take.PTCP.PFV.MPL

*AC*, 11r

b. todos los lugares que auia tomado
all the place.MPL that have.PST.IPFV.3SG take.PTCP.PFV.MSG

(25) *AC*, 51v

a. auian fechos conc'ilios en toledo
have.PST.IPFV.3PL do.PTCP.PFV.MPL council.MPL in Toledo

*AC*, 12v

b. hunalia […] auia fecho
Hunila have.PST.IPFV.3SG do.PTCP.PFV.MSG
sus amistades
his friendship.FPL

The distribution of DOM is also in line with low V-mvt; it is fully established with kinship terms (26a) and proper names (26b) (present

in 21 out of 22 examples), though still unstable with specific, animate lexical DPs (27) (10 DOM vs 9 non-DOM).

(26) *AC*, 206v

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| a. | el | Rey | don | pedro | auia | muerto | a |
| | the | king | Don | Pedro | have.PST.IPFV.3SG | kill.PTCP.PFV | DOM |
| | su | hermano | | | | | |
| | his | brother | | | | | |

*AC*, 8v

| | | | | |
|---|---|---|---|---|
| b. | sienpre | temieron | a | Dios |
| | always | fear.PST.PFV.3PL | DOM | God |

(27) *AC*, 11v

| | | | | |
|---|---|---|---|---|
| a. | veyendo | venir | al | enperador |
| | see.GER | come.INF | DOM=the | emperor |

*AC*, 10r

| | | | | | | |
|---|---|---|---|---|---|---|
| b. | vissto | commo | auian | vencido | los | vaundalos |
| | see.PTCP.PFV | how | have.PST.IPFV.3PL | win.PTCP.PFV | the | Vandals |

In conclusion, *AC* shows that, in the passage from the 13th to the 15th century, Spanish continues to exhibit a low setting of the V-mvt parameter. Superficial strings including a verb followed by a low adverb are attested, but they continue to represent a minority of cases as part of a marked focalization option. In terms of alignment, *AC* still exemplifies an early active-stative stage, but, as expected, there is an increase in the number of attestations of HAVE in unaccusative contexts as the language moves towards its modern pattern. Analogously, active past-participle agreement with pronominal and DP objects shows unmistakable signs of weakening: in terms of V-mvt, this indicates that the participle is starting to move to a position adjacent to the auxiliary outside of the immediate local agreement configuration with its object. Indeed, although a few cases of interpolation are still attested, they are much more restricted than in *BR* occurring almost exclusively with *mal* 'badly' in line with an archaicizing formulaic usage.

### 3.3 *Estoria de Espanna*

We conclude by examining the *Estoria de Espanna* (henceforth *EE*). Like *BR*, the *EE* was composed in the 13th century, but, unlike the former, it belongs to the production undertaken under the direction

of Alfonso X, in whose scriptorium a new 'Alfonsine norm' was being fostered.[6]

Our expectation is that *EE* should exhibit a predominance of Adv-V orders in accordance with the low setting already identified in the 13th century for *BR* (§3.1) and which continues through the 15th century (cf. *AC*, §3.2) up until modern times (§2). However, out of 34 examples involving a finite indicative lexical verb and a low adverb, 19 exhibit V-Adv order (28a) in contrast to 15 examples of Adv-V (28b). Significantly, 4 of the latter examples include a formulaic use of *numqua* 'never' and are all concentrated in the same folio (90r), suggesting that their frequency might even be lower than what the raw numbers at first suggest.

(28) *EE*, 124r

a. los monges que morauan ya por tierra de
the monks that dwell.PST.IPFV.3PL already for land of
Egypto
Egypt

*EE*, 169r

b. Sepas que este angel nunqua riso
know.PRS.SBJV.2SG that this angel never laugh.PST.PFV.3SG

While in both *BR* and *AC* orders such as (28a) are also attested, they represent a minority, supporting the claim they are pragmatically-marked focalizations of the adverb rather than the output of an optionally higher V-mvt grammar. In *EE,* by contrast, these same orders are dominant. This would suggest that *EE* exemplifies a variety of old Spanish at least optionally characterized by a higher setting of the V-mvt parameter. Before considering this hypothesis, we first complete our investigation by considering the behaviour of those morphosyntactic phenomena that above were observed to correlate with V-mvt.

Beginning with negation, *EE* exemplifies a rigid Stage I variety.

(29) *EE*, 3r

nos non queremos fablar de los otros linages
we not want.PRS.IND.1PL talk.INF of the other lineages

**6** Cf. Cano Aguilar 1989; 2010, 173-5; 2022, 7-8; Fernández-Ordóñez 2004; 2008-09. Cf. also `https://www.patrimonionacional.es/en/colecciones-reales/history-spain-e1?utm` (last accessed: September 2025).

As for auxiliary selection, we observe an active-stative pattern with transitives/unergatives selecting HAVE and unaccusatives BE (30). Our sample does not include any instances of unaccusative HAVE, suggesting that the active-stative alignment is still very robust in the Spanish of this text. Regarding participle agreement, the only robust pattern which can be extracted from our sample involves in-situ DP objects, most of which (10 out of 14) exhibit agreement, witness *destroida* in (30).

(30) *EE*, 14v

| | | | | | | |
|---|---|---|---|---|---|---|
| les | contaron | cuemo | annibal | auie | | |
| them.DAT= | tell.PST.PFV.3PL | how | Hannibal | have.PST.IPFV.3SG | | |
| destroida | ya | Siguença | e | que | era | |
| destroy.PTCP.PFV.FSG | already | Sigüenza.FSG | and | that | be.PST.IPFV.3SG | |
| partido | ende | | | | | |
| leave.PTCP.PFV | thence | | | | | |

Finally, the distribution of DOM matches that found in *BR*: it is robustly attested with pronouns (31) (38 out of 41 cases), kinship terms and proper names (32) (21 out of 33 cases), and is also gaining ground with specific, animate lexical DPs (31) (18 out of 28 cases).

(31) *EE*, 10v

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| mato | a | el | e | a | todos | sos | caualleros |
| kill.PST.PFV.3SG | DOM | him | and | DOM | all | his | knights |

(32) *EE*, 4v

| | | | |
|---|---|---|---|
| mato | otrossi | a | busilis |
| kill.PST.PFV.3SG | also | DOM | Busilis |

In sum, all the phenomena reviewed for *EE* comply with the expectations of a 13th-century Spanish text, with the apparent exception of V-mvt as revealed by the remarkably high proportion of V-Adv orders. One possible interpretation is to postulate that such strings are the output of a high(er) V-mvt grammar. Accordingly, *EE* could be interpreted as the manifestation of a transitional phase in the history of Spanish, where the original low-movement pattern is in competition with an innovative higher setting. On this view, the apparent optionality exemplified in (28) is the output of grammars in competition (Kroch 1994). However, various arguments undermine this possibility. Diachronically, Spanish is set to remain a low-movement language, witness the evidence of the 15th-century *AC* (§3.2) and modern Spanish (§2), making a transitional high stage in the 13th century very unlikely. Indeed, our investigation of a contemporary

but, crucially, non-Alfonsine text (viz., *BR*), provides independent evidence of the expected low setting. To this, we can add the results from two further 14th-century texts, namely, *Libro del cauallero Çifar* (c. 1300-1305)[7] and *El libro del los enxiemplos del Conde Lucanor et de Patronio* (1335).[8] Both display a low setting of the V-mvt parameter, with Adv-V orders significantly outnumbering the reverse order (16 out of 22 in *Çifar* and 11 out of 16 in *Lucanor*), a pattern that also continues into the 15th century *AC*. In short, the continuity observed across texts from the 13th, 14th and 15th centuries underlines how the V-Adv patterns of the Alfonsine text should not be considered a genuine manifestation of an optionally high-movement grammar. Indeed, if *EE* were the manifestation of a transitional stage of V-mvt towards a higher setting, we would expect at least some incipient manifestations of Stage II negation, witness the early history of Gallo-Romance and the more recent history of Rossellonès Catalan (§2;).[9] In the same vein, an ongoing resetting towards high V-mvt should also be accompanied, at the very least, by an incipient retreat of DOM, as clearly witnessed once again in Rossellonès Catalan. This is not the case in *EE* where, if anything, DOM shows signs of further extension.

*EE* cannot therefore instantiate a stage of old Spanish where V-mvt was optionally higher. How should we then account for the observed V-Adv orders, the high incidence of which rules out a derivation via adverb focalization yielding pragmatically-marked (and hence *a priori* less frequent) orders? One possibility is that such orders represent a deliberate, artificial stylistic choice. It is well known that Alfonso and his collaborators championed a distinctive variety of Castilian, making a fundamental contribution to the emergence of a new Spanish norm. This included the incorporation of specific stylistic choices, not only lexically and morphologically, but also syntactically (Fernandez-Ordoñez 2008), some of which were non-Castilian dialectal features which would not make their way into the later Spanish norm (Cano Aguilar 1989, § 5; Fernández-Ordóñez 2004, § 3). A case in point is interpolation between a preverbal clitic and its verbal host. Generally, it is difficult to pinpoint the dialectal origin of many of Alfonso's linguistic choices, partly because of the linguistic plurality of his scribes and collaborators and the multiple layers of production and revision (Fernández-Ordoñez 2004, 403), and partly because the Alfonsine prose corpus does not seem to privilege any one dialectal model (Fernández-Ordoñez 2004, 408-9). However, in relation to interpolation, a western (406-7), and more specifically Galician (Chenery 1905, 50), influence has been invoked since

**7** https://textred.spanport.lss.wisc.edu/chivalric/texts.html.

**8** Cf. Knust, Birch-Hirschfeld's (1900) edition.

**9** Cf. Ledgeway, Schifano 2022; 2023a; 2023b; forthcoming a; forthcoming b.

interpolation was extremely productive in old Gallego-Portuguese (Martins 1995; 2005), with related configurations surviving into modern Galician (Álvarez et al. 1995).

Returning to the unusually frequent V-Adv orders in *EE*, 10 out of 19 feature the adverb *siempre* 'always', implying that the overwhelming evidence for an allegedly high-movement grammar comes from this single adverb. Crucially, in medieval Gallego-Portuguese the adverb *sempre* could either precede or follow the verb (Fiéis 2010). Combining this fact with the independent evidence of a western syntactic influence on Alfonsine prose by way of very frequent interpolation, it is legitimate to speculate that the high incidence of V-*siempre* orders is not the genuine output of a high V-mvt grammar, but another deliberate stylistic choice which gives the text a distinctive western, or better Galician, flavour.[10] The plausibility of this hypothesis is reinforced by other cases, not limited to Alfonsine production, where writers deliberately adopt syntactic options reflecting different diaphasic, diatopic or diachronic varieties. One example is the deliberate use of (S)OV order observed in main clauses of Classical Latin, an artifice notably employed by Caesar, who Linde (1923, 154) characterizes as 'fanatical' about verb-final order. As pointed out by various authors (cf. Ledgeway 2012, 42), this reflects a deliberate stylistic choice that artificially replicates an earlier OV stage of the language rather than the genuine output of a head-final language.

In conclusion, *EE* apparently diverges from the other 13$^{th}$-century text (cf. *BR*) in that V-Adv orders are the most frequent. While it is tempting to interpret this as the reflex of an ongoing resetting of the V-mvt parameter from low to high, this interpretation is untenable for two principal reasons. First, the diachronic evidence reveals a language in which low V-mvt has remained stable over the 13$^{th}$, 14$^{th}$ and 15$^{th}$ centuries to the present day. Second, none of the morphosyntactic phenomena otherwise correlated with high V-mvt are attested. Combining these considerations with the notoriously stylistically and diatopically marked nature of some of the linguistic choices of the Alfonsine prose corpus, it is legitimate to interpret the high frequency of V-Adv orders (most of which include *siempre*) as a marked stylistic choice, most probably an imitation of an early Gallego-Portuguese model.

**10** Both interpolation and V-*siempre* orders were grammatical in old Spanish such that the influence of western (viz., Galician) models simply increased the frequency of two already existing patterns.

## 4 Conclusions

Our analysis of three old Spanish texts has shed new light on apparent instances of optionality, and hence variation, in V-mvt. Taking the patterns of modern Spanish as a starting point, we first investigated V-mvt in *BR* and *AC*, where we observed a majority of low placements accompanied by the expected distribution of several correlated morphosyntactic phenomena. The continuity observed between the 13th and the 15th centuries suggests that the numerous V-Adv placements noted in our third text, Alfonso's *EE*, represent an anomaly. Rather than the optional output of a transitional high-movement grammar, such orders represent a stylistically-marked choice, most probably under the influence of Gallego-Portuguese models. Indeed, this is consistent with the adoption of diatopically marked features observed elsewhere in Alfonsine production. The differential distribution of a series of morphosyntactic phenomena known to correlate with low and high V-mvt was shown to offer us a key diagnostic tool in distinguishing genuine outputs of a low-movement grammar from instances of superficial stylistic variation. This highlights the heuristic value of the approach adopted here in which V-mvt is not conceived as an isolated parameter, but as the catalyst for series of cascading effects, opening new avenues for investigating the still understudied word-order patterns of embedded clauses in early Romance.

## Bibliography

Álvarez, R.; Monteagudo, H.; Regueira, X.L. (1995). *Gramática Galega*. Vigo: Galaxia.

Cano Aguilar, R. (1989). "La construcción del idioma en Alfonso el Sabio". *Philologia Hispalensis*, 4(2), 463-73. https://doi.org/10.12795/ph.1989.v04.i02.35.

Cano Aguilar, R. (2010). "Alfonso X y la historia del español: imagen histórica". *Revista de Filología de la Universidad de La Laguna*, 28, 173-93. https://doi.org/10.25145/j.refiull.2023.46.18.

Cano Aguilar, R. (2022). *Alfonso X: estudios sobre la lengua de los textos alfonsíes*. Sevilla: Editorial Universidad de Sevilla. https://doi.org/10.12795/9788447222506.

Cardinaletti, A. (1997). "Subjects and Clause Structure". Haegeman, L. (ed.), *The New Comparative Syntax*. London: Longman, 33-63.

Cardinaletti, A. (2004). "Towards a Cartography of Subject Positions". Rizzi, L. (ed.), *The Structure of CP and IP*. Oxford: OUP, 115-65. https://doi.org/10.1093/oso/9780195159486.003.0005.

Chenery, W.H. (1905). *Object-Pronouns in Dependent Clauses: A Study in Old Spanish Word-Order*. Spanish Monographs 2. New York: Modern Language Association of America. https://doi.org/10.2307/456603.

Cinque, G. (1999). *Adverbs and Functional Heads: A Cross-Linguistic Perspective.* Oxford: OUP. https://doi.org/10.1093/oso/9780195115260.001.0001.

Emonds, J. (1978). "The verbal complex V'-V in French". *Linguistic Inquiry,* 9, 151-75.

Enrique-Arias, A. (ed.) (2010). *La Biblia Escorial I.i.6. Transcripción y estudios*. Logroño: Cilengua. https://doi.org/10.54166/rhle.2013.08.12.

Fantechi, G. (2014). "La Biblia Escorial I.I.6, espejo de una época: Lengua y religion en la construcción de la identidad castellana en el siglo XIII". *Estudios Bíblicos,* LXXII, 293-330. https://doi.org/10.31819/9783865279668-016.

Fernández-Ordóñez, I. (2004). "Alfonso X El Sabio en la Historia del Español". Cano Aguilar, R. (ed.), *Historia de la lengua española*. Barcelona: Ariel, 381-422. https://doi.org/10.5944/epos.20-21.2004.10487.

Fernández-Ordóñez, I. (2008-09). "Orden de palabras, tópicos y focos en la prosa alfonsí". *Revista de estudios Alfonsíes*, 6, 139-72.

Fiéis, A. (2010). "On the Position of *Sempre* in Medieval Portuguese and in Modern European Portuguese". *The Linguistic Review*, 27, 75-105. https://doi.org/10.1515/tlir.2010.004.

Kroch, A.S. (1994). "Morphosyntactic Variation". Beals, K. (ed.), *Papers from the 30th Regional Meeting, Chicago Linguistic Society*. Chicago: Chicago Linguistic Society, 180-201.

Knust, H.; Birch-Hirschfeld, A. (eds) (1900). *El libro de los enxiemplos del Conde Lucanor et de Patronio* (Juan Manuel, Infante of Castile). Leipzig: Seele.

Ledgeway, A. (2012). *From Latin to Romance. Morphosyntactic Typology and Change*. Oxford: OUP.

Ledgeway, A. (2020a). "The North-South Divide: Parameters of Variation in the Clausal Domain". *L'Italia Dialettale,* 81, 29-78.

Ledgeway, A. (2020b). "Variation in the Gallo-Romance Left-Periphery: V2, Complementizers, and the Gascon Enunciative System". Maiden, M.; Wolfe, S. (eds), *Variation and Change in Gallo-Romance Grammar*. Oxford: OUP, 71-99. https://doi.org/10.1093/oso/9780198840176.003.0004.

Ledgeway, A. (2022). "Disentangling Parameters: Romance Differential Object Marking and the Distribution of Head and Edge Features". Alboiu, G.; Isac, D.; Nicolae, A.; Tănase-Dogaru, M.; Tigău, A. (eds), *A Life in Linguistics. A Festschrift for Alexandra Cornilescu on her 75th Birthday*. Bucharest: Editura Universităţii din Bucureşti, 439-58.

Ledgeway, A. (2023a). "Parametric Variation in Differential Object Marking in Italo-Romance". Irimia, M.; Mardale, A. (eds), *Differential Object Marking in Romance: Towards Microvariation*. Amsterdam: John Benjamins, 267-314. https://doi.org/10.1075/la.280.11led.

Ledgeway, A. (2023b). "La distribuzione dell'accusativo preposizionale nei dialetti d'Italia". Del Puente, P.; Carbutti, E. (a cura di), *Atti del VI Convegno internazionale di dialettologia - Progetto A.L.Ba*. Lagonegro: Zaccara Editore, 81-130. https://doi.org/10.1515/9783110910346.73.

Ledgeway, A. (2023c). "Differential Object Marking in the Dialects of Southern Italy: an Overview". *Caplletra. Revista Internacional de Filología*, 74, 183-212. https://doi.org/10.7203/caplletra.74.26041.

Ledgeway, A.; Lombardi, A. (2005). "Verb-Movement, Adverbs and Clitic Positions in Romance". *Probus*, 17, 79-113. https://doi.org/10.1515/prbs.2005.17.1.79.

Ledgeway, A.; Lombardi, A. (2014). "The Development of the Southern Subjunctive: Morphological Loss and Syntactic Gain". Benincà, P; Ledgeway, A.; Vincent, N. (eds), *Diachrony and Dialects. Grammatical Change in the Dialects of Italy.* Oxford: OUP, 25-47. https://doi.org/10.1093/acprof:oso/9780198701781.003.0002.

Ledgeway, A; Schifano, N. (2022). "Parametric Variation". Ledgeway, A.; Maiden, M. (eds), *The Cambridge Handbook of Romance Linguistics*. Cambridge: CUP, 637-70. https://doi.org/10.1017/9781108580410.025.

Ledgeway, A.; Schifano, N. (2023a). "Negation and Verb-Movement in Romance: New Perspectives on Jespersen's Cycle". *Probus,* 35(1), 151-211. https://doi.org/10.1515/probus-2022-0016.

Ledgeway, A.; Schifano, N. (2023b). "Jespersen: ¿un ciclo que no vuelve a empezar?". Corbella, D.; Dorta, J.; Padrón, R. (eds), *Perspectives en linguistique et philologie romanes*. Paris: Éditions de Linguistique et de Philologie, Bibliotèque de Linguistique Romane, 361-79. https://doi.org/10.1515/zrp-2019-0072.

Ledgeway, A.; Schifano, N. (forthcoming a). "Verb-Movement and its Correlates: Insights from Cartography". Wolfe, S. (ed.), *Oxford Handbook of Syntactic Cartography*. Oxford: OUP.

Ledgeway, A.; Schifano, N. (forthcoming b). "When Catalan goes high, Italo-Greek Goes Low: the Effects of Contact on Parameter Setting". Pujol i Campeny, A.; Olivier, M. (eds), *Crosslinguistic Perspectives on Syntactic Change in the Diachrony of Romance*, special issue of *Catalan Journal of Linguistics*.

Linde, P. (1923). "Die Stellung des Verbs in der lateinischen Prosa". *Glotta*, 12, 153-78.

Martins, A.M. (1995). "Clitic Placement from Old to Modern European Portuguese". Andersen, H. (ed.), *Historical Linguistics*. Amsterdam: John Benjamins, 395-407.

Martins, A.M. (2005). "Clitic Placement, VP-Ellipsis, and Scrambling in Romance". Batllori, M.; Picallo, H.C.; Roca, F. (eds), *Grammaticalization and Parametric Variation.* Oxford: OUP, 175-93. https://doi.org/10.1093/acprof:oso/9780199272129.003.0011.

Musio, C. (1995). *Il Salento in vernacolo*. Galatina: Congedo Editore.

Pollock, J-Y. (1989). "Verb Movement, Universal Grammar, and the Structure of IP". *Linguistic Inquiry*, 20(3), 365-424.

Schifano, N. (2015). "The Paradigmatic Instantiation of TAM: A Novel Approach to Romance Verb Movement". Aboh, E.O.; Schaeffer, J.; Sleeman, P. (eds), *Romance Languages and Linguistic Theory. Selected Papers from Going Romance, Amsterdam 2013*. Amsterdam: John Benjamins, 83-102. https://doi.org/10.1075/rllt.8.06sch.

Schifano, N. (2018). *Verb Movement in Romance: A Comparative Study*. Oxford: OUP. https://doi.org/10.1093/oso/9780198804642.001.0001.

Schifano, N. (2026). "Parameter Hierarchies and Language Contact: The Present Perfect in Ecuadorian Spanish". *Transactions of the Philological Society*, 124(2), 513-46. https://doi.org/10.1111/1467-968x.70026.

**Language Optionality and Variation**
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# A Sociolinguistic View on Variable Subjects in Italian Sign Language (LIS)

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**Abstract** This study examines variable subject expression in Italian Sign Language (LIS) through a quantitative analysis of data from the LIS Corpus. The results indicate that both linguistic and social factors shape the distribution of subject omission. Null subjects occur more frequently with agreeing verbs, while geographical origin and education further modulate this pattern. Discourse and clause-mate coreference also condition subject omission, interacting significantly with clause type.

**Keywords** Italian Sign Language. Sociolinguistic variation. Corpus study. Variable subject. Null subjects.

**Summary** 1 Introduction. – 2 Variable Subjects in Human Language. – 3 Methodology. – 4 Results. – 5 Discussion. – 6 Conclusions.

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## 1 Introduction

The syntax of sign languages is often described as quite flexible, especially with respect to word order (a.o. Quer et al. 2017).[1] While there could be an easily identifiable canonical word order like SVO or SOV, additional word orders are frequently attested within a sign language, sometimes co-occurring with special non-manual markers (NMMs) indicating syntactic movement (see Branchini, Geraci 2011 for Italian Sign Language – LIS). This high degree of variability is found in other syntactic domains as well. For instance, in wh-questions, wh-phrases may appear in situ, in clause-final position, or be split between the wh-sign and its restriction within the same language (see Cecchetto et al. 2009 for LIS).

Interestingly, one domain in which the grammar of sign languages appears to be uniform is subject expression. To our knowledge, in non-out-of-the-blue contexts, subjects may remain unexpressed in all sign languages studied to date (Jaber et al. 2022). This uniformity can be attributed to several factors that, independently or in combination, license subject omission and, more generally, argument omission. These factors include the use of space to mark argument relations in directional predicates (see Costello 2015 for Spanish Sign Language – LSE), the use of NMMs to retrieve a previously introduced subject (e.g. head tilt in American Sign Language – ASL; Neidle et al. 2000), the use of the body as a subject marker (see Meir et al. 2007 for Israeli Sign Language – ISL), as well as action and attitude role shift. Crucially, although subject omission is quite widespread across sign languages, the conditions under which it applies are far from uniform. Previous studies clearly show that this phenomenon is governed by a variety of linguistic and social factors, as we discuss in Section 2.

In this paper, we present a corpus-based study conducted on LIS, describing the variability found in subject expression and discussing the factors that condition it. We investigate the role of linguistic factors such as verb type, grammatical person, role shift, and subordination, as well as sociolinguistic factors, including gender, age, education, and exposure to LIS.

**1** Authors' contribution: GC conceived the study and designed the annotation protocol. All authors annotated the LIS corpus data and jointly discussed ambiguous cases. GC conducted the statistical analysis, and all authors contributed to the interpretation and discussion of the results. GC is responsible for Sections 1, 2 (excluding 2.2), and 5. LM is responsible for Sections 2.2, 3, 4, and 6. All authors revised the paper and accepted the present version.

## 2 Variable Subjects in Human Language

Research on spoken languages has largely treated subject omission as a purely grammatical phenomenon since early studies (a.o. Perlmutter 1971; Rizzi 1986; Jaeggli, Safir 1989).

From a typological perspective, a basic classification distinguishes languages that do not allow subject omission (e.g. English and French), from languages that allow it (e.g. Italian and Chinese). However, the latter group is far from homogeneous. Biberauer et al. (2010) and D'Alessandro (2015) propose a feature-based classification that distinguishes topic-drop from pro-drop languages (e.g. Chinese vs. Italian) and, within the latter group, complete from partial pro-drop languages (e.g. Italian vs. Finnish). In partial pro-drop languages, subject omission is conditioned by specific linguistic features such as grammatical person (omission allowed only for 1st and 2nd person, but disallowed for 3rd person), control in subordinate clauses (omission allowed in finite complements when the subject is controlled by the main clause), and genericity (generic subjects are allowed to be null). Cardinaletti's (1997, 2018) seminal work on the structural position of subjects provides a key theoretical framework for explaining why subject omission is systematically available in some languages but not in others.

Since early studies, the influence of sociolinguistic factors on subject expression has been often relegated to explaining differences across registers, styles, and genres. In variationist sociolinguistics, however, variable subject expression is analyzed as the outcome of both linguistic and social constraints. The following sections offer an overview of major sociolinguistic studies on this phenomenon in spoken and sign languages. Rather than explaining why null subjects exist, these studies examine how they are used. As will be shown, both linguistic and social factors play a crucial role in shaping patterns of subject omission, which reflect preferences rather than categorical contrasts.

### 2.1 Variation in Spoken Languages

The majority of prior sociolinguistic studies on this topic has focused on spoken languages. A substantial body of variationist research has investigated subject drop in languages with rich inflectional morphology such as Spanish (Cameron 1992; Travis 2007; Flores-Ferrán 2010) and Portuguese (Paredes Silva 1993; Smith 2013). This phenomenon has also been investigated on some non-inflectional languages, including Mandarin Chinese (Jia, Bayley 2002) and Bislama (Meyerhoff 2000). An illustrative example of subject drop is provided in (1).

(1) ø Du mei du Kewen?
ø read NEG read text
'Did you read the text or not?' (Mandarin - Jia, Bayley 2002, 108)

Overall, previous variationist studies have shown that the choice between overt and null subjects is constrained by a range of both linguistic and social factors. Linguistic factors typically include coreference with the subject of the preceding clause (switch in reference favors overt subject expression, e.g. Cameron 1992), and person/number of the subject (singular subjects are more likely to be expressed overtly than plural ones, e.g. Jia, Bayley 2002). Additional factors such as verb type, sentence type, and discourse context have also been shown to play a role (Travis 2007; Flores-Ferrán 2010). Social factors can also condition subject expression. General patterns indicate that null subjects are more frequently used in informal conversation (e.g. Haegeman, Weir 2025) and by speakers with lower levels of education and socioeconomic status (e.g. Beaman 2025), while the effects of age and gender vary across languages.

## 2.2 Variation in Sign Languages

Subject omission has been investigated for various sign languages within formal approaches (see Lillo-Martin 1986; Bahan et al. 2000; Koulidobrova 2017 for ASL; Bos 1993 for Sign Language of the Netherlands – NGT; Glück, Pfau 1998 for German Sign Language – DGS; and Jaber et al. 2022 for French Sign Language – LSF). A variationist sociolinguistic approach to subject omission has only recently become possible, thanks to the availability of large, annotated sign language corpora (a.o. Wulf et al. 2002; McKee et al. 2011).

The first sociolinguistic study on subject omission in a sign language is Wulf et al. (2002). Analyzing 19 narratives from a large ASL corpus and focusing on animate referents associated with plain verbs, the authors found that only 35% of subjects in plain verb clauses were overtly expressed, as illustrated in (2).

(2) ø HAVE TWO STUDENT…
'I have two students…' (ASL – adapted from Wulf et al. 2002, 64)

Their statistical analysis revealed that subject expression in ASL is significantly influenced by several factors, including English influence, clause-mate coreference, person and number, action and attitude role shift, gender, and age. Overt subjects are favored in English-influenced structures and with first-person singular

pronouns, whereas null subjects are favored with role shift and third-person singular pronouns. With respect to social predictors, men and signers aged 15-54 showed a stronger preference for null subjects.

McKee et al. (2011), conducted two parallel corpus-based studies on Australian Sign Language (Auslan) and New Zealand Sign Language (NZSL) using comparable quantitative methods. In the Auslan study, based on 977 clauses from spontaneous personal narratives, the authors found that 63% of clauses contained a null subject, as illustrated in (3).

(3) ø NEED ø $_{1}$GIVE$_{3}$
'I need to give it to him.' (Auslan – McKee et al. 2011, 390)

The analysis showed that subject expression in Auslan is significantly constrained by linguistic factors such as clause-mate coreference (coreference with the subject of the preceding clause favors the use of null subjects), person and number (first-person singular pronominal subjects are most likely to be expressed, whereas third-person singular and plural pronouns are more likely to be null), English influence (the presence of fingerspelling, English mouthings without an accompanying sign, and syntactic influence from English favor overt subjects), verb type (spatial verbs favor null subjects, whereas agreement and plain verbs favor overt subjects), and action role shift (which favors null subjects).

In the NZSL study, the authors examined a larger dataset of 2,145 clauses from conversations and interviews and found that 55% of the clauses contained a null subject, as illustrated in (4).

(4) ø GO WORK
'I went to work.' (NZSL – adapted from McKee et al. 2011, 391)

The analysis showed that subject expression is significantly influenced by both linguistic predictors (coreference, verb type, action role shift, and discourse genre) and social predictors (age and ethnicity). In particular, null subjects were more frequent in coreferent clauses, with spatial verbs and action role shift, and in conversational discourse. They were also used significantly more often by signers aged 40-64 and by Pākehā signers than by Māori signers.

Overall, sociolinguistic studies of subject expression in sign languages show substantial heterogeneity, particularly with respect to corpus size, genre, and methodological approaches.

## 3 Methodology

To investigate subject expression in LIS, we analyzed data from the largest available LIS corpus (Geraci et al. 2011; Cardinaletti et al. 2011), whose structure is comparable to that of corpora used in previous sociolinguistic studies of other sign languages (Section 2.2). The LIS corpus includes data from 163 participants, balanced with respect to social factors such as age, gender, geographic origin, and parental hearing status, who were involved in four linguistic tasks (Cardinaletti et al. 2011). For the present study, we focused on spontaneous narratives, as this task provides access to subject expression in naturalistic discourse.

Data were annotated by the authors using ELAN (Crasborn, Sloetjes 2008). Inter-annotator consistency was ensured through a shared annotation template and collective discussion of dubious cases. The annotation focused on the narrative productions of all the signers of the corpus, coming from ten Italian cities (Turin, Milan, Brescia, Bologna, Florence, Rome, Salerno, Trani, Lamezia, and Ragusa). For each signer, at least 15 consecutive predicates were annotated (tot. 2,654 tokens). As shown in Figure 1, signs were segmented and glossed according to standard conventions. Clauses were segmented mainly on the basis of prosodic cues typically associated with clause boundaries, such as pauses, eye blinks, and head nods.

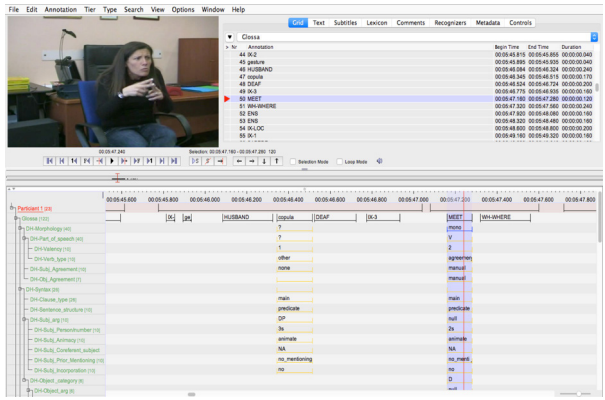


**Figure 1** ELAN screenshot

Annotation tiers were used to enter values for the dependent variable (subject expression) and the linguistic independent variables. Subject expression was coded using the following categories: null subjects and overtly realized subjects, including pronouns, DPs, and CPs. As for the linguistic independent variables, the annotation addressed properties of the subject (Animacy, Clause-mate coreference,

Discourse coreference, Number, Person, Subject incorporation), properties of the predicate (Verb type, Agreement, Semantic type, Sign Category, Valency), and clausal properties (Role shift and Clause type). In line with previous studies, Verb type (agreeing vs. non agreeing verbs) is predicted to be a significant variable, as spatial agreement encode referential information morphologically, potentially facilitating subject omission.

Once the annotation in ELAN was completed, linguistic data were extracted from the software, were combined with the participants' social information, and organized into a dataset. The social independent variables were collected during the LIS Corpus project through a metadata questionnaire administered to all participants. They included Age and Age group, Gender, Geographical origin, Residential status, Education, Occupation, as well as Deaf-culture predictors such as the hearing status of the Family and Register.

To better capture distributional patterns in the statistical analysis, levels displaying comparable behavior were collapsed for some variables.

## 4 Results

This section first outlines the general distribution of the dependent variable and then examines the role of linguistic and social factors as potential predictors.

In the annotated corpus, subject variables are distributed as shown in Figure 2. The most frequent option is null subjects (1,404 - 53%). These are followed by subjects overtly realized as personal pronouns (802 - 30%) and DPs (428 - 16%). Sentential subjects (CPs) are relatively infrequent (20 - 1%).

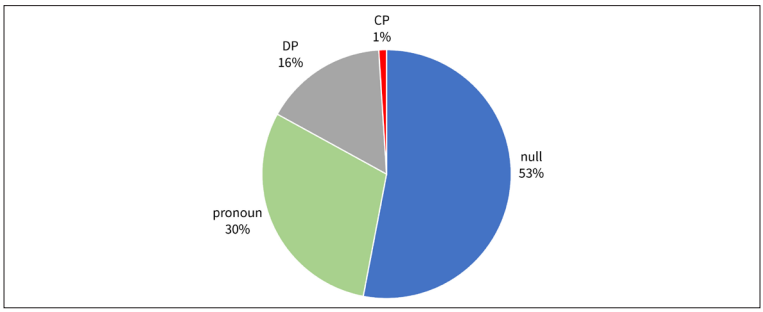



**Figure 2** General distribution of subject variables in the corpus

For statistical purposes, pronouns, DPs, and CPs were collapsed into a single category of overt subjects. The resulting binomial variable

shows a balanced distribution, with 1,404 null subjects (53%) and 1,250 overt subjects (47%).

The data were analyzed using mixed-effects logistic regression (Baayen et al. 2008), with Participant and (Predicate) Item included as random effects and the linguistic and social factors described in Section 3 as potential predictors. A step-up and step-down model selection procedure converged on the same final model, which included one linguistic fixed effect (Verb type) and two social effects (Education and Geographical origin). In addition, a significant three-way interaction emerged among Clause type, Clause-mate coreference, and Discourse coreference. The parameters estimated by the final model are reported in Table 3, with overt subject set as the reference level of the dependent variable. Following a 2-SD criterion, five outliers were excluded.

**Table 3** Mixed-effect analysis. Parameters estimated by the final model and their statistical significance analysis. Model's goodness of fit values: AIC 3229.4, BIC 3335.1 and logLik -1596.7

| Fixed factor | Estimate | Std. Error | Z value | Pr(>\|z\|) |
|---|---|---|---|---|
| Intercept | -1.1904 | 0.1594 | -7.466 | 8.24e-14 *** |
| Verb type:directional | 0.6234 | 0.1128 | 5.529 | 3.23e-08 *** |
| Geog. origin:noTurin | 0.4336 | 0.1543 | 2.809 | 0.004965 ** |
| Geog. origin:Turin | -0.2409 | 0.2266 | -1.063 | 0.287739 |
| Education:low | 0.2995 | 0.1269 | 2.361 | 0.018211 * |
| Clause type:adjunct | 0.7681 | 0.2263 | 3.394 | 0.000689 *** |
| Clause type:other | 0.8987 | 0.1959 | 4.587 | 4.49e-06 *** |
| Clause-mate coref.:antecedent | -0.1754 | 0.4210 | -417 | 0.676958 |
| Discourse coref.:antecedent | 0.5086 | 0.1336 | 3.807 | 0.000141 *** |
| Clause type:adjunct * Clause-mate coref.:antecedent | 1.1927 | 0.5503 | 2.167 | 0.030208 * |
| Clause type:other * Clause-mate coref.:antecedent | 1.4936 | 0.4881 | 3.060 | 0.002213 ** |
| Clause type:adjunct * Discourse coref.:antecedent | -0.2554 | 0.3255 | -785 | 0.432722 |
| Clause type:other * Discourse coref.:antecedent | -0.1616 | 0.3063 | -527 | 0.597853 |
| Clause-mate coref.:antecedent* Discourse coref.:antecedent | 0.4322 | 0.5043 | 857 | 0.391435 |
| Clause type:adjunct * Clause-mate coref.:antecedent * Discourse coref.:antecedent | -1.3797 | 0.6890 | -2.002 | 0.045247 * |
| Clause type:other * Clause-mate coref.:antecedent * Discourse coref.:antecedent | -1.1207 | 0.6161 | -1.819 | 0.068935. |

Further details on the statistically significant effects of the linguistic and social predictors, as well as on the three-way interaction, are provided in the next sections.

## 4.1 Linguistic Predictor

The Verb type factor indicates whether the predicate can display overt agreement with its argument(s) or not. The analysis indicates that null subjects are more likely with agreeing verbs than with non-agreeing verbs, as illustrated in Figure 3.

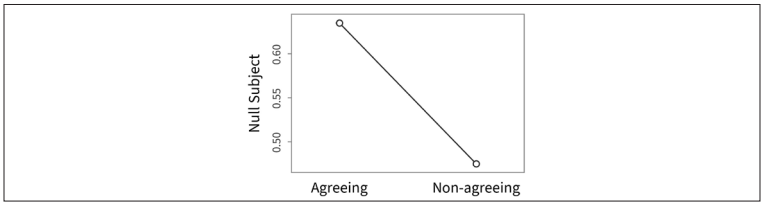



**Figure 3** Probability of null subjects by Verb type

This pattern is illustrated by the examples in (5).

(5) a. ø $_3$TEACH$_1$ PROGRAM HEARING EXACTLY
'(They) taught me exactly the hearing program…'
b. IX$_1$ THINK HOUSE IX
'I think about the house.'

In LIS, TEACH is an agreeing verb, as subject–object agreement is expressed through the directionality of the verb's movement. In (5a), the hands move from the locus of the third-person subject toward that of the object (the signer), and the verb co-occurs with a null subject. By contrast, THINK is a non-agreeing verb, as it lacks spatial agreement. In (5b), it is preceded by the overt first-person pronoun, IX$_1$.

## 4.2 Social Predictors

The statistical analysis revealed that the distribution of LIS null subjects is influenced by two social factors: Geographical origin and Education. The geographical predictor was recoded into three groups: i) Turin, ii) Rome and Trani, and iii) the remaining seven

cities.[2] The probability for null subjects to occur across these groups is illustrated in Figure 4. The analysis indicates that null subjects are more likely in Rome and Trani, whereas overt subjects are marginally more frequent in Turin.

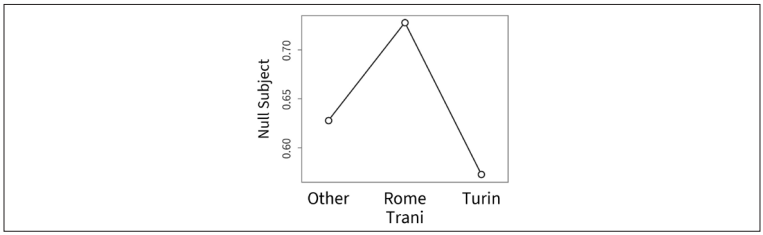



**Figure 4** Probability of null subjects by Geographical origin

In the Education factor, signers with primary or middle school education were grouped as lower-educated, while those who completed high school or university were classified as higher-educated. The analysis shows that null subjects tend to be more frequent among lower-educated signers than with higher-educated signers, as illustrated in Figure 5.

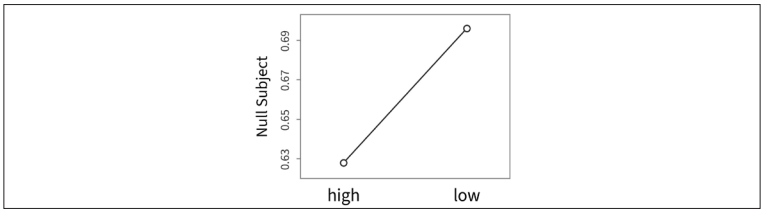



**Figure 5** Probability of null subjects by Education

## 4.3 Three-Way Interaction

A significant three-way interaction emerged among Clause type, Clause-mate coreference, and Discourse coreference. For clarity, we briefly describe these factors. Clause type is a three-level factor, including main clauses, adjunct clauses, and coordinate together with

**2** This predictor appears to be a partial post-hoc artifact and improves model fit. We are not aware of historical reasons to group Rome and Trani. Notably, LIS in Turin is lexically distinct from other varieties (Geraci, Battaglia 2011), and signers from Rome show a stronger preference for SVO order (Branchini, Geraci 2011).

completive clauses.[3] Clause-mate coreference is a two level-factor, indicating the presence or absence of a clause-mate antecedent, serving as an approximation of syntactic dependencies such as binding, coordination, raising, and control. Discourse coreference is also binary and indicates whether the subject under analysis was mentioned in the two preceding clauses: this factor has been used in previous research to capture topic-drop effects in sign languages.

Each graph in Figure 6 corresponds to a clause type. Clause-mate coreference is shown on the horizontal axis (absence on the left, presence on the right), while Discourse coreference is encoded by color (red = presence of a discourse antecedent; blue = absence of a discourse antecedent).

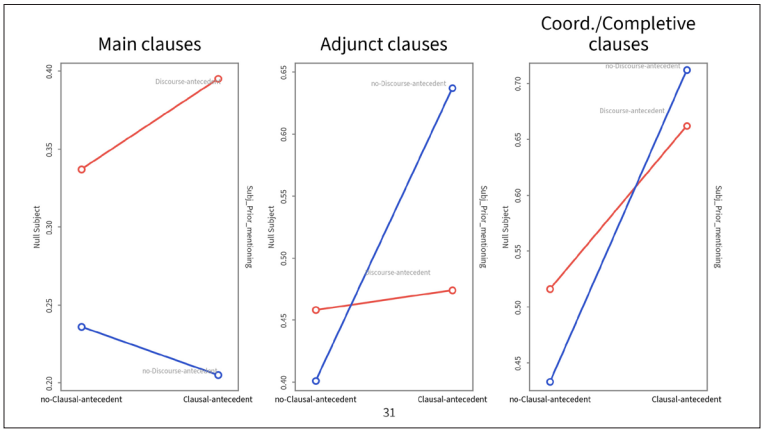



**Figure 6** Probability of null subjects by the interaction among Clause type, Clause-mate coreference, and Discourse coreference

In the first graph (main clauses), Clause-mate coreference shows virtually no effect, as the two points on the left are approximately at the same height as the two points on the right. By contrast, Discourse coreference has a clear effect: the red line is consistently higher than the blue one, indicating that topicality strongly conditions subject omission in main clauses, while syntactic antecedents play little or no role. The third graph (coordinated and completive clauses) shows the opposite pattern. Here, Clause-mate coreference plays a decisive role: null subjects are more likely when a co-referential DP is present within the clause. Discourse coreference, by contrast, has no apparent effect, as indicated by the almost overlapping lines.

**3** Coordinate and completive clauses are grouped together, as they show a similar distribution.

The second graph (adjunct clauses) reveals a mixed pattern. Clause-mate coreference has a clear effect, but only when the subordinate subject is not discourse-topical, as shown by the blue point on the right. Discourse coreference, in turn, shows little to no effect on subject realization, as reflected in the flat and relatively low red line.

## 5 Discussion

Subject expression, whether overt or covert, has been investigated in corpus studies of other sign languages (Section 2.2). Adopting this methodological tradition, the present study examines variation in subject expression in LIS using comparable texts and predictors. Table 4 summarizes the significant predictors identified in previous studies and compares them with the findings for LIS.

**Table 4** Significant predictors in previous sign language corpus studies compared with the present study

| Language | Distribution of null vs. overt subjects | Significant predictors |
|---|---|---|
| ASL | 65% of plain verbs clauses have null subjects | English influence, Coreference, Person/Number, Role shift, Gender, Age |
| Auslan | 63% of clauses have null subjects | Coreference, Person/Number, English influence, Verb type, Role shift |
| NZSL | 55% of clauses have null subjects | Coreference, Age, Ethnicity, Text type, Verb type, Role shift |
| LIS | 53% of clauses have null subjects | Verb type, Education, Geographical origin, Clause type*Clause-mate coreference*Discourse coreference |

A first observation is that LIS and NZSL show a very similar distribution of null and overt subjects, with the two options occurring at comparable rates. Auslan, by contrast, exhibits a higher proportion of null subjects. The ASL data are not directly comparable, as they concern only plain verbs; nevertheless, the fact that 65% of the plain verbs occur with null subjects is quite remarkable, given that null subjects with plain verbs are not spatially licensed and require additional NMMs (Neidle et al. 2000). In LIS, by contrast, only 41.6% of plain verbs occur with null subjects (compared to 58.4% with agreeing verbs), highlighting a substantial difference between ASL and both LIS and NZSL that calls for further research.

A second observation concerns the effect of discourse on null subject expression, a finding that is not particularly surprising. As in spoken languages, discourse antecedents license both pronouns and null subjects, and out-of-the-blue null subjects are pragmatically disfavored even in languages with radical pro-drop. Interestingly, this

effect does not operate as an independent factor; rather, it interacts with other grammatical properties, such as clause type (main vs. embedded) and the presence of a clause-internal antecedent.[4]

A third observation concerns the effect of Verb type, which mirrors findings from Auslan and NZSL.[5] Overall, null subjects occur less frequently with non-agreeing verbs than with agreeing verbs. This robust cross-linguistic pattern raises three points of discussion. First, it supports approaches that identify φ-features as the licensing mechanism for subject omission in pro-drop languages (a.o. Biberauer et al. 2010, D'Alessandro 2015), providing independent quantitative evidence from sign languages. Second, it offers a way to interpret this effect in terms of partial pro-drop, as also discussed in Jaber et al. (2022), since the functional equivalent of rich agreement in sign languages is found only with agreeing verbs, while non-agreeing verbs lack overt φ-feature exponents. Third, and crucially, the absence of agreement does not result in the absence or extremely low rates of null subjects with non-directional predicates. Instead, null subjects remain widely attested in these contexts. Following Jaber et al. (2022), this pattern can be explained by assuming that φ-features in non-directional predicates are highly underspecified, yielding a system that resembles topic-drop. On this view, sign languages such as ASL, Auslan, NZSL, and LIS instantiate a mixed system combining properties of both pro-drop and topic-drop languages (see Lillo-Martin 1986; Zwitserlood, van Gijn 2006). This pattern is particularly interesting, as it suggests that LIS behaves more like consistent pro-drop languages such as Spanish and Italian, whereas ASL, Auslan, and NZSL pattern more closely with Finnish. As in other sign languages, however, the effect is not categorical but probabilistic.

With respect to Role shift, no effect was found for LIS. Given that the narratives analyzed in this study strongly favor the use of role shift, the absence of an effect in this discourse type suggests that it is unlikely to emerge in other domains.

Moreover, this study is the first to introduce the syntactic predictors Clause type and Clause-mate coreference. We argue that these variables more accurately capture what has been described as role shift effects in other languages. Indeed, role shift is often introduced by a main predicate (typically a verb of saying) and occurs within an embedded sentential complement. Crucially, the embedded subject must have a clause-mate antecedent to be taken over by the signer. This configuration is consistent with the syntactic conditions captured in the observed three-way interaction.

**4** We verified that the factors included in the analysis are not collinear.

**5** Considering that 65% of plain verbs in ASL are subjectless, we expect the effect of Verb type less relevant in this language.

An anonymous reviewer suggested that contact with spoken Italian might emerge as an additional predictor. While spoken-language influence has been considered in other sign language studies (e.g. Wulf et al. 2002; McKee et al. 2011), its annotation involves a high degree of subjectivity. Although contact effects are possible and deserve further investigation, ideally through a parallel study of Italian, we leave this issue for future research.

Finally, a brief note on the sociolinguistic factors. Geographical variation in LIS is well known, particularly at the lexical level (Geraci et al. 2011). This study identified three areas: Turin, on the one hand, and Rome and Trani, on the other, which show distinct patterns of subject expression compared to the remaining cities. Whether this syntactic difference correlates with other structural properties remains a topic for future research. As for Education, the analysis indicates that higher-educated signers show a lower rate of subject omission. In line with findings from spoken languages, this pattern may reflect greater sensitivity to potential ambiguity and a corresponding tendency to favor overt subjects to avoid misunderstanding. While this interpretation remains tentative, it highlights Education as a factor that may shape metalinguistic awareness and communicative strategies.

## 6 Conclusions

This study examined subject expression in LIS through a quantitative analysis of the LIS corpus, an invaluable resource developed with the contribution of Anna Cardinaletti within the PRIN 2007 project "Dimensions of Variation in Italian Sign Language". The results show that both linguistic and social factors shape the distribution of subjects in LIS. While many sign languages display effects of both pro-drop and topic-drop, LIS reveals a complementary distribution of these mechanisms across clause types, and the effect of role shift is now better qualified as part of syntactically-driven null subjects.

## Acknowledgments

We are deeply indebted to Anna Cardinaletti, whose work has given a significant impetus to scientific research on LIS and has played a crucial role in promoting its recognition within academia.

This research was made possible by the availability of the LIS Corpus (PRIN 2007 project *Dimensions of variation in Italian Sign Language*). We would like to thank all the Deaf signers who participated in the project and generously shared their linguistic competence for the purposes of scientific research.

## Bibliography

Baayen, R.H.; Davidson, D.J.; Bates, D.M. (2008). "Mixed-Effects Modeling with Crossed Random Effects for Subjects and Items". *Journal of Memory and Language*, 59(4), 390-412. https://doi.org/10.1016/j.jml.2007.12.005.

Bahan, B.; Kegl, J.; Lee, R.G.; MacLaughlin, D.; Neidle, C. (2000). "The Licensing of Null Arguments in American Sign Language". *Linguistic Inquiry*, 31, 1-27. https://doi.org/10.1162/002438900554271.

Beaman, K. (2025). "Changing Socioindexicalities in Swabian: Real-Time Change in Subject Pronoun Use". *Journal of Language Variation and Sociolinguistics*, 1(1), 95-118.

Biberauer, T.; Holmberg, A.; Roberts, I.; Sheehan, M. (2010). *Parametric Variation: Null Subjects in Minimalist Theory*. Cambridge: Cambridge University Press. https://doi.org/10.1017/cbo9780511770784.

Bos, H.F. (1993). "Agreement and Prodrop in Sign Language of the Netherlands". *Linguistics in Amsterdam*, 10(1), 37-47. https://doi.org/10.1075/avt.10.06bos.

Branchini, C.; Geraci, C. (2011). "L'Ordine dei Costituenti in LIS: Risultati Preliminari". Cardinaletti, A.; Cecchetto, C.; Donati, C. (eds), *Grammatica, Lessico e Dimensioni di Variazione nella LIS*. Milano: FrancoAngeli, 113-26.

Cameron, R. (1992). *Pronominal and Null Subject Variation in Spanish: Constraints, Dialects, and Functional Compensation* [PhD Dissertation]. Philadelphia: University of Pennsylvania.

Cardinaletti, A. (1997). "Subjects and Clause Structure". Haegeman, L. (ed.), *The New Comparative Syntax*. London: Longman, 33-63.

Cardinaletti, A. (2018). "On Different Types of Postverbal Subjects in Italian". *Italian Journal of Linguistics*, 30, 79-106.

Cardinaletti, A.; Cecchetto, C.; Donati, C. (eds) (2011). *Grammatica, Lessico e Dimensioni di Variazione nella LIS*. Milano: FrancoAngeli.

Cecchetto, C.; Geraci, C.; Zucchi, A. (2009). "Another Way to Mark Syntactic Dependencies: The Case for Right-Peripheral Specifiers in Sign Languages". *Language*, 85(2), 278-320. https://doi.org/10.1353/lan.0.0114.

Costello, B.D.N. (2015). *Language and Modality: Effects of the Use of Space in the Agreement System of Lengua de Signos Española (Spanish Sign Language)* [PhD Dissertation]. Amsterdam; Leioa: University of Amsterdam; University of the Basque Country.

Crasborn, O.; Sloetjes, H. (2008). "Enhanced ELAN Functionality for Sign Language Corpora". *Proceedings of LREC 2008, 6th International Conference on Language Resources and Evaluation*, 39-43.

D'Alessandro, R. (2015). "Null Subjects". Fábregas, A.; Mateu, J.; Putnam, M. (eds), *Contemporary Linguistic Parameters*. London: Bloomsbury Press, 201-26. https://doi.org/10.5040/9781474219549.ch-009.

Flores-Ferrán, N. (2010). "¡Tú no me Hables! Pronoun Expression in Conflict Narratives". *International Journal of the Sociology of Language*, 203, 61-82. https://doi.org/10.1515/ijsl.2010.022.

Geraci, C.; Battaglia, K.; Cardinaletti, A.; Cecchetto, C.; Donati, C.; Giudice, S.; Mereghetti, E. (2011). "The LIS Corpus Project. A Discussion of Sociolinguistic Variation in the Lexicon". *Sign Language Studies*, 11(4), 528-74. https://doi.org/10.1353/sls.2011.0011.

Glück, S.; Pfau, R. (1998). "On Classifying Classification as a Class of Inflection in German Sign Language". Cambier-Langeveld, T.; Lipták, A.; Redford, M. (eds), *ConSOLE VI Proceedings*. Leiden: SOLE, 59-74.

Haegeman, L.; Weir, A. (2025). "Against a Uniform Analysis of Subject Omission in English: Colloquial Speech, Abbreviated Writing, and Conjunctions". *Rivista di Grammatica Generativa*, 47(7), 1-27.

Jaber, A.; Donati, C; Geraci, C. (2022). "On the Properties of Null Subjects in Sign Languages: the Case of French Sign Language (LSF)". *Linguistic Review*, 39(4), 655-86. https://doi.org/10.1515/tlr-2022-2100.

Jaeggli, O.; Safir, K. (eds) (1989). *The Null Subject Parameter*. Dordrecht; Boston; London: Kluwer Academic Publishers. Studies in Natural Language and Linguistic Theory 15. https://doi.org/10.1007/978-94-009-2540-3_1.

Jia, L.; Bayley, R. (2002). "Null Pronoun Variation in Mandarin Chinese". *University of Pennsylvania Working Papers in Linguistics*, 8(3), 103-16.

Koulidobrova, E. (2017). "Elide me Bare: Null Arguments in American Sign Language". *Natural Language and Linguistic Theory*, 35, 397-446. https://doi.org/10.1007/s11049-016-9349-5.

Lillo-Martin, D. (1986). "Two Kinds of Null Arguments in American Sign Language". *Natural Language and Linguistic Theory*, 4, 415-44. https://doi.org/10.1007/bf00134469.

McKee, R.; Schembri, A.; McKee, D.; Johnston, T. (2011). "Variable 'Subject' Presence in Australian Sign Language and New Zealand Sign Language". *Language Variation and Change*, 23(3), 375-98. https://doi.org/10.1017/s0954394511000123.

Meir, I.; Padden, C.; Aronoff, M.; Sandler, W. (2007). "Body as Subject". *Journal of Linguistics*, 43, 531-63. https://doi.org/10.1017/s0022226707004768.

Meyerhoff, M. (2000). *Constraints on Null Subjects in Bislama (Vanuatu): Social and Linguistic Factors*. Canberra: Pacific Linguistics Publications.

Neidle, C.; Kegl, J.; MacLaughlin, D.; Bahan, B.; Lee, R.G. (2000). *The Syntax of American Sign Language: Functional Categories and Hierarchical Structure*. Cambridge, MA: MIT Press.

Paredes Silva, V.L. (1993). "Subject Omission and Functional Compensation: Evidence from Written Brazilian Portuguese". *Language Variation and Change*, 5, 35-49. https://doi.org/10.1017/s0954394500001381.

Perlmutter, D. (1971). *Deep and Surface Structure Constraints in Syntax*. New York: Holt, Rinehart and Winston.

Quer, J.; Cecchetto, C.; Pfau, R.; Donati, C.; Steinbach, M.; Geraci, C.; Kelepir, M. (2017). *SignGram Blueprint. A Guide to Sign Language Grammar Writing*. Berlin: De Gruyter Mouton. https://doi.org/10.1515/9781501511806.

Rizzi, L. (1986). "Null Objects in Italian and the Theory of pro". *Linguistic Inquiry*, 17, 501-57. https://doi.org/10.4324/9780203461785-6.

Smith, S.D. (2013). *Pro-Drop and Word-Order Variation in Brazilian Portuguese: A Corpus Study* [MA Dissertation]. Provo, UT: Brigham Young University.

Travis, C.E. (2007). "Genre Effects on Subject Expression in Spanish: Priming in Narrative and Conversation". *Language Variation and Change*, 19(2), 101-35. https://doi.org/10.1017/s0954394507070081.

Wulf, A.; Dudis, P.; Bayley, R.; Lucas, C. (2002). "Variable Subject Presence in ASL Narratives". *Sign Language Studies*, 3(1), 54-76. https://doi.org/10.1353/sls.2002.0027.

Zwitserlood, I.; van Gijn, I. (2006). "Agreement Phenomena in Sign Language of the Netherlands". Ackema, P.; Brandt, P.; Schoorlemmer, M.; Weerman, F. (eds), *Arguments and Agreement*. Oxford: Oxford University Press, 195-229. https://doi.org/10.1093/oso/9780199285730.003.0007.

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# The Partitive Pronoun *er* with the Numeral 'one' in Two Regional Spoken Varieties of Dutch

## Optionality and Variation

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**Abstract** In standard Dutch, the use of the partitive pronoun *er* is required with an elliptical indefinite noun phrase introduced by a quantifier in object position. Previous research on informal face-to-face conversations from the SONAR corpus, which contains data from Netherlandic and Belgian Dutch, has shown that in the Netherlandic Dutch data the partitive pronoun is much more used with the numeral 'one' than in the Belgian Dutch data, in which, conversely, the use of *er* with 'two', 'three' and 'four' is almost 100%. This paper investigates whether the distinctions between the two regional varieties of Dutch may be a reflection of the influence of local dialects. The results point to a different theoretical analysis of 'one', depending on the variety.

**Keywords** Partitive pronoun. Numeral. Regional variety. Dialect. Dutch.

**Summary** 1 Introduction. – 2 The Use of *er* with Numerals in Two Colloquial Dutch Regional Varieties. – 3 Methodology. – 4 Results. – 5 Discussion. – 6 Conclusion.

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## 1 Introduction

Similarly to Italian, which has the partitive clitic *ne* (Cardinaletti, Giusti 1992), Dutch has the partitive pronoun *er*, which has also been called a quantitative pronoun for Dutch. Cardinaletti (1999) argues that where Italian has clitics, Dutch has weak pronouns. This suggests that partitive *er* is a weak pronoun.[1]

Cardinaletti and Giusti (1992) analyze *ne* as an NP, selected by the functional category Q, as in (1):

(1) *Ne* *ho* *letto* $[_{QP}\,[_{Q}$ *uno* $[_{NP}$ ~~*ne*~~ $]]]$.
PART.CL I.have read one
'I have read one.'

This analysis has been adopted by Kranendonk (2010) for Dutch. In this more recent analysis QP has been replaced by NumP and NP has been replaced by nP:

(2) *Ik* *heb* *er* $[_{NumP}\,[_{Num}$ *één* $[_{nP}$ ~~*er*~~ $]]]$ *gelezen*
I have PART.WK one read
'I have read one.'

Kranendonk investigates, among other things, the occurrence of *er* with numerals in Southern and Northern Dutch dialects. He states that there are Dutch dialects in which numerals in elliptical noun phrases in object position co-occur necessarily with *er*, as in standard Dutch, but that there are also dialects in which this is not (necessarily) the case.

Kranendonk does not distinguish between *één* and higher numerals. He shows, for instance, that in Giethoorn Dutch a schwa shows up on both the numeral *één* 'one' and the numeral *vier* 'four' in an ellipsis construction with *er*.

**1** This paper builds on research carried out within the PARTE project (Partitivity in European languages), which was funded by NWO (the Netherlands Organization for Scientific Research, Grant 236-70-007) and co-funded by the Universities of Zurich, Venice, Budapest and Pavia. I am very grateful to Anna Cardinaletti for her valuable contribution to the project. Many thanks also go to the two reviewers of this paper for their critical remarks and suggestions and to the editors of the volume.

Cardinaletti and Giusti (2017, fn. 24) argue, however, that quantitative *er*, differently from other *er*-pronouns in Dutch, might be a clitic as well.

| | | | | | | |
|---|---|---|---|---|---|---|
| (3) | *Ik* | *he* | *ien* | *boek* | *elezen* | |
| | I | have | one-Ø | book | read | |
| | *en* | *Jacob* | *het'r* | *ok* | *iene* | *elezen.* |
| | and | Jacob | has-PART.WK | also | one-e | read |
| | 'I have read one book and Jacob has read one too.' | | | | | |
| (4) | *Ik* | *he* | *vier* | *boek'n* | *elezen* | |
| | I | have | four-Ø | book-s | read | |
| | *en* | *Jacob* | *het'r* | *ok* | *viere* | *elezen.* |
| | and | Jacob | has-PART.WK | also | four-e | read |
| | 'I have read four books and Jacob has read four too.' | | | | | |

Sleeman (2025) shows that in the spoken Netherlandic and Belgian varieties of standard Dutch (SONAR corpus), a distinction seems to be made between *één* 'one' and *twee* 'two', *drie* 'three' and *vier* 'four' in their use in an elliptical noun phrase in combination with the partitive pronoun *er*.[2]

This paper investigates if there is a difference between the co-occurrence of *er* with the numeral *één* and with some other low numerals, especially in regional Dutch dialects, to see if there could be an influence of the dialect on the regional varieties of spoken standard Dutch in the Netherlands and in Belgium.

The paper is organized as follows. In Section 2, Sleeman's (2025) results of the use of *er* with numerals in the spoken varieties of standard Dutch in the Netherlands and in Belgium are presented. In Section 3 the methodology for the present study on the use of *er* with *één* and higher numerals in Dutch dialects is presented, followed by the results in Section 4. In Section 5 the results are discussed, and a (refined) theoretical analysis is proposed. Section 6 ends the paper with a conclusion.

## 2 The Use of *er* with Numerals in Two Colloquial Dutch Regional Varieties

In Sleeman (2025), the use of the partitive pronoun *er* with the diminutive form *eentje* 'one.DIM' is investigated in the spontaneous face-to-face conversations of Netherlandic Dutch (henceforth: ND) and Belgian Dutch (henceforth: BD) speakers in the Corpus of Spoken Dutch (Corpus Gesproken Nederlands, CGN) of the OpenSoNaR

**2** SoNaR corpus. 2015. Dutch Language Institute. http://hdl.handle.net/10032/tm-a2-h5.

corpus.[3,4] Since the diminutive suffix *-tje* attaches essentially to nouns, the goal of the investigation was to find out if there are speakers who analyze *eentje* as a nominalization instead of an elliptical noun phrase, leading to the omission of *er*. In order to know if the possible omission of *er* could be due to the analysis of *eentje* as a nominalization, the omission of *er* with the non-diminutive form *één* was investigated as well. The results show that the omission of *er* with *eentje* did not substantially differ from the omission of *er* with *één*, in neither of the two regional varieties, suggesting that *eentje* is not analyzed as a nominalization.

An important difference was found between spoken ND and spoken BD with respect to the omission of *er*. In informal ND *er* was omitted with elliptical *één* in object position or predicative position in 21% of the cases and with *eentje* in 28% of the cases. In colloquial BD partitive *er* was omitted with *één* in 57% of the cases and with *eentje* in 61% of the cases, see Figure 1.

To verify whether the possible omission of *er* with *eentje* is a property of informal speech, Sleeman (2025) also analyzed the occurrence of *er* with *eentje* in written texts in the SoNaR-500 corpus (Oostdijk et al. 2013), available in the OpenSoNaR corpus. The results presented in Figure 1 show that *er* in combination with *eentje* is almost not omitted in books.

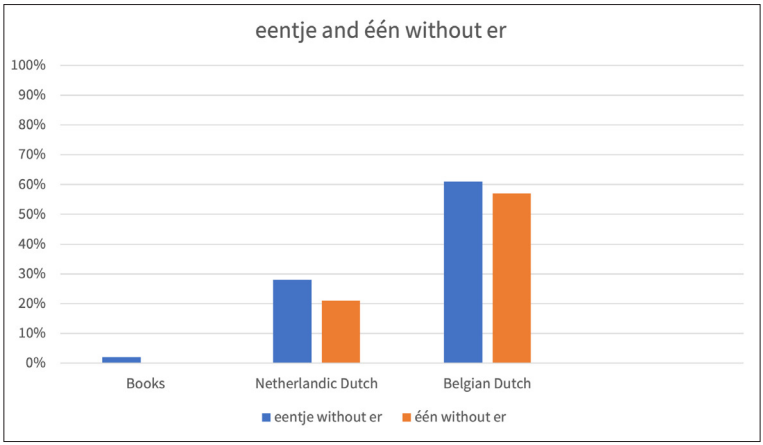



**Figure 1** Percentages of omission of the partitive pronoun with *een(tje)*

**3** Corpus Gesproken Nederlands (2014). Dutch Language Institute: `http://hdl.handle.net/10032/tm-a2-k6`.

**4** OpenSoNaR corpus. 2015. Dutch Language Institute. `https://taalmaterialen.ivdnt.org/download/pp-opensonar-j/`.

To check whether the difference between informal ND and informal BD in the omission of *er* with *één* and *ééntje* is a special property of the numeral 'one' or if it also occurs with other numerals, Sleeman (2025) analyzed the omission of *er* with the numerals *twee* 'two', *drie* 'three' and *vier* 'four' in the spontaneous face-to-face conversations of ND and BD speakers. The results show that in ND the percentages of omission of *er* with *een(tje)* and the higher numerals were quite comparable: 18% of omission of *er* with 'two', 'three' and 'four', versus 21% of omission with *één* and 28% of omission with *eentje*. In BD, however, there was a big difference: 7% of omission of *er* with 'two', 'three' and 'four', versus 57% of omission of *er* with *één* and 61% with *eentje*, see Figure 2.

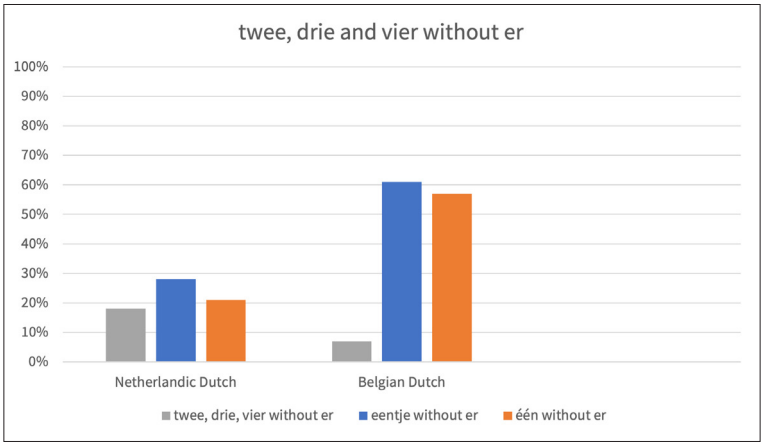



**Figure 2** Omission of the partitive pronoun with various numerals

A question that these results raise is why in the BD results there is almost no omission of *er* with the numerals 'two', 'three' and 'four', whereas the omission of *er* with *eentje* and *één* is considerable and why in the ND data in both cases the percentages of omission are relatively low.

Barbiers (2005; 2007) argues that *één* differs morphologically and syntactically from higher cardinals. Morozova and Barbiers (2024; 2025), based on Russian and additional data from Dutch, also distinguish 'one' from numerals higher than 'one'. They propose a DP-structure containing a lower and a higher classifier. They analyze 'one' as a classifier, more specifically as a low classifier, generated in the head of Class-low. The value of the feature [Unit:_] of the low classifier, e.g., [gender], [person], [place], is provided by its syntactic

environment.[5] Higher numerals, which are called cardinals by Morozova and Barbiers, are generated in the specifier position of the low ClassP, but if the higher classifier structure is available, cardinals are moved to Spec,ClassP-high. These high numerals have a feature [Partitioning:_], the value of which corresponds to the cardinal itself. In Russian, numerals higher than 'one' require genitive case on the noun, whereas 'one' does not do so.

Sleeman (2025) proposed that in spoken ND, *een(tje)* and higher numerals are cardinals, all expressing a partitioning, justifying the combination with *er* in both cases. Originally *er* is a third-person genitive pronoun. Postma (2023) relates the occurrence of *er* with both 'one' and higher numerals to the movement of *er* to the verbal domain, cancelling a paucal effect. For informal BD, Sleeman (2025) proposed that the higher numerals are cardinals, whereas *een(tje)* may function as a classifier with a unit interpretation, as in Morozova and Barbiers' (2024; 2025) structural analysis. In BD, *ene(n)* (or *een*) can be used in the meaning of 'someone' or 'something'. The influence of this pronominal use of *ene(n)* may explain the relatively high percentage of omission of *er* with the numeral *een(tje)*.

Sleeman (2025) suggests that dialectal influence could account as well for the differences between the varieties. Kranendonk (2010, 137) observes variation in the use of *er* with numerals in Northern Dutch dialects, as in Sleeman's results for informal ND, but he claims that in Southern Dutch dialects *er* is obligatorily present, which was not confirmed in Sleeman's data for *een(tje)*.

In a corpus of spontaneous face-to-face conversations in Heerlen Dutch (Cornips 1994), a standard Dutch variety spoken in Heerlen in the south-east of the Netherlands, Cornips and Sleeman (2024) found an omission of *er* of 16.9% with elliptical noun phrases in object position containing a numeral or a weak quantifier, which they attribute to a possible influence of the local Heerlen dialect. This percentage is comparable to the omission of *er* with *een(tje)* and the higher numerals in the spontaneous face-to-face conversations in the SONAR corpus.

A potential influence of dialects on colloquial spoken language is also suggested by Cardinaletti and Giusti (2020), who checked if there is variation among regional varieties of informal Italian in the possible forms of indefinite determiners and if possible variation reflects variation reported in the dialectal database *AIS* and discussed by Cardinaletti and Giusti (2018). To check a possible

**5** In Russian, 'one' exhibits gender concord with the noun. In Dutch, the feature [Unit:_] of the low classifier is valued with [person] in constructions such as *in mijn eentje* 'on my own', litt. 'in my one.DIM'. The feature [Unit:_] of the low classifier is valued with [place] by the preposition in constructions such as *zij kwamen bijeen* 'they came together, litt. 'they came by.one'.

influence of the Heerlen dialect on the optional use of *er* in standard Heerlen Dutch, Cornips and Sleeman (2024) analyzed the answers given by the two speakers of the Heerlen dialect to relevant questions in a questionnaire from the *Diversity in Dutch DP Design* (DiDDD) project (Corver et al. 2011). The answers show that the partitive pronoun is both used (5) and omitted (6) by the two speakers, as exemplified by answers given by one of the respondents.

(5) *Dees kinger hei leëze ging beuk,*
these children here read no books
*mar die doa leëze d'r juus vöal.*
but those there read PART.WK on the contrary many
'These children do not read books, but those, on the contrary, read many.'

(6) *Uëver auto's gekald, deë va d'r Jan is prachtig!*
about cars spoken the.one of the Jan is beautiful
*Ich wil Ø óch zoeë inne.*
I want also such one-e
'Speaking about cars, Jan's car is beautiful! I also want to have one like that.'

In Section 4, the answers given to sentences containing *één* 'one', *twee* 'two', *drie* 'three' and *vier* 'four' in the questionnaires of the DiDDD project will be analyzed. The goal is, on the one hand, to verify if there is a difference between the ND and BD dialects with respect to the omission of *er* with *één*, and, on the other hand, to investigate if there is a difference between 'one' versus 'two', 'three' and 'four' with respect to the omission of *er* in Dutch dialects. In the next section, the methodology will be presented.

## 3 Methodology

In the DiDDD project (Corver et al. 2011), two types of questionnaires were used. The first type only contains some sentences in standard Dutch, which the respondents were asked to translate into their own regional dialect. This type is called "short questionnaire". This questionnaire was filled in by one or two speakers from a large number of ND and BD dialects. The second type is much longer and was filled in by one or two speakers of a smaller group of ND and BD dialects. This type is called "list Negation and Quantification". These questionnaires also contain standard Dutch sentences, but this time with the question "Does this sentence occur in your dialect?", with the options "yes", "no" or "not known". If the respondents answered "yes", they were asked to provide the translation of the sentence into their dialect. If they answered "no", they were asked to provide an

alternative used in their dialect. The option "unknown" was rarely used by the respondents.

The type "short questionnaire" contains two sentences with *één*. Sentence 6 from the questionnaire contains *zo één* 'a similar one', see (7), translated into dialectal Heerlen Dutch in (6). Sentence 23 contains *geen één* 'not one', see (8). The type "short questionnaire" contains one sentence with a higher numeral, namely *vier* 'four'. This is sentence 34, shown in (9).[6]

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| (7) | *Over* | *auto's* | *gesproken,* | | *die* | *van* | *Jan* | *is* | *prachtig!* |
| | about | cars | spoken | | that | of | Jan | is | beautiful |
| | *Ik* | *wil* | *er* | | *ook* | *zo* | *één.* | | |
| | I | want | PART.WK | | also | so | one | | |
| | 'Speaking of cars, Jan's car is beautiful! I also want to have one like that.' | | | | | | | | |
| (8) | *Van* | *al* | *deze* | *boeken* | *zijn* | *die* | *dikke* | *het* | *mooist,* |
| | of | all | these | books | are | those | thick | the | beautiful.SUP |
| | *maar* | *ik* | *heb* | *er* | *nog* | *geen* | *één* | *gekocht.* | |
| | but | I | have | PART.WK | yet | not | one | bought | |
| | 'Of all these books, the thickest ones are the most beautiful, but I have not bought a single one yet.' | | | | | | | | |
| (9) | *Hij* | *heeft* | *vijf* | *appels* | *en* | *ik* | *heb* | *(er)* | *vier.* |
| | he | has | five | apples | and | I | have | PART.WK | four |
| | 'He has five apples and I have four.' | | | | | | | | |

The type of questionnaires called "list Negation and Quantification" contains one sentence with *één*, sentence 2e, exemplified in (10). There is one sentence with *twee* 'two', sentence 1a, see (11). A similar sentence, but this time containing *drie* 'three' is 3a, exemplified in (12). An additional sentence containing *drie* 'three' is 2m, shown in (13).

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| (10) | *Jan* | *heeft* | *er* | *één.* | | | | | |
| | Jan | heeft | PART.WK | one | | | | | |
| | 'Jan has one.' | | | | | | | | |
| (11) | *Over* | *boeken* | *gesproken,* | *ik* | *heb* | *er* | *twee* | *gekocht.* | |
| | about | books | spoken | I | have | PART.WK | two | bought | |
| | 'Speaking of books, I have bought two.' | | | | | | | | |
| (12) | *Over* | *boeken* | *gesproken,* | *ik* | *heb* | *er* | *drie* | *gekocht.* | |
| | about | books | spoken | I | have | PART.WK | three | bought | |
| | 'Speaking of books, I have bought three.' | | | | | | | | |

**6** It is not clear why *er* is put between parentheses in this question, whereas it is not in the other test sentences.

(13) *Jan heeft twee fietsen en ik heb er drie.*
Jan has two bikes and I have PART.WK three
'Jan has two bikes and I have three.'

For both types of questionnaires, the translations of the sentences were checked on the presence or absence of *er*. It has to be noticed that in informal and dialectal Dutch, *er* can take different forms, like *d'r*, *t'r*, *'r*, as shown in (3)-(5). The results are presented in the next section.[7]

## 4 Results

In this section, the results of the investigation on the use of the partitive pronoun *er* in ND and BD dialects with *een*, *two*, *three* and *four* are presented.

The results presented in subsections 4.1 and 4.2 will be presented in maps making use of the software created by the Meertens Institute and based on Kloeke codes.[8] For a proper interpretation of the data, a map of the Netherlands is provided in Figure 3 and a map of Belgium in Figure 4.[9,10] The Dutch-speaking region in Belgium comprises the provinces of West Flanders, East Flanders, Flemish Brabant, Antwerp and Belgian Limburg. Data for the short list were also collected in the Brussels Capital Region and in Teteghem in French Flanders. Dutch Limburg borders Belgian Limburg to the west, across the Meuse River, and the French-speaking province of Liège to the south.

**7** The analyzed data has been stored on OSF, project *ER with numerals in Dutch dialects* (https://osf.io/58rj6/overview).

**8** Kloeke codes. Meertens Institute, KNAW. https://kloeke.meertens.knaw.nl/.

**9** https://www.freeimages.com/vector/netherlands-subdivision-map-of-europe-5701429.

**10** Created by user Golbez. https://commons.wikimedia.org/wiki/File:Belgium_provinces_EN.png.




**Figure 3** Map of the Netherlands. Source: freeimages.com

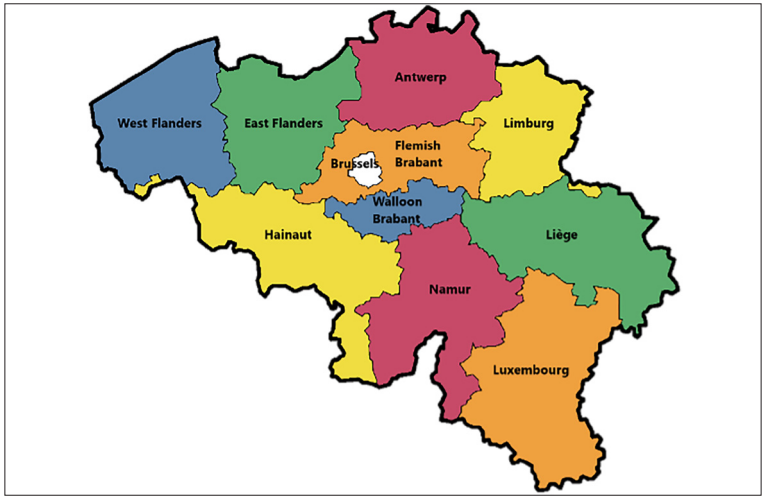



**Figure 4** Map of Belgium. Source: Wikimedia Commons, Created by user Golbez

### 4.1 *Eén*

The short questionnaire was filled in by 235 participants, sometimes by two speakers of the same dialect. The respondents were asked to translate sentence (7) into their own dialect. The results for the use or non-use of *er* with *zo één* are depicted in the geographical map in Figure 5.

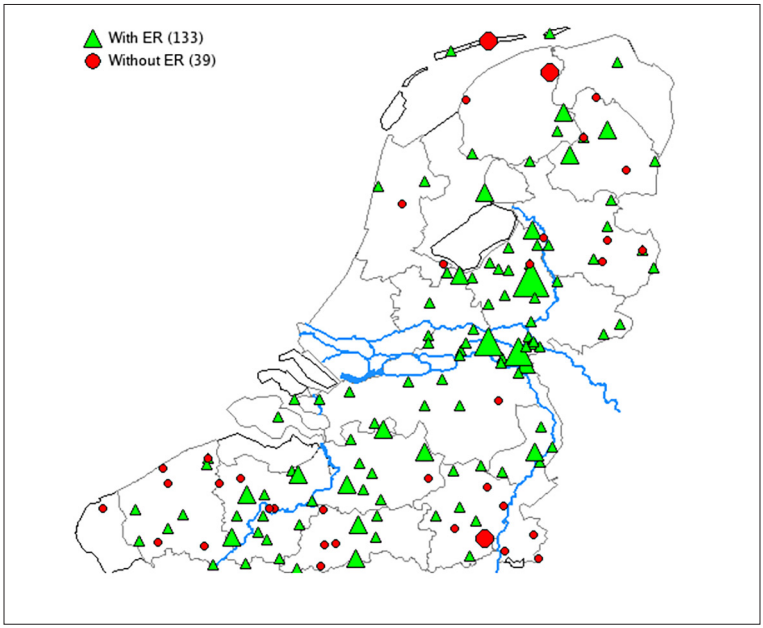



**Figure 5** Use or non-use of ER in the translations of "Ik wil er ook zo één"

In the translations of example (7), 133 times *er* was used and 39 times *er* was left out. In 63 cases another construction was used, namely one with a focalized *zo één* in sentence-initial position, or the relevant part of the sentence had not been translated. These 63 cases were left out of the analysis. In the 172 translations retained for analysis, *er* was left out in 19% of the cases in the ND dialects and in 29% of the cases in the BD dialects.

In the translation of example (8), *er* was used 160 times with *geen één* and it was left out 23 times, as shown in Figure 6. In the dialects of the Netherlands *er* was omitted in 8% of the cases and in the dialects of Belgium in 21% of the cases. In 52 answers, the relevant part was translated in another way or was not translated.

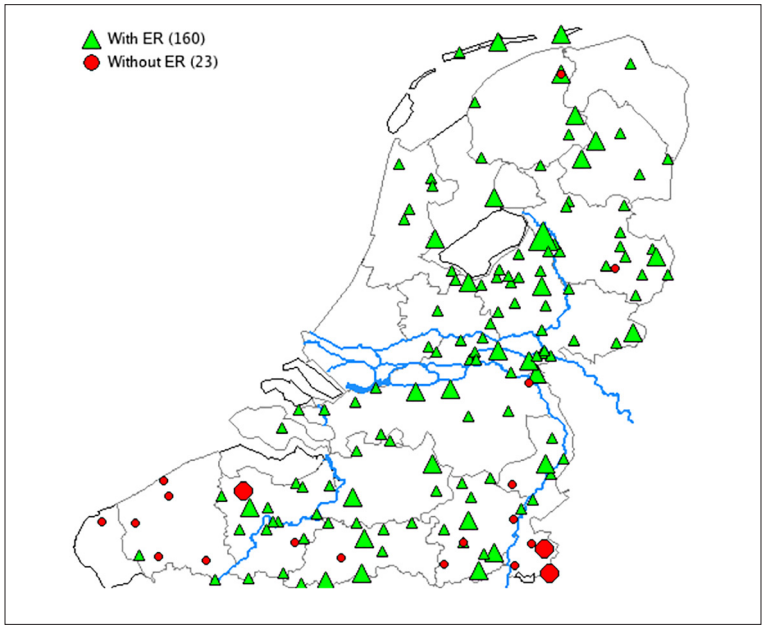



**Figure 6** Use or non-use of ER in the translations of "ik heb er nog geen één gekocht"

The third question containing *één* is a question from the list "Negation and Quantification", exemplified in (10). This long questionnaire was filled in by 53 dialect speakers. In some cases, there is overlap with the dialects of the short questionnaire, but in most cases the dialects are different. As in the case of the short questionnaire, sometimes more than one speaker of the same dialect provided an answer. Whereas most questions of the long questionnaire were yes/no questions followed by a question on the translation of the relevant sentence, in the case of example (10) only the translation into the dialect was asked. The results are shown in Figure 7.

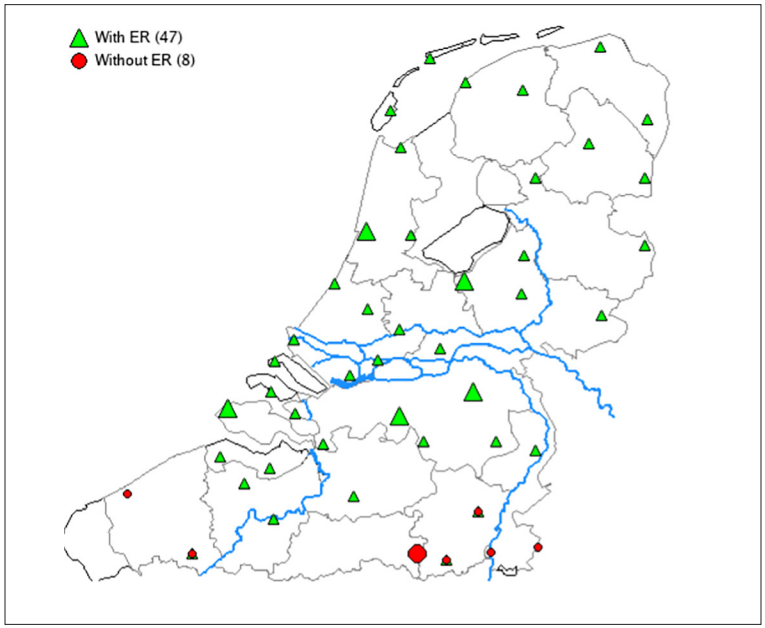



**Figure 7** Use or non-use of ER in the translations of "Jan heeft er één"

In 45 of the translations, *er* was used as the only option. In ND dialects *er* was used 40 times and left out 2 times. In BD dialects the use of *er* occurred 5 times and the omission 4 times. Additionally, in BD there were two optional uses of *er*, counted twice, as a use and as an omission of *er*. The omission of *er* took place in 5% of the cases in ND dialects and in 46% of the cases in BD dialects.

## 4.2 *Twee*, *drie* and *vier*

In Figure 8 the results for the translation of *ik heb (er) vier*, sentence (9), are presented. Since this sentence is part of the short questionnaire, 235 translations were provided, sometimes by several speakers of the same dialect.

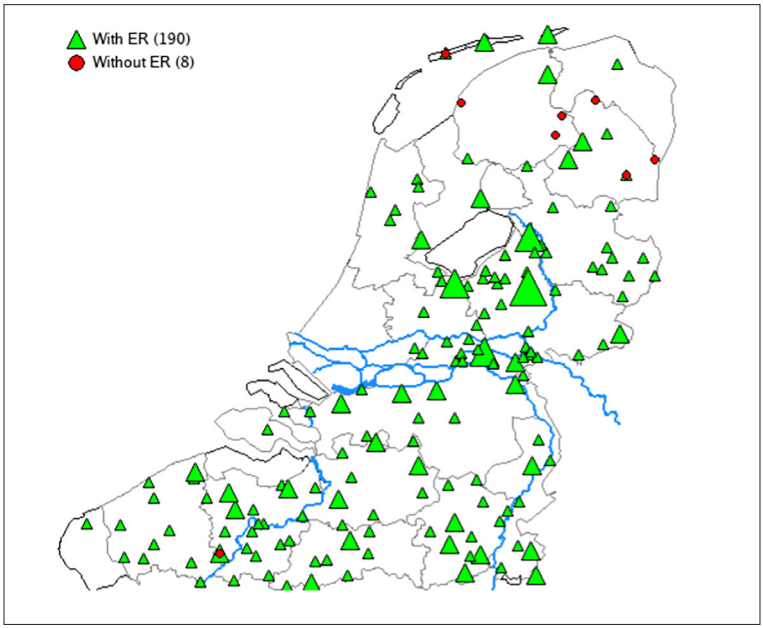



**Figure 8** Use or non-use of ER in the translations of "ik heb (er) vier"

In 39 cases, the dialect speakers gave an irrelevant translation or no translation. The use of *er* showed up 190 times, of which optionally in 2 cases. In 8 cases, *er* was omitted, of which optionally in 2 cases counted twice: as "non-use" and as "use". The optionality was indicated once in a Netherlandic answer and once in a Belgian answer. The omission of *er* took place in 6% of the relevant Netherlandic answers and in 1% of the relevant Belgian answers.

The long questionnaire was filled in by 57 dialect speakers, 43 from the Netherlands and 14 from Belgium. For sentences (11), (12) and (13) in the long questionnaire it is first asked if the sentence occurs in the dialect. Subsequently a translation is asked. The results presented for *twee* and *drie* are based on a combination of the answers to both types of questions.

The results for *twee* are represented in Figure 9. In the ND dialects *er* was used 42 times, among which 8 times optionally. The 8 optional cases are counted both as "use" and "non-use". The respondent of one dialect answered that in their dialect *er* is left out, without providing a translation, however. In the BD dialects, *er* was used 14 times and not omitted at all. In the ND dialects there is 18% of omission of *er*.

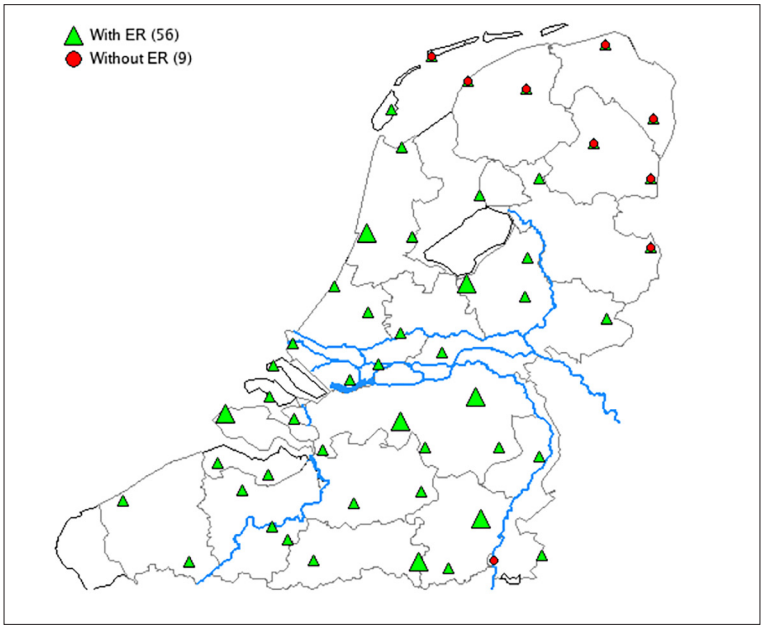



**Figure 9** Use or non-use of ER in the translations of "ik heb er twee gekocht"

The results for the first sentence containing *drie*, sentence (12), are shown in Figure 10. Seven respondents indicated that *er* can be used and can be omitted in the sentence under consideration. One respondent answered that *er* cannot be used. These cases of (optional) omission all concerned dialects in the Netherlands. For 35 respondents from the Netherlands and all the respondents from Belgium the non-optional use of *er* was the only option. This means that in 0% of the cases the omission of *er* in sentence (12) was an option for the BD dialectal speakers. For the speakers of a ND dialect this was 16%, but in most of these cases the omission is optional.

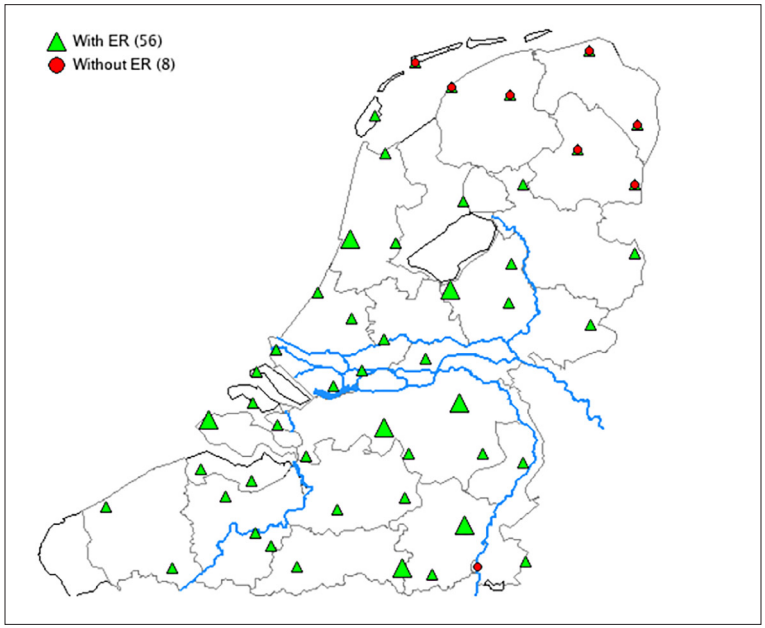



**Figure 10** Use or non-use of ER in the translations of "ik heb er drie gekocht"

Figure 11 shows the results for the second sentence containing *drie*, sentence (13). In the ND data, *er* is used by 56 dialect speakers, although 4 of them indicated that its use is optional and that omission is also possible. For one ND dialect, it was indicated that *er* can only be omitted. For all of the 14 BD dialects, the respondents answered that *er* is used but that it cannot be left out. The ND rate of omission is 11%, including the 4 optional cases of omission.

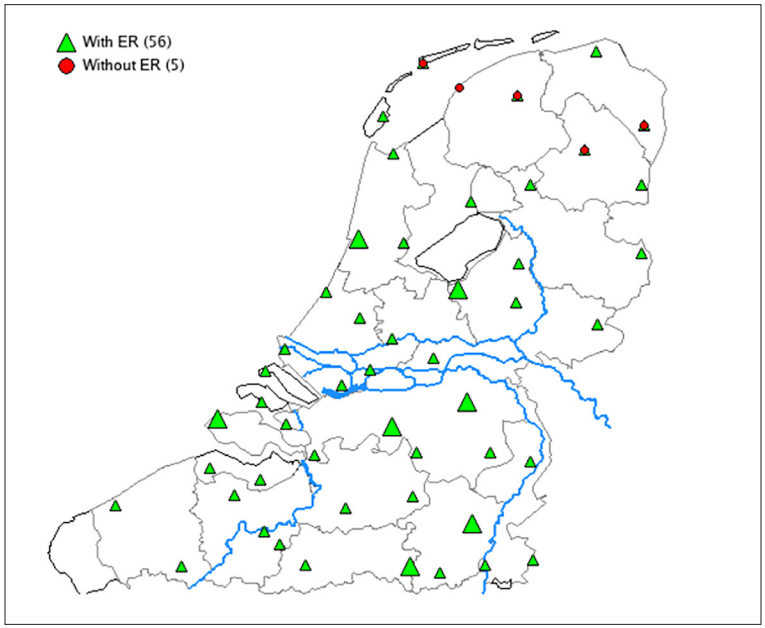



**Figure 11** Use or non-use of ER in the translations of "ik heb er drie"

## 4.3 Comparison of *één* with *twee, drie* and *vier*

The comparison of the average percentage of omissions of *er* with *één* for the three sentences presented in subsection 4.1 and of the average percentage of omissions of *er* with *twee, drie* and *vier* for the four sentences presented in subsection 4.2 yields the results provided in Figure 12.

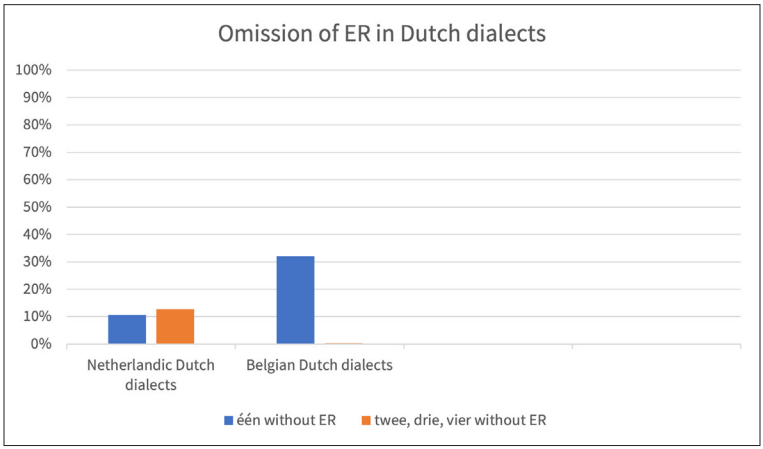



**Figure 12** Omission of ER with low numerals in Netherlandic and Belgian Dutch dialects

Figure 12 shows that with *één er* was omitted in ND dialects in on average 10.7% of the cases, whereas the percentage is 32% for BD dialects. Figure 12 furthermore shows that, whereas in the BD dialects *er* is almost never omitted with *twee*, *drie* and *vier*, namely in 0.25% of the cases (not visible in the figure), for ND the percentage of omission with *twee*, *drie* and *vier* is comparable to that for the omission of *er* with *één*, namely 12.75%.

## 5 Discussion

On the basis of previous results of the combination of *er* with *één* in informal spoken ND and BD, two research questions were formulated at the end of Section 2: in ND and BD dialects, is there a difference with respect to the use of *er* with *één* and does the use of *er* with *één* differ from the use of *er* with *twee*, *drie* and *vier*?

A comparison of Figure 12 and Figure 2 shows that, as in colloquial Dutch, the omission of *er* with *één* in dialects is higher in Belgium than in the Netherlands. In colloquial ND there is 21% of omission and in the ND dialects 10.7%. In informal BD there is 57% of omission and in the Belgian dialects 32%. It should be noted that the results presented in subsection 4.1 do not only concern the bare numeral *één*, but also the combinations *zo één* and *geen één*. If, for a proper comparison, we consider only the bare numeral *één*, as in the informal spoken Dutch results, we see that the percentage of omission of *er* in Belgian dialects increases to 46%. In Netherlandic dialects, the percentage of omission of *er* with the bare numeral *één* is lower than in informal ND, namely 5%. This means that with bare *één* the

regional difference in omission of *er* is even bigger in dialects than in colloquial standard Dutch.

As for the second research question, the results in Figures 2 and 12 show that, as in informal ND, in Dutch dialects the percentages of omission of *er* with *twee*, *drie*, *vier* and *één* are quite comparable. In colloquial ND the percentage of omission of *er* with *twee*, *drie*, *vier* is 18% and with *één* 21%. In the Netherlandic dialects the omission rate with *twee*, *drie*, *vier* is 12.75% and with *één* it is 10.7%. As in Figure 2, in Figure 12 *er* is more often omitted in BD with *één* than with *twee*, *drie* and *vier*. In informal BD there is 7% of omission with *twee*, *drie*, *vier* and 57% of omission with *één*. In Belgian dialects there is 0.25% of omission with *twee*, *drie* and *vier* and on average 32% of omission with *zo één*, *geen één* and *één*, and 46% of omission with the bare numeral *één*.

Based on standard Dutch and Russian, Morozova and Barbiers (2024; 2025) claim that 'one' is a low classifier with a "unit" interpretation, whereas higher numerals are cardinals. Sleeman (2025) argued that in spoken BD 'one' may behave like a classifier under the influence of the homophonous pronoun 'someone' or 'something'. This would account for the relatively high omission rate of *er* with *één*. In dialectal BD *één* may also be analyzed as a classifier, whereas *twee*, *drie* and *vier* are cardinals, since we see the same pattern. In dialectal ND, as in spoken ND, the omission of *er* with all numerals is low, which suggests that all numerals are cardinals, at least in ellipsis constructions. Postma (2023) attributes the cancelling of the paucal effect with quantitative *er* to the movement of *er* to the verbal domain. In Morozova and Barbiers' framework, this would mean that the movement of *er* to the verbal domain would be related to the movement of all numerals, including 'one', from the low classifier position to the high classifier position. As suggested by one of the reviewers, the empty counterpart of *er* would imply vacuous movement of the empty pronoun. The absence of movement of the empty pronoun would then imply that there is no movement from the low classifier position to the high classifier position. In this way the presence or absence of the use of *er* would be related to the position of the numeral in the syntactic structure. If *één* remains in the low classifier position, there is no *er*, which has to move to the verbal domain, either. In this sense, there is no true optionality between the two forms (Cardinaletti, Giusti 2018). The overt partitive pronoun occurs with numerals raised to the higher classifier phrase. The empty pronoun is used with numerals that remain in the low classifier phrase.

The results partly confirm Kranendonk's (2010) observation about the omission of *er* in Dutch dialects: no omission in Southern Dutch dialects and optional omission in Northern Dutch dialects. In the data presented in Section 4, for all numerals we see indeed that there is

variation and optionality in the use of *er* in the ND dialects.[11,12] There are dialects where *er* is used and others where *er* is omitted; whereas one speaker of a dialect indicates that *er* has to be omitted, another speaker of the same dialect indicates that *er* has to be used in the translation of the same sentence; there are also individual speakers who indicate that *er* can be used or left out in the translation of a sentence. Kranendonk's observation that in Southern Dutch dialects there is no omission of *er* is partly confirmed, namely for the numerals *twee*, *drie* and *vier*. In the data there is only one omission and an average percentage of omission of only 0.25%. With *zo één*, *geen één* and, especially with the bare numeral *één*, we saw, however, that there is a relatively high percentage of omission, representing variation between BD dialects and between individual speakers of a dialect and, in some cases, optionality for individual speakers.

Although a fine-grained regional comparison as in Cardinaletti and Giusti (2018; 2020) could not be made, due to the absence of specific local information in the informal Dutch data, the results of the dialectal research presented in Section 4 confirm the suggestion formulated in Section 2 that there could be an influence of the dialect on the spoken variety of standard Dutch: the patterns presented in Figure 12 are quite similar to the patterns observed in informal spoken Dutch presented in Figure 2. Any differences may be due to the fact that the data in Figure 2 are based on face-to-face conversations. Sleeman (2025) suggests that in spoken varieties *er* may be omitted for reasons of economy, the pronoun not being pronounced at PF. Although dialects are also mainly spoken varieties, the answers to the questions in the questionnaires used in the DiDDD project had to be written. Furthermore, the sentences that had to be translated already contained *er*, which may have had a priming effect.

For this reason, the results presented in this paper should be interpreted with caution. Furthermore, in the short questionnaire, the respondents from the Netherlandic province of Gelderland are relatively overrepresented, whereas respondents from the Netherlandic provinces of Zuid-Holland and Zeeland are almost absent. In the long questionnaire, there is a more balanced representation, which may contribute to the validity of the claims made in this section.

**11** According to Cardinaletti and Giusti (2018; 2020), there may not only be an influence of dialects on the colloquial language, but also influence of the standard language on dialects. This is what we see for the Frisian language. Frisian, like English and Standard German, originally does not have the partitive pronoun, but under the influence of standard Dutch, *er* is used in Friesland, as can be seen in most of the maps of Section 4. The optionality may be due to the presence of several coexisting grammars in the speakers' minds (Cardinaletti, Giusti 2018, 144).

**12** The optionality does not only occur in dialects spoken in Friesland. As the maps presented in Section 4 show, among the ND dialects, it also occurs in North-Eastern, Low Saxon, dialects spoken in provinces bordering Germany.

## 6 Conclusion

In this paper, the omission of the partitive pronoun *er* with the numeral *één* was investigated in Dutch dialects to investigate if there is diatopic variation in the omission or *er*. There is much more omission of *er* with *één* in BD than in ND dialects, whereas with the numerals *twee*, *drie* and *vier* there is almost no omission. While in Netherlandic spoken varieties all numerals are cardinals, in spoken BD *één* may be analyzed as a classifier with a "unit" interpretation and higher numerals as cardinals. It was furthermore suggested that there may be an influence of the local dialect on the regional spoken variety. The use of an overt partitive pronoun was related to the movement of the numeral with the feature [Partitioning:_] to a high classifier phrase. The use of an empty pronoun was related to the non-movement of numerals from a low classifier position. In this way, the higher percentage of omission of the partitive pronoun with the numeral *één* bearing the feature [Unit:_] in BD was accounted for. Due to the different syntactic environment, there is no true optionality between the two forms.

More research is needed to confirm the patterns discovered in this research. Furthermore, it could be investigated if the difference between the numerals in BD may have to do with their morphological form, the absence or presence of a schwa. This is also left for future research.

## Bibliography

Barbiers, S. (2005). "Variation in the Morphosyntax of ONE". *The Journal of Comparative Germanic Linguistics*, 8(3), 159-83. https://doi.org/10.1007/s10828-004-6539-z.

Barbiers, S. (2007). "Indefinite Numerals ONE and MANY and the Cause of Ordinal Suppletion". *Lingua*, 117, 859-80. https://doi.org/10.1016/j.lingua.2006.03.003.

Cardinaletti, A. (1999). "Pronouns in Germanic and Romance Languages: An Overview". Riemsdijk, H. van (ed.), *Clitics in the Languages of Europe*. Berlin: Mouton de Gruyter, 33-82. https://doi.org/10.1515/9783110804010.33.

Cardinaletti, A.; Giusti, G. (1992). "Partitive *ne* and the QP-Hypothesis". Fava, E. (ed.), *Proceedings of the XVII Meeting of Generative Grammar*. Torino: Rosenberg & Sellier, 121-41.

Cardinaletti, A.; Giusti. (2017). "Quantified Expressions and Quantitative Clitics". Everaert, M.; Riemsdijk, H. van (eds), *The Wiley Blackwell Companion to Syntax*, 2nd ed. Hoboken, NJ: John Wiley & Sons, 1-61. https://doi.org/10.1002/9781118358733.wbsyncom063.

Cardinaletti, A.; Giusti, G. (2018). "Indefinite Determiners: Variation and Optionality in Italo-Romance". Pescarini, D.; D'Alessandro, R. (eds), *Advances in Italian Dialectology: Sketches of Italo-Romance Grammars*. Amsterdam: Brill, 135-61. https://doi.org/10.1163/9789004354395_008.

Cardinaletti, A.; Giusti, G. (2020). "Indefinite Determiners in Informal Italian: A Preliminary Analysis". *Linguistics*, 20(3), 679-712. https://doi.org/10.1515/ling-2020-0081.

Cornips, L. (1994). *Syntactische variatie in het algemeen Nederlands van Heerlen* (Syntactic Variation in Heerlen Dutch) [PhD Dissertation]. Amsterdam: University of Amsterdam.

Cornips, L.; Sleeman, P. (2024). "Variation in the Use of the Partitive Pronoun ER in Regional (Heerlen) Standard Dutch". *Linguistic Variation* 24(2), 262-96. https://doi.org/10.1075/lv.23026.cor.

Corver, N.; Koppen, M. van; Kranendonk, H.; Rigterink, M. (2011). Database Diversity in Dutch DP Design (DDiDD). Utrecht, UiL-OTS. http://www.meertens.knaw.nl/dp_vragenlijst/.

Kranendonk, H. (2010). *Quantificational Constructions in the Nominal Domain: Facets of Dutch Microvariation*. Utrecht: LOT.

Morozova, I.; Barbiers, S. (2024). "How and Why is ONE Different?". *Nota Bene* 1(2), 225-41.
https://doi.org/10.1075/nb.00014.mor.

Morozova, I.; Barbiers, S. (2025). "On the Category and Morphosyntax of Numerals". *Linguistic Variation*. Online first. https://doi.org/10.1075/lv.24047.mor.

Oostdijk, N.; Reynaert, M.; Hoste, V.; Schuurman, I. (2013). "The Construction of a 500-Million-Word Reference Corpus of Contemporary Written Dutch". Spyns, P.; Odijk, J. (eds), *Essential Speech and Language Technology for Dutch: Theory and Applications of Natural Language Processing*. Berlin: Springer, 219-47. https://doi.org/10.1007/978-3-642-30910-6_13.

Postma, G. (2023). "De paucalis in het Nederlands en de structuur van de grammatica". *Nederlandse Taalkunde*, 28(2), 306-24. https://doi.org/10.5117/nedtaa2023.3.003.post.

Sleeman, P. 2025. "The Diminutive Form *Eentje*. A Syntactic Analysis". *Nota Bene* 2(2), 430-47. https://doi.org/10.1075/nb.00042.sle.

# Language Acquisition, Bilingualism and Multilingualism

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# Null and Overt Subjects in the Narratives of Speakers of Heritage Romanian in Contact with Italian and Dutch

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**Abstract** This study investigates the distribution of null and overt subjects in child heritage Romanian in the narratives of Romanian-Italian and Romanian-Dutch bilinguals compared to those of age-matched monolinguals. The results reveal that heritage speakers use subjects similarly to monolinguals with one exception. In intrasentential contexts the Romanian-Dutch bilinguals, unlike the other groups, do not use significantly more null than overt subjects. Since in Dutch topics can be dropped in main but not in embedded clauses, we suggest that this different distribution pattern can be explained in terms of crosslinguistic influence effects.

**Keywords** Subjects. Heritage Romanian. Romanian-Italian bilinguals. Romanian-Dutch bilinguals. Crosslinguistic influence.

**Summary** 1 Introduction. – 2 On Null and Overt Subjects in Romanian, Italian and Dutch. – 3 Null and Overt Subjects in Heritage Languages. – 4 The Study. – 5 Conclusions.

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## 1 Introduction

In *pro*-drop languages, both overt and null pronominal subjects are syntactically licit in finite clauses. The former generally signal topic shift (TS), the latter are used mainly in topic continuity (TC) contexts. A growing number of studies provide evidence that in bilingual settings narrow syntax properties are not problematic whereas properties at the syntax-pragmatics interface, as is the case of subject use, whose acquisition requires a relevant amount of input, are more likely to be affected (Sorace 2011).

Heritage languages are acquired under conditions of reduced input which generally becomes even more limited after onset of schooling in the environmental language. This is why they offer a good testing ground for the possible effects of reduced input on the use of null and overt subjects. Additionally, since heritage languages are acquired in contact with the environmental language, they also offer a good testbed for the role of crosslinguistic influence.

The studies which investigated the distribution of subjects in heritage languages provide controversial findings. Some report overt pronominal subject (OPS) overuse (Montrul, Sánchez-Walker 2013; Flores, Rinke 2024), others show that null pronominal subjects (NS) are actually the vulnerable ones (Montrul 2004; Giannakou 2018). In contrast, the results in Brehmer, Sopata, Canzi (2023) reveal that child heritage speakers do not differ significantly from monolingual children with respect to subject use.

These divergent findings may not be fully indifferent to the structural properties of the languages of the dyad. Extending the investigation to understudied pairs of languages could contribute to our understanding of some of the factors that affect subject use in bilingual development. In the current study, we examine subject use in child heritage Romanian in two language pairs, Romanian-Dutch and Romanian-Italian, both understudied in the field of heritage languages.

## 2 On Null and Overt Subjects in Romanian, Italian and Dutch

Romanian (1a) and Italian (1b) are null subject languages in which (referential and non-referential) NS are allowed in (main and subordinate) finite clauses:

(1) a. *pro* a spus că *pro* a citit cartea.
*pro* has said that *pro* has read book-the
b. *pro* ha detto che *pro* ha letto il libro.
*pro* has said that *pro* has read the book
'She/he said that she/he read the book.'

In both languages, NS have a [–switch reference] feature and are preferentially used in TC scenarios (Carminati 2002; Cardinaletti 2004; Zafiu 2008). They usually co-refer with a prominent antecedent, in line with their weak pronoun status (Cardinaletti, Starke 1999; Giurgea 2010). They can also be used in TS, but only if the referent is salient, or morphological and/or contextual cues disambiguate their reference. For example, in (2), agreement on *vesel* 'happy' indicates that *pro* in the *when* clause takes the matrix object as its antecedent.

(2) Ea$_i$ l- a strigat pe copil$_j$ când *pro*$_j$ intra vesel
she cl.3m.sg.acc has called dom child when *pro* entered happy.m
în casă.
in house
'She called the child when (he was) entering the house happy.'

OPS have a [+switch reference] feature. In some null subject languages, they can be pragmatically appropriate in TC as well even when there is no contrast. In such languages they behave both like weak pronouns (as defined in Cardinaletti, Starke 1999), i.e. like *pro*, and like strong pronouns. This is the case of Romanian; though there is a TS preference, OPS can occur in TC as well (Giurgea 2010). This hybrid behaviour predicts a weaker bias with respect to antecedent choice. In (3) the OPS could, in principle, pick out either the matrix subject or the matrix object as its antecedent.

(3) Nicu$_i$ l- a strigat pe Marcel$_j$ când el$_{i/j}$ intra
Nicu cl.3m.sg.acc has called dom Marcel when he entered
în clădire.
in building
'Nicu called Marcel when (he was) entering the building.'

In Italian, OPS generally signal TS but the language is possibly undergoing a change, with overt pronouns being used in TC as well (Cardinaletti 2004), even in the absence of a contrast feature. In colloquial Italian, *lui/lei* can behave like weak pronouns (Cardinaletti 1997; 2004) and hence be used for TC.

(4) Magari *pro*$_i$ non si ricordava […]. Passano i tre bambini
maybe *pro* not refl.3 remembered pass the three children
con le pere in mano. Quindi lui$_i$ li guarda.
with the pear in hand so he them looks
'Perhaps he did not remember. The three boys with the pears in their hands pass by. So he looks at them.' (Di Domenico, Baroncini, Capotorti 2020, ex. 31)

Dutch allows only overt subjects in finite clauses (5) (Koeneman, Neeleman 2001).

(5) *(Hij) zegt dat *(hij) het boek leest.
he says that he the book reads
'He says that he reads the book.'

In spoken Dutch, topics can be dropped in main (6) but not in embedded clauses (7). In this respect, Dutch behaves like a V2 language, where topic drop is restricted to the Spec of CP in the matrix.

(6) A: Wat is er met Jan aan de hand?
what is there with Jan on the hand
'What is the matter with Jan?'
B: 0$_i$ moet t$_i$ morgen naar de tandards.
must tomorrow to the dentist
'He must go to the dentist tomorrow.' (Ackema, Neeleman 2007, ex. 5a)

(7) *Ik geloof dat niet op vakantie gaat.
I believe that not on holiday go-2/3.sg
'I believe that (you/he/she) does not go on holiday.' (Ackema, Neeleman 2007, ex. 6b)

In anaphoric contexts, (unstressed) OPS preferentially pick up the subject as their antecedent, i.e. there is a TC bias, whereas demonstratives pick up the object as an antecedent (Kaiser 2011).

Lexical DP subjects (LDP) signal TS across languages.

Summing up, the Romanian-Italian pair is one of proximity. The two languages are typologically similar, they are both consistent null subject languages and the discourse use of null and overt subjects in terms of TC and TS is similar. The Romanian-Dutch pair is one of linguistic "distance": the two languages are typologically different, one is a consistent null subject language, the other one bans null referential subjects. But in terms of surface similarity, Dutch also allows NS as an instance of topic drop, restricted to non-embedded clauses.

## 3 Null and Overt Subjects in Heritage Languages

Bilingual children acquiring a *pro*-drop language were shown to produce more OPS in TC contexts than monolingually-raised children (e.g. Schmitz 2007 and Schmitz, Patuto, Müller 2012 for heritage Italian). According to some studies, this divergent use is temporary. Italian-English bilinguals, after the age of 8, no longer overuse OPS (Serratrice 2007; Wolleb 2013). In contrast, older Spanish-English bilinguals (ages 6-17 years) continue to use more OPS in TC contexts than Spanish monolinguals (Montrul, Sánchez-Walker 2013). Similarly, Portuguese-French bilingual children (ages 10-12 years) have been found to overuse OPS (in intersentential contexts) in written narratives. They used more overt subjects to maintain topics than Portuguese monolinguals (Flores, Rinke 2024).

The use of NS has also been shown to be problematic. Giannakou (2018) reported NS overuse in heritage Greek in contact with (Chilean) Spanish. The adult heritage speakers in her study used more NS and fewer LDP in TS in narratives. They also used more LDP than NS in TC. Importantly, both NS and lexical subject use were pragmatically appropriate. However, pragmatically infelicitous NS were attested with adult speakers of heritage Spanish (Montrul 2004).

In contrast, Brehmer, Sopata, Canzi (2023) found that child heritage speakers of Polish living in Germany (ages 4;11-13;01) did not differ from monolingual children with respect to the distribution of subjects. Similarly, Toșu (2022), who examined subject use by speakers of heritage Romanian (ages 6;00–14;01) in contact with Italian, reported no differences between heritage and age-matched monolingual speakers. But the Italian-dominant bilinguals in her study used more overt subjects than the balanced ones.

Research on heritage Spanish showed that Spanish-English bilingual children (ages 4-5) produced pragmatically appropriate subjects (Austin, Sánchez, Perez-Cortes 2017). Similar results were reported for child heritage speakers of Italian living in Germany (Scherger, Schmitz 2019).

The findings summarized here show that whether the use of null or overt subjects is vulnerable in heritage language acquisition differs from one language dyad to another.

## 4 The Study

### 4.1 Questions

The research questions addressed in the current study are:

(i) Do child heritage speakers of Romanian, simultaneous Romanian-Italian and Romanian-Dutch bilinguals acquire the

properties of subjects? Do they use null and overt subjects similarly to monolingually-raised Romanian children?

(ii) Is there any developmental difference between subject use in inter- and intrasentential contexts and between subject use in TC and TS contexts?

(iii) Is subject use pattern the same irrespective of the properties of subjects in the environmental language, i.e. irrespective of linguistic proximity/distance?

## 4.2 Participants

36 children[1] participated in this study **[tab. 1]**.

**Table 1** Participants

| Group | No | Age range | Mean age |
|---|---|---|---|
| Romanian-Italian bilinguals | 12 | 6;00 – 12;07 | 9;07 |
| Romanian-Dutch bilinguals | 12 | 7;09 – 12;03 | 9;05 |
| Romanian monolinguals | 12 | 5;08 – 12;05 | 9;03 |

The two groups of heritage speakers consisted of children born to Romanian families living in Italy (Zelarino and Mirano)[2] and in the Netherlands (Amsterdam and The Hague), respectively. Their parents are all first-generation immigrants who had been living in the country of residence for at most 20 years. According to the parents' responses to a sociolinguistic questionnaire which focused on the linguistic profile of their children, the heritage speakers in the current study are all simultaneous bilinguals who speak Romanian at home with both parents and with siblings and Italian or Dutch at school and in the community. They occasionally read Romanian books or watch cartoons or films in Romanian. They attend optional Romanian classes (two hours per week) organised at the Romanian School in their community. They are all balanced bilinguals, as confirmed not only by their parents' responses to the questionnaire but also by their

**1** Subject use by 20 first-generation immigrants living in Italy and the Netherlands, and 10 Romanian adults living in the homeland was also analysed. No difference between these groups was found.

**2** The narratives of the Romanian-Italian bilinguals were collected by Bianca-Elena Babei-Popa and Alicia Toșu as part of the research for their MA dissertation, coordinated by Anna Cardinaletti, within a joint MA programme of Ca' Foscari University and University of Bucharest. The narratives of the Romanian-Dutch bilinguals were collected by Bianca-Elena Babei-Popa, as part of the research for her doctoral dissertation and supported by ICUB under Grant 292/11.01.2024.

teachers of Romanian. The comparison of the length of their "frog story" narratives (in words) and their fluency in these narratives in the two languages confirmed that they are balanced bilinguals. Fluency was determined on the basis of the comparison of speaking rate per one minute (randomly selected) while telling the story in the two languages (as in Polinsky 2008).

### 4.3 Corpus and Coding

We used a corpus of "frog story" narratives, audio-recorded and transcribed. For the bilingual children, who told the story in both languages, only the Romanian narratives were analysed. All finite clauses were extracted. Sentences with no true choice between null and overt subjects, such as existential sentences, subject relatives or complements of aspectual verbs were excluded. Sentences in which a discourse referent was introduced for the first time (and could only be an overt LDP) were also excluded. The quantitative details of the analysed corpus are given in Table 2.

**Table 2** Total number of analysed sentences per group

| Group | No of finite clauses | Excluded | Analysed |
|---|---|---|---|
| Romanian-Italian bilinguals | 792 | 118 | 674 |
| Romanian-Dutch bilinguals | 493 | 61 | 432 |
| Romanian monolinguals | 747 | 77 | 670 |

The sentences were coded for subject type: NS, OPS, and LDP. Subjects were further coded for syntactic context: intersentential (i.e. main clauses) and intrasentential (i.e. subordinate clauses). Subject use was also examined in terms of discourse pragmatics. We distinguished between TC and TS scenarios. For example, the sentence in (8) illustrates NS use in intersentential context where the topic in the previous sentence (the subject) is maintained. The sentence in (9) exemplifies OPS in intrasentential context, signaling TS; the antecedent is the object in the main clause.

(8) Copilul$_i$ a căutat într- un copac. *pro*$_i$ şi- a dat seama…
child-the has searched in a tree *pro* refl.3.dat has given account
'The child searched in a tree. He realized …' (T. 9;06)

(9) Au început să- l$_i$ fugărească în timp ce el$_i$ fugea.
have started sbj cl.3m.s.acc chase in time what he ran
'They started chasing him while he was running.' (B. 12;05)

For the statistical analysis, to address the first two research questions and examine within-group differences with respect to subject use, we conducted a series of Friedman tests, followed by pairwise Wilcoxon signed-rank tests with Bonferroni correction (using the *rstatix* package in R (Kassambara 2023)). To assess between-group differences regarding subject use, we employed a series of beta regression models (using the *betareg* package in R, Cribari-Neto, Zeileis 2010), with monolinguals as the reference group. Post-hoc pairwise comparisons were conducted using estimated marginal means (*emmeans* package; Lenth 2023) with Bonferroni correction.

## 4.4 Results (I). Subject Use in Inter- and Intrasentential Contexts

### 4.4.1 Descriptive Results

We first examined the distribution of subjects in inter- and intrasentential contexts. Table 3 gives an overview of the raw data for the three groups. The number of OPS was by far the lowest within each group, irrespective of syntactic context. Given these very low numbers, in what follows we will report the results of the analysis with a focus on the comparison between NS and LDP. The data also show that NS were more frequently used than LDP in intrasentential contexts. In intersentential contexts their rate was relatively similar.

**Table 3** Null and overt subjects (% and raw counts) per inter- and intrasentential context

| Context | Subject type | Romanian-Italian bilinguals | Romanian-Dutch bilinguals | Monolinguals |
|---|---|---|---|---|
| intersentential | NS | 53.6% (n = 294/548) | 52.3% (n = 200/382) | 48.6% (n = 245/504) |
| | OPS | 3.8% (n = 21/548) | 1.8% (n = 7/382) | 3.5% (n = 18/504) |
| | LDP | 42.5% (n = 233/548) | 45.8% (n = 175/382) | 47.8% (n = 241/504) |
| intrasentential | NS | 81.7% (n = 103/126) | 60% (n = 30/50) | 74.5% (n = 123/166) |
| | OPS | 3.9% (n = 5/126) | 0 | 1.8% (n = 3/166) |
| | LDP | 14.2% (n = 18/126) | 40% (n = 20/50) | 24.1% (n = 40/166) |

### 4.4.2 Statistical Analysis

The differences revealed by the raw data are statistically significant. A series of Friedman tests showed that there was an effect of subject type within all groups, irrespective of context. The comparison is summarized in Figures 1-2 below.

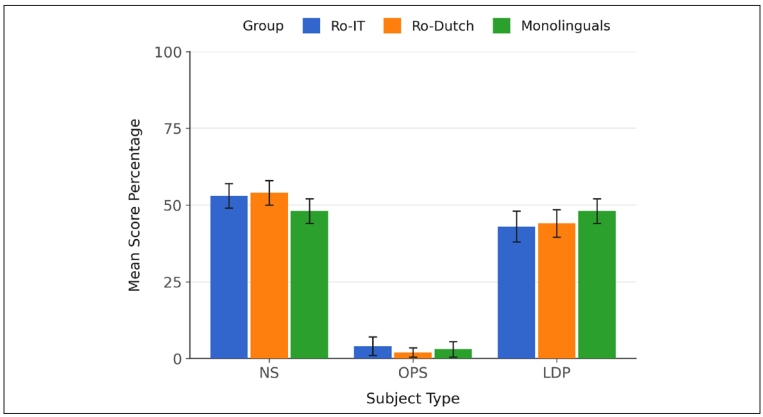



**Figure 1** Null and overt subjects in intersentential contexts per group

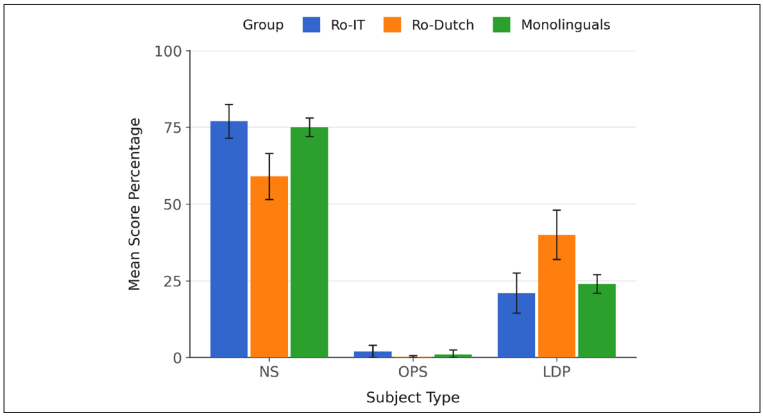



**Figure 2** Null and overt subjects in intrasentential contexts per group

In intersentential contexts, there was an effect of subject type with the monolinguals ($\chi^2(2) = 18.00$, $p < .05$), the Romanian-Italian bilinguals ($\chi^2(2) = 18.56$, $p < .05$) and the Romanian-Dutch bilinguals ($\chi^2(2) = 18.42$, $p < .05$). A series of Wilcoxon signed-rank tests with Bonferroni correction revealed no statistically significant difference

between NS and LDP within any group. To test whether there were any statistically significant differences between the three groups with respect to subject use, we ran a beta-regression with Group as the predictor and Subject use as the dependent variable. The results showed that there was no statistically significant difference between monolinguals and Romanian-Italian bilinguals ($\beta$ = 0.01, SE = 0.1, $z$ = 0.01, $p$ =.98) and no difference between monolinguals and Romanian-Dutch bilinguals ($\beta$ = 0.03, SE = 0.1, $z$ = 0.03, $p$ =.97). A pairwise comparison also revealed no difference between the two bilingual groups ($p$ >.05). The same results occurred when we ran beta-regressions for each individual type of subject in turn.

In intrasentential contexts, a series of Friedman tests revealed a significant effect of subject type in the group of monolinguals ($\chi^2(2)$ = 23.3, $p$ <.05) and of Romanian-Italian bilinguals ($\chi^2(2)$ = 18.71, $p$ <.05); both used NS significantly more than LDP ($p$ <.05). The effect of subject type reached significance with the Romanian-Dutch bilinguals as well ($\chi^2(2)$ = 17.12, $p$ <.05) but, although they also used NS more than LDP, this difference did not reach statistical significance ($p$ >.05).

A beta-regression with Group as the predictor and Subject use as the dependent variable was conducted to test for any potential differences between the three groups. The model showed no statistically significant difference between monolinguals and Romanian-Italian bilinguals ($\beta$ = 0.01, SE = 0.2, $z$ = 0.04, $p$ =.96) and no difference between monolinguals and Romanian-Dutch bilinguals ($\beta$ = 0.05, SE = 0.2, $z$ = 0.2, $p$ =.83). A pairwise comparison also revealed no difference between the groups of bilingual speakers ($\beta$ = 0.04, SE = 0.2, $z$ = 0.16, $p$ = 1). No differences arose when we analysed the use of each subject type in turn either.

## 4.5 Results (II). Subject Use in TC and TS Contexts

### 4.5.1 Descriptive Results

Table 4 below gives an overview of the raw data for subjects in TC and TS contexts. The distribution in TC is similar across groups: NS are by far the most frequently used ones in both inter- and intrasentential contexts, and the rates of overt subjects are low across the board. In TS scenarios, the pattern in intersentential contexts is similar for the three groups: they all used more LDP than NS, and percentages are similar across groups. In intrasentential contexts, though, there is a difference between the two groups of heritage speakers. The Romanian-Italian bilinguals used more NS than LDP whereas the Romanian-Dutch bilinguals used more LDP than NS.

**Table 4** Null and overt subjects (% and raw counts) in inter- and intrasentential contexts in TC and TS scenarios

| TC/TS | syntactic context | Subject type | Romanian-Italian bilinguals | Romanian-Dutch bilinguals | Romanian monolinguals |
|---|---|---|---|---|---|
| TC | intersentential | NS | 85.1% (n = 246/289) | 85.9% (n = 153/178) | 81.4% (n = 219/269) |
| | | OPS | 2.4% (n = 7/289) | 1.1% (n = 2/178) | 5.2% (n = 14/269) |
| | | LDP | 12.5% (n = 36/289) | 12.9% (n = 23/178) | 13.4% (n = 36/269) |
| | intrasentential | NS | 97.2% (n = 70/72) | 96.1% (n = 25/26) | 96.9% (n = 96/99) |
| | | OPS | 2.8% (n = 2/72) | 0 | 0 |
| | | LDP | 0 | 3.9% (n = 1/26) | 3.03% (n = 3/99) |
| TS | intersentential | NS | 18.5% (n = 48/259) | 23.03% (n = 47/204) | 11.1% (n = 26/235) |
| | | OPS | 5.5% (n = 14/259) | 2.5% (n = 5/204) | 1.7% (n = 4/235) |
| | | LDP | 76.1% (n = 197/259) | 74.5% (n = 152/204) | 87.2% (n = 205/235) |
| | intrasentential | NS | 62.3% (n = 33/54) | 20.8% (n = 5/24) | 40.3% (n = 27/67) |
| | | OPS | 5.6% (n = 3/54) | 0 | 4.5% (n = 3/67) |
| | | LDP | 33.3% (n = 18/54) | 79.2% (n = 19/24) | 55.2% (n = 37/67) |

### 4.5.2 Statistical Analysis

Since the raw data in TC contexts are transparent with respect to significance, we will only be reporting the statistical analysis for subjects in TS scenarios. The comparison is summarized in Figure 3. We focused on intrasentential contexts where the raw data suggested some possibly significant differences. Since the number of OPS was too low in these contexts we excluded them from the statistical analysis.

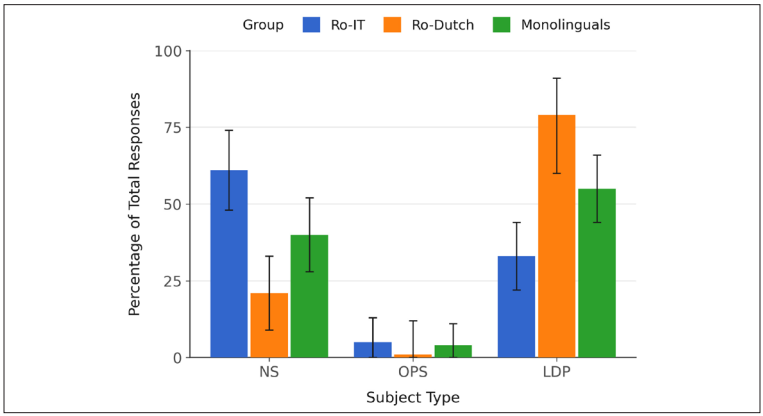



**Figure 3** Null and overt subjects in TS scenarios in intrasentential contexts

A series of Friedman tests showed an effect of subject type in TS with both groups of heritage speakers, but not with that of monolinguals. The heritage speakers in Italy used significantly more NS than LDP ($p$ <.05), whereas the mirror image was found with the heritage speakers in the Netherlands, who used significantly more LDP than NS ($p$ <.05). A beta-regression (with Group as the predictor and Subject use as the dependent variable) was conducted to test for any potential differences between the three groups. When looking at both types of subjects together, the model shows no statistically significant difference between monolinguals and Romanian-Italian bilinguals ($\beta$ = 0.01, SE = 0.09, $z$ = 0.2 $p$ = 1) and no difference between monolinguals and Romanian-Dutch bilinguals ($\beta$ = 0.03, SE = 0.09, z = 0.3, $p$ =.1). A pairwise comparison also revealed no difference between the two groups of bilingual speakers ($\beta$ = 0.004, SE = 0.09, $z$ = 0.1, $p$ = 1). However, a beta-regression for each type of subject (NS and LDP) revealed a statistically significant difference between the groups of bilinguals, both when looking solely at NS ($\beta$ = 0.2 SE = 0.1, $z$ = 2.6, $p$ =.02) and solely at LDP ($\beta$ = 0.02 SE = 0.1, $z$ = 0.2, $p$ =.01), in line with the picture provided by the raw data.

Though NS can be felicitous in TS scenarios in Romanian, they can be so only if context or morphological cues disambiguate them. It is therefore plausible to assume that a higher number of NS in subordinate clauses in TS contexts could be indicative of pragmatically inappropriate NS use. To address this issue a qualitative analysis was conducted to evaluate the pragmatic appropriateness of NS in subordinate clauses in TS contexts in the narratives of the Romanian-Italian bilinguals. The results indicate felicitous use, i.e. the NS used in TS contexts were unambiguous.

## 4.6 Discussion

The current paper examined the use of subjects in child heritage Romanian in inter- and intrasentential contexts, in TC and TS scenarios. The main goal was to see whether speakers of heritage Romanian, balanced Romanian-Italian and Romanian-Dutch bilinguals, acquire the properties of subjects similarly to monolingually-raised children. Data from "frog story" narratives revealed that child heritage speakers use null and overt subjects similarly to monolingual children, irrespective of the value of the null subject parameter in the environmental language.

The number of OPS was very low within all groups, i.e. no overuse of OPS was attested. Since low counts of OPS were also found in other studies on the distribution of subjects in narratives (Pinto 2013; Torregrossa, Andreou, Bongartz 2020; Brehmer, Sopata, Canzi 2023) this may be a possible data effect.

The distribution pattern was similar across groups, with one difference attested in intrasentential contexts, where *pro* picks out its antecedent in terms of discourse prominence and c-command (Carminati 2002; Rizzi 2018), i.e. a context in which subject use is a genuine interface property. In these contexts Romanian-Italian bilinguals and Romanian monolinguals used significantly more NS than LDP whereas the Romanian-Dutch bilinguals used NS and LDP at similar percentages. This difference is more obvious in TS scenarios, where the monolinguals used NS and LDP at similar percentages, the Romanian-Dutch bilinguals used significantly more LDP than NS and the Romanian-Italian group used significantly more NS than LDP. Subject use was pragmatically felicitous within all groups, irrespective of context or scenario, indicating that the different pattern observed in intrasentential contexts cannot be an effect of divergent pragmatics.

The different value of the null subject parameter cannot have affected subject use in heritage Romanian in contact with Dutch either; this would have resulted in overuse of overt subjects across the board. In fact, different subject distribution was attested only in intrasentential contexts in TS scenarios. We suggest that this different pattern can be interpreted as a crosslinguistic influence effect (in line with Hulk, Müller 2000; Müller, Hulk 2001). Dutch bans NS in finite clauses but in the spoken language topics can be dropped. Topic drop is licit in main but not in embedded clauses, in accordance with the V2 property of this language. The superficial similarity between NS use in the two languages (Inflection-licensed NS in Romanian, topic drop in Dutch) may facilitate crosslinguistic influence. This account is further supported by the higher percentage of NS than of LDP in intrasentential contexts in TS scenarios in the narratives of the Romanian-Italian bilinguals, who are acquiring two null

subject languages. The use of NS in their narratives is pragmatically appropriate, indicating that the difference is only quantitative. This result is not singular. Adult heritage speakers of Greek in contact with (Chilean) Spanish, both null subject languages, just like the Romanian-Italian dyad in the current study, were reported to use more (pragmatically felicitous) NS and fewer lexical subjects in TS scenarios in narratives (Giannakou 2018).

Overall, our findings are similar to those in Brehmer, Sopata, Canzi (2023), Austin, Sánchez, Perez-Cortes (2017) and Toșu (2022), which show that child heritage speakers use subjects similarly to age-matched monolinguals.

## 5 Conclusions

The present study examined null and overt subject distribution in child heritage Romanian in contact with Italian and Dutch. The results showed that properties of subjects in the heritage language are acquired irrespective of linguistic proximity/distance between the languages of the dyad. The heritage speakers used subjects similarly to age-matched monolingually-raised children in spite of having been exposed to reduced input in the heritage language.

The results revealed two asymmetries: differences among the groups in the current study were found in intra- but not in intersentential contexts, in TS but not in TC scenarios. The distribution pattern of subjects in the narratives of the Romanian-Dutch bilinguals differed from the one of the other two groups: they were the only group who did not use a significantly higher number of NS than LDP in intrasentential contexts. This quantitative difference, more obvious in TS scenarios, was accounted for in terms of crosslinguistic influence, possibly induced by the superficial similarity between topic drop in Dutch (restricted to main clauses) and NS in Romanian. The fact that the Romanian-Italian bilinguals used more null than overt subjects in intrasentential contexts in TS scenarios further supports this account.

More generally, the present study showed that properties at the syntax-discourse interface can be acquired under conditions of language contact and reduced input. On a more tentative note, our results also point to a difference between the vulnerability in bilingual settings of subject use in intra- and intersentential contexts. The former, which involve both c-command and discourse prominence, are prone to crosslinguistic influence whereas the latter, which involve discourse accessibility alone, are probably unproblematic and free of crosslinguistic influence.

## Bibliography

Ackema, P.; Neeleman, A. (2007). "Restricted pro Drop in Early Modern Dutch". *The Journal of Comparative Germanic Linguistics*, 10(2), 81-107. https://doi.org/10.1007/s10828-007-9010-0.

Austin, J.R.; Sánchez, L.; Perez-Cortes, S. (2017). "Null Subjects in the Early Acquisition of English by Child Heritage Speakers of Spanish". Perpiñan, S.; Heap, D.; Moreno-Villamar, I.; Soto-Corominas, A. (eds), *Romance Languages and Linguistic Theory 11: Selected Papers from the 44th Linguistic Symposium on Romance Languages (LSRL)*. London, Ontario: John Benjamins, 209-27. https://doi.org/10.1075/rllt.11.

Brehmer, B.; Sopata, A.; Canzi, M. (2023). "Same or Different? Subject Realization in the majority and the Heritage Language of Polish-German Bilingual Children". *Linguistics Vanguard,* 9, s2. https://doi.org/10.1515/lingvan-2022-0061.

Cardinaletti, A. (1997). "Subjects and Clause Structure". Haegeman, L. (ed.), *The New Comparative Syntax.* New York: Longman, 33-63.

Cardinaletti, A. (2004). "Towards a Cartography of Subject Positions". Rizzi, L. (ed.), *The Structure of CP and IP: The Cartography of Syntactic Structures. Vol. 2.* New York: Oxford Academic, 115-65. https://doi.org/10.1093/oso/9780195159486.001.0001.

Cardinaletti, A.; Starke, M. (1999). "The Typology of Structural Deficiency: A Case Study of the Three Classes of Pronouns". van Riemsdijk, H. (ed.), *Clitics in the Languages of Europe*. The Hague: Mouton de Gruyter, 145-233.

Carminati, M.N. (2002). *The Processing of Italian Subject Pronouns* [PhD Dissertation]. Amherst: University of Massachusetts.

Cribari-Neto, F.; Zeileis, A. (2010). "Beta Regression in R". *Journal of Statistical Software*, 34(2), 1-24. https://doi.org/10.18637/jss.v034.i02.

Di Domenico, E.; Baroncini, I.; Capotorti, A. (2020). "Null and Overt Subject Pronouns in Topic Continuity and Topic Shift: An Investigation of the Narrative Productions of Italian Natives, Greek Natives and Near-Native Second Language Speakers of Italian with Greek as a First Language". *Glossa: A Journal of General Linguistics*, 5(1), 117. https://doi.org/10.5334/gjgl.1009.

Flores, C.; Rinke, E. (2024). "Overt Pronouns are Challenging: Subject Realization in Written Narratives of Portuguese-French Bilingual School-Age Children". *Romanica Cracoviensia*, 24(3), 383-98. https://doi.org/10.4467/20843917RC.24.029.20984.

Giannakou, A. (2018). *Spanish and Greek Subjects in Contact: Greek as a Heritage Language in Chile* [PhD Dissertation]. Cambridge: University of Cambridge.

Giurgea, I. (2010). *Pronoms, déterminants et ellipse nominale. Une approche minimaliste*. Bucharest: Editura Universităţii din Bucureşti.

Hulk, A.; Müller, N. (2000). "Bilingual First Language Acquisition at the Interface between Syntax and Pragmatics". *Bilingualism: Language and Cognition*, 3(3), 227-44. https://doi.org/10.1017/S1366728900000353.

Kaiser, E. (2011). "Salience and Contrast Effects in Reference Resolution: The Interpretation of Dutch Pronouns and Demonstratives". *Language and Cognitive Processes*, 26(10), 1587-1624. http://dx.doi.org/10.1080/01690965.2010.522915.

Kassambara, A. (2023). *rstatix: Pipe-Friendly Framework for Basic Statistical Tests*. R Package version 0.7.2. https://CRAN.R-project.org/package=rstatix.

Koeneman, O.; Neeleman, A. (2001). "Predication, Verb Movement and the Distribution of Expletives". *Lingua*, 111(3), 189-233.

Lenth, R.V. (2023). *emmeans: Estimated Marginal Means, Aka Least-Squares Means.* R package version 1.8.9. https://CRAN.R-project.org/package=emmeans.

Montrul, S. (2004). "Subject and Object Expression in Spanish Heritage Speakers: A Case of Morpho-Syntactic Convergence". *Bilingualism: Language and Cognition*, 7(2), 125-42. https://doi.org/10.1017/S1366728904001464.

Montrul, S.; Sánchez-Walker N. (2015). "Subject Expression in School-Age Spanish-English Bilingual Children". Carvalho, A.M.; Orozco, R.; Shin, N. (eds), *Subject Pronoun Expression in Spanish: A Crossdialectal Perspective*. Georgetown University Press, 231-48. http://www.jstor.org/stable/j.ctt1657v9g.

Müller, N.; Hulk, A. (2001). "Crosslinguistic Influence in Bilingual Language Acquisition: Italian and French as Recipient Languages". *Bilingualism: Language and Cognition*, 4(1), 1-21. https://doi.org/10.1017/S1366728901000116.

Pinto, M. (2013). "Tracking Reference with Null Subjects". *Linguistics in the Netherlands*, 30, 131-45. https://doi.org/10.1075/avt.30.10pin.

Polinsky, M. (2008). "Heritage Language Narratives". Brinton, D.; Kagan, O.; Bauckus, S. (eds), *Heritage Language Education: A New Field Emerging*. Mahwah, NJ: Erlbaum, 108-56.

Rizzi, L. (2018). "Subjects, Topics and the Interpretation of pro". Petrosino, R.; Cerrone, P.; van der Hulst, H. (eds), *From Sounds to Structures. Beyond the Veil of Maya*. Berlin; Boston: De Gruyter Mouton, 510-30. https://doi.org/10.1515/9781501506734.

Scherger, A.-L.; Schmitz, K. (2019). "The Role of Age in the Domain of Subject Expressions in Young Italian-German Bilinguals". *Heritage Language Journal*, 16(1), 99-119.

Schmitz, K. (2007). "L'interface syntaxe-pragmatique: Le sujet chez des enfants bilingues franco-allemands et italo-allemand". *AILE*, 25, 9-43.

Schmitz, K.; Patuto, M.; Müller, N. (2012). "The Null-Subject Parameter at the Interface between Syntax and Pragmatics: Evidence from Bilingual German-Italian, German-French and Italian-French Children". *First Language*, 32(1-2), 205-38. https://doi.org/10.1177/0142723711403880.

Serratrice, L. (2007). "Referential Cohesion in the Narratives of Bilingual English-Italian Children and Monolingual Peers". *Journal of Pragmatics*, 39(6), 1058-87. https://doi.org/10.1016/j.pragma.2006.10.001.

Sorace, A. (2011). "Pinning down the Concept of 'Interface' in Bilingualism". *Linguistic Approaches to Bilingualism*, 1(1), 1-33. https://doi.org/10.1075/lab.1.1.01sor.

Torregrossa, J.; Andreou, M.; Bongartz, C.M. (2020). "Variation in the Use and Interpretation of Null Subjects: A View from Greek and Italian". *Glossa: A Journal of General Linguistics*, 5(1), 95, 1-28. https://doi.org/10.5334/gjgl.1011.

Toșu, M.-A. (2022). *On the Acquisition of Subjects in Child Heritage Romanian in Italy* [MA Dissertation]. Bucharest; Venice: University of Bucharest; Ca' Foscari University.

Wolleb, A. (2013). "Referring Expressions in the Narratives of Italian-English Bilingual Children". *Studia Linguistica*, 67(1), 28-46. https://doi.org/10.1111/stul.12010.

Zafiu, R. (2008). "Anafora". Guţu-Romalo, V. (ed.), *Gramatica limbii române, Vol. II, Enunţul*. Bucharest: Editura Academiei Române, 749-66.

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# The Acquisition of Accusative and Dative Clitics in Italian Children

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**Abstract** This study investigates the acquisition of Italian third-person accusative and dative clitics in 111 monolingual children aged 3-11. Using an oral elicitation task, we found that accusative clitics, particularly masculine ones, are produced earlier and with higher accuracy than datives. Dative clitics remain challenging throughout development, with greater variability and persistent use of non-target strategies. Results suggest that clitic acquisition follows a complexity-driven trajectory, shaped by syntactic and processing demands rather than gender morphology alone.

**Keywords** Heritage Italian. Clitic Acquisition. Accusative and Dative Clitics. Trilingualism. Child Language Acquisition.

**Summary** 1 Introduction. – 2 Italian Object Clitics. – 3 The Present Study. – 4 Results. – 5 Discussion. – 6 Conclusions.

## 1 Introduction

Romance clitic pronouns are complex, unstressed elements that, due to their phonological weakness and morphosyntactic properties, have been widely studied in both typical and atypical language acquisition. Research consistently reports difficulties with accusative clitics – particularly third-person forms – compared to

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other types such as French subject clitics (Hamann 2002), reflexives (Schmitz, Müller 2008), or datives (Cardinaletti, Cerutti, Volpato 2021). Indeed, object clitics, especially third-person accusatives, have been identified as clinical markers of immature or impaired language (Jakubowicz, Nash, Rigaut 1998; Tuller et al. 2011; Gavarró 2012).

While the asymmetry between subject and object clitics is well-established (Rizzi, Shlonsky 2007), systematic comparisons among other types (accusative, dative, oblique, and partitive) remain scarce. Previous studies report that dative clitics are relatively unproblematic, often acquired at similar or higher rates than accusatives in Italian (Cerutti, Cardinaletti, Volpato 2024), Spanish (Blasco 2000), Romanian (Babyonyshev, Marin 2006), and Catalan (Gavarró, Mosella 2009). Caprin and Guasti (2009) found that accusative and reflexive Italian clitics were used earlier and more consistently than dative clitics in children between 27 and 30 months of age. This study further deepens this comparison among clitics by investigating the acquisition of Italian accusative and dative object clitics in typically developing children aged 3-11, examining developmental trajectories and comparing resolution strategies across clitic types. Overall, our results reveal that dative clitics are delayed relative to accusatives. We propose that greater syntactic distance, lower frequency, and increased processing complexity may underlie this difference.

## 2 Italian Object Clitics

Clitics are unstressed elements that cannot appear in isolation and, in Romance, are syntactically and phonologically dependent on a host verb. They typically refer to a previously mentioned discourse element, making their use pragmatically guided but syntactically constrained. In Italian, clitic pronouns occur before finite verbs (proclisis) rather than in complement position and are analyzed as the result of movement (Kayne 1975); in enclitic contexts, they attach postverbally and are base-generated. Clitic placement is not considered problematic acquisition (Jakubowicz, Nash, Rigaut 1998), whereas form and morphology may pose challenges. Previous studies in Italian, Catalan, and French report an omission stage for direct object (hereafter ACC) clitics in early acquisition but not clearly for indirect object (hereafter DAT) clitics, despite their similarities. This study investigates the development of ACC and DAT clitics in Italian-speaking children using an experimental task. Italian clitics encode case and may also mark person, number, and gender. ACC and DAT forms overlap in the 1st and 2nd (singular: *mi*, *ti*; plural: *ci*, *vi*), but they differ in the 3rd person **[tab. 1]**, which is the focus of the present study.

**Table 1** ACC and DAT 3rd Person Clitics in Italian

| Case /Gender & Number | Singular | | Plural | |
|---|---|---|---|---|
| | **Masculine** | **Feminine** | **Masculine** | **Feminine** |
| Accusative | *Lo* | *La* | *Li* | *Le* |
| Dative | *Gli* | *Le/Gli* | *Gli* | *Gli* |

There is an ongoing debate on gender distinctions in Italian DAT clitics. As shown in Table 1, only the feminine singular form differs from the others. This asymmetry has led Cardinaletti, Cerutti, and Volpato (2021) to propose that DAT clitics lack a gender feature, as *le* is restricted to formal contexts and often replaced by the default *gli*. Under this view, DAT clitics are morphologically simpler than ACC clitics, as they do not require gender agreement. If clitics follow a complexity hierarchy in acquisition (Jakubowicz, Nash, Rigaut 1998; Jakubowicz, Rigaut 2000; Tuller et al. 2011), this difference may affect their developmental order.

The acquisition of clitics in Italian is complex and non-uniform, shaped by morphosyntactic and prosodic factors. While early research focused on ACC, recent studies highlight asymmetries across clitic types, particularly between ACC and DAT forms. ACC emerge early (~22-24 months), often as unanalyzed enclitic forms with imperatives (e.g., *eccolo*) (Antelmi 1997; Cipriani et al. 1993). Antelmi (1997, 102-4) reports an initial preference for using the clitic together with the full DP: *me* ***lo*** *fai chiuso* ***questo****?* (25 months), and certain omission of ACC clitics at 25-28 months, mostly in dislocated structures: *questo no, non ti do* (=non te **lo** do); typically in combination with indirect objects: *dopo dammi* (=dopo dammelo), *mi chiudi?* (=me lo chiudi), in which the ACC is the one systematically omitted, probably because it is more pragmatically salient and hence, recoverable. By age 3, ACC clitic use increases but can remain optional, improving by age 5 (Guasti 1993-94). Beyond this stage, persistent omission or substitution is linked to Developmental Language Disorder (DLD) (Tuller et al. 2011; Varlokosta et al. 2016), supporting their role as clinical markers. However, not all clitics develop simultaneously. A proposed development places reflexives first, followed by ACC, DAT, and partitives (Antelmi 1997), often linked to increasing syntactic and morphological complexity rather than input frequency. This aligns with the Complexity Hypothesis (Jakubowicz, Nash, Rigaut 1998; Jakubowicz 2011) if complexity is defined in syntactic terms (e.g., additional projections and/or merging operations). If defined morphologically, which is the approach mostly adopted in Cardinaletti, Cerutti, and Volpato (2021) and Tuller et al. (2011), then ACC, marking gender and number with distinct forms, may instead be more complex.

Although DAT have traditionally been considered more complex and later-acquired, recent findings challenge this view. In a large-scale study, Cardinaletti, Cerutti, and Volpato (2021) reported higher accuracy for DAT clitics (*gli*/*le*) than for ACC (*lo*, *la*), despite slightly higher omission rates for DAT in school-aged children. This suggests that, at least in singular forms, DAT may not be structurally more complex. Similar results were found in Cerutti, Cardinaletti, and Volpato (2024), suggesting that, at least in singular forms, DAT may not be structurally more complex. One explanation lies in morphological agreement: *gli*, as a default form, lacks gender agreement and may therefore impose lower processing. Substitution strategies also vary by clitic type: ACC are often replaced by lexical DPs (e.g., *legge il libro* for *lo legge*), while DAT are replaced by prepositional phrases or strong pronouns (e.g., *a lui, al nonno*) (Antelmi 1997; Guasti 1993-94; Caprin, Guasti 2009).

The current study directly compares ACC and DAT clitics in contrastive environments, using ditransitive verbs for DAT. While ACC have long been viewed as primary in early grammar, recent evidence suggests that DAT may be more accessible in some contexts. This highlights the importance of direct comparisons across clitic types in complex syntactic environments.

## 3 The Present Study

### 3.1 Objectives and Research Questions

This study investigates whether ACC and DAT clitics are acquired simultaneously or follow a stepwise developmental path in L1 Italian children raised and schooled in Italy.

The following research questions are addressed:

- **RQ1:** Are ACC and DAT clitics acquired at the same age, or do they follow different developmental timelines?
- **RQ2:** When clitic production is avoided, which alternative strategies do children employ?

### 3.2 Participants

A total of 111 children participated (age range=3;6-11;2, *M*=8;6, SD=2;1). For statistical analyses, age is treated as a continuous variable (in months) but is presented in age bins for visualization. None had a diagnosis of DLD or conditions affecting language development. At the time of testing, all participants were attending pre-school or primary

school in the metropolitan area of Venice (Northern Italy).[1] They were L1 Italian speakers, with limited exposure to English (a maximum of three hours per week through school). As shown in Figure 1, all age groups were represented, although older children were more numerous. Informed parental consent was obtained before data collection.

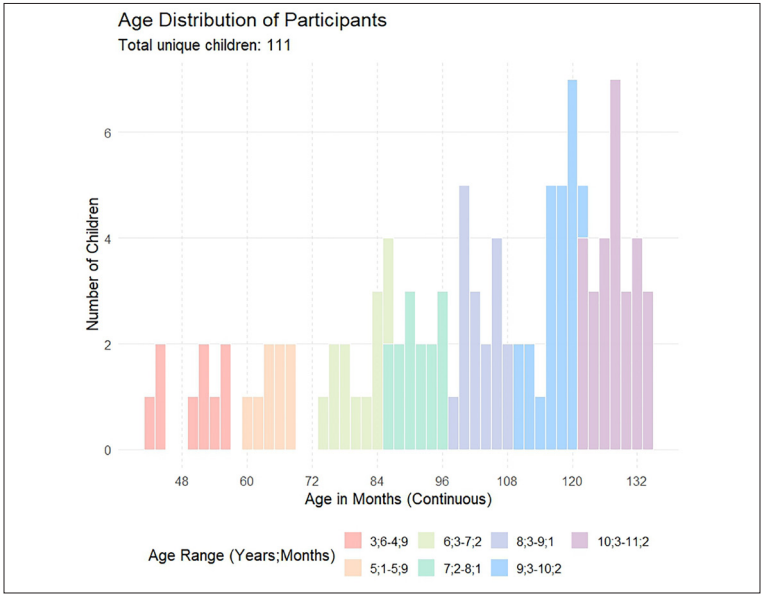



**Figure 1** Distribution of participants by age (in months) and age-bins (by color)

## 3.3 Materials and Procedure

An elicited production task, adapted from Soto-Corominas (2018, 2020), was developed to elicit single clitic pronouns (ACC, DAT, and partitive) and clusters. In the present analysis, we focus on ACC and DAT contexts (16 items out of 32). To create a more communicative

**1** In Venetian, ACC clitics display gender distinctions: *lo* is used for masculine referents and *la* for feminine ones (e.g. *el lo vède/el la vède* "he sees him/he sees her"), where the initial /l/ weakens or is realized as a glide, a phenomenon known as *l evanescente* (Cardinaletti 2010). In contrast, DAT clitics are gender-invariant, with *ghe* is used for both masculine and feminine IO (e.g. *el ghe dà el libro* "he gives him/her the book").

methodology than in previous studies (e.g., Arosio et al. 2010),[2] we designed a task with two gender-neutral characters introduced as behavioral opposites: Oli, a disobedient mouse, and Flo, a compliant one who always followed the plan. This contrast generated a corrective context in which children were required to confirm or disconfirm a statement by completing a sentence. Our design may have been more demanding than that of Arosio et al. (2010, 2014) and Cardinaletti, Cerutti, and Volpato (2021), potentially revealing asymmetries between clitic types, underestimating children's overall competence.

Stimuli consisted of short stories depicted in three pictures with oral narration from the experimenter. The first image introduced the scenario, with both mice planning an action together **[figs 2a, 3a]**; the second showed the disobedient mouse (*Oli*) performing a different action **[figs 2b, 3b]**; the third image depicted the obedient mouse (*Flo*) completing the planned action **[figs 2c, 3c]**. The experimenter (first author) described each step. To elicit the target structure, children were asked to finish the story: "*I will start telling the story, and when I stop, you have to finish the last sentence for me, okay?*". This prompt required a clitic pronoun referring to a previously introduced antecedent. If needed, the item was repeated up to two times. The task included five familiarization items followed by 32 experimental items. ACC contexts **[fig. 2]** included four feminine and four masculine inanimate ACC through four transitive verbs: *comprare* 'to buy', *leggere* 'to read', *colorare* 'to color', and *preparare* 'to prepare'. DAT contexts **[fig. 3]** included four feminine and four masculine gender-matched ACC-DAT pairs to avoid gender agreement problems (Cardinaletti, Casani 2019; Casani 2020), using verbs that contextually required a direct object and an indirect object (*dare* 'to give', *regalare* 'to gift, *fare* 'to do/make', *prepare* 'to prepare'); only the indirect object was elicited in these ditransitive contexts.

**2** Our task was originally designed for trilingual children (Spanish/Catalan/Italian) to be tested in all three languages. In Spanish – and to some extent Catalan – the questions used in Arosio's methodology to elicit ACC and DAT clitics require a DAT clitic: It. *Cosa sta facendo al castello?* Sp. ¿Qué (le) *está haciendo al castillo*?; It. *Cosa sta facendo al papa?* Sp. *¿Qué le está haciendo al papá?* Thus, to avoid priming effects, Arosio's methodology was not adopted.

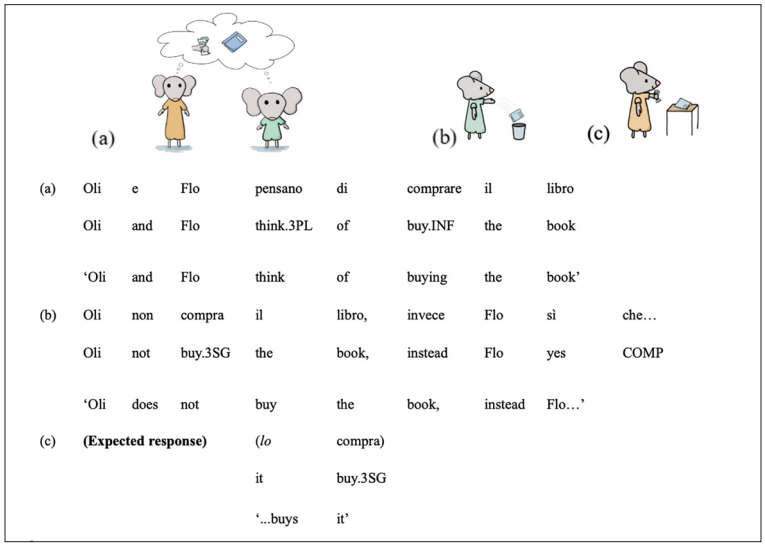



**Figure 2** Example of ACC context (Masculine)

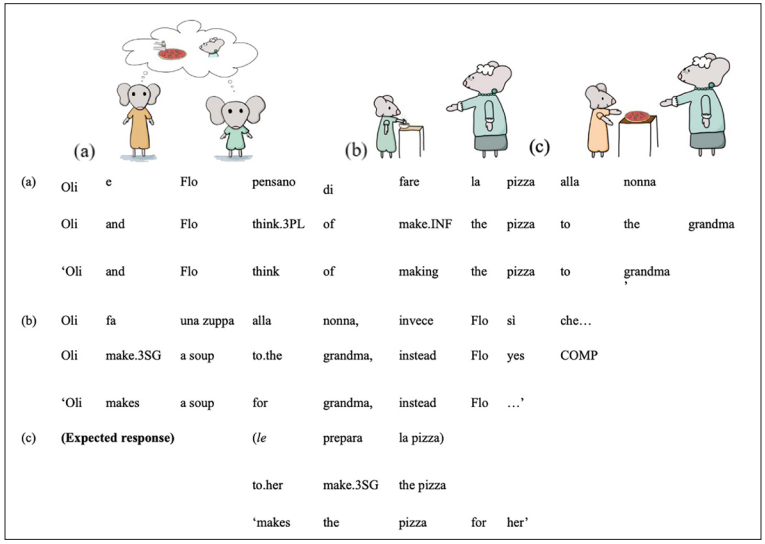



**Figure 3** Example of DAT context (Feminine)

Participants were tested individually in a quiet room at their school. The experiment was conducted in Italian with standardized instructions. The task lasted about 15 minutes within a 30-minute session that also included a sentence-comprehension task, which is not

reported here. All responses were audio-recorded for transcription and analysis. Informed consent was obtained from the parents of all participants prior to their inclusion in the study.

### 3.4 Response Coding and Analysis

Coding varied by structure, as each context elicited distinct strategies. Initial coding categories are summarized in Table 1 (ACC) and Table 2 (DAT).

**Table 2** Response coding categories for ACC clitics

| Response type | Description | Example |
|---|---|---|
| Target clitic | Target-like response | *Lo* legge |
| Full DP | Substitution with a full lexical DP | Legge *il libro* |
| Omission | Omission of the target clitic or cluster | Ø legge |
| Doubling | Clitic reduplication | *Lo* legge *il libro* |
| Cluster | Production of a cluster instead of a single clitic | *Glielo* legge |
| Number | Number agreement error | *Li* legge |
| Gender | Masculine produced for feminine (or vice versa) | *La* legge |
| DAT-for-ACC | DAT produced instead of the ACC | *Gli* legge |
| Other | Residual strategies not included in the categories above | Oli è bravo. |

**Table 3** Response coding categories for DAT clitics

| Response type | Description | Example |
|---|---|---|
| Target | Target-like response | *Le* prepara la pizza. |
| Full DP | Substitution with a full lexical DP | Prepara la pizza *alla nonna*. |
| Omission | Omission of the target clitic or cluster | Ø prepara la pizza. |
| Doubling | Clitic reduplication | *Le* prepara la pizza *alla nonna*. |
| Cluster | Production of a cluster instead of a single clitic | *Gliela* prepara. |
| Wrong | Wrong form | *Li* prepara. |
| Gender | Masculine produced for feminine | *Gli* prepara. |
| ACC-for-DAT | ACC produced instead of the DAT | *La* prepara. |
| Other | Residual strategies not included in the categories above | Fa bene. |

## 4 Results

Statistical analyses were conducted in RStudio (v. 2025.09.2, 2025). Accuracy and strategy distributions were calculated by clitic type (ACC, DAT) and gender. Descriptive and inferential analyses

(GLMM and Type III ANOVA) compared performance across age groups, examining effects of clitic type, age, accuracy, and gender as fixed factors, with participant as a random factor.[3] Overall, the plots presented below display clear differences in accuracy across structures: ACC clitics improve earlier **[fig. 4]**, especially in masculine forms, whereas DAT clitics remain challenging for a longer period, with lower accuracy and slower growth **[fig. 5]**.

## 4.1 ACC Contexts

Tables 4 and 5 show the distribution of response strategies for masculine and feminine ACC clitics, respectively, across age groups. Children showed a clear developmental progression in clitic production. For masculine clitics, target responses increased from 47% at age 4;2 to over 91% by age 10;8. Early non-target responses included full DP substitutions, minimal omissions, and occasional use of DAT clitics, all decreasing with age. Feminine ACC clitics followed a similar pattern but started from a lower baseline (19% of target responses at age 4;2) and showed greater variability. Non-target responses included full DPs, gender mismatches (i.e., masculine clitic used instead of feminine), and fewer omissions. Accuracy increased steadily for both ACC clitics, though the feminine trajectory lagged slightly behind, suggesting later acquisition. Overall, both structures followed a shared developmental path, with increased accuracy and reduced variability by the end of primary school. Omissions were minimal and disappeared by age 5 in masculine contexts, age 6 in feminine ones, as expected for typically developing children.

**Table 4** Distribution of Response Strategies (in %) for Masculine ACC Contexts by Age (in years)

| Age Group(*M*) | Target | Full DP | Omission | Cluster | Dative | Other |
|---|---|---|---|---|---|---|
| **3;6-4;9** (4;2) | 47.22 | 41.67 | 8.33 | 0 | 2.78 | 0 |
| **5;1-5;9** (5;5) | 43.75 | 34.38 | 12.5 | 6.25 | 3.13 | 0 |
| **6;3-7;2** (6;9) | 62.5 | 33.33 | 0 | 4.17 | 0 | 0 |
| **7;2-8;1** (7;8) | 78.57 | 19.64 | 0 | 0 | 0 | 1.79 |

**3** Open access to the analysis scripts and statistical model outputs is provided through the following link: `https://osf.io/ftnpb/overview`.

| Age Group(*M*) | Target | Full DP | Omission | Cluster | Dative | Other |
|---|---|---|---|---|---|---|
| **8;3-9;1** (8;8) | 66.18 | 32.35 | 0 | 1.47 | 0 | 0 |
| **9;3-10;2** (9;10) | 60.87 | 35.87 | 2.17 | 0 | 0 | 0 |
| **10;3-11;2** (10;8) | 91.96 | 5.36 | 0 | 1.79 | 0 | 0.89 |

**Table 5** Distribution of Response Strategies (in %) for Feminine ACC Contexts by Age

| Age Group(*M*) | Target | Full DP | Omission | Cluster | Dative | Masculine | Other |
|---|---|---|---|---|---|---|---|
| **3;6-4;9** (4;2) | 19.44 | 38.89 | 8.33 | 2.78 | 8.33 | 19.44 | 2.78 |
| **5;1-5;9** (5;5) | 25 | 46.88 | 9.38 | 6.25 | 3.13 | 9.38 | 0 |
| **6;3-7;2** (6;9) | 37.5 | 41.67 | 0 | 8.33 | 4.17 | 8.33 | 0 |
| **7;2-8;1** (7;8) | 67.86 | 25 | 1.79 | 0 | 0 | 3.57 | 1.79 |
| **8;3-9;1** (8;8) | 54.41 | 38.24 | 2.94 | 1.47 | 0 | 0 | 2.94 |
| **9;3-10;2** (9;10) | 59.78 | 38.04 | 1.09 | 1.09 | 0 | 0 | 0 |
| **10;3-11;2** (10;8) | 85.71 | 9.82 | 0.89 | 1.79 | 0 | 1.79 | 0 |

For statistical and visualization purposes, and following previous research, we recoded clitic clusters and ACC clitic doubling as target responses; less frequent responses were grouped as *Other* **[fig. 4]**.

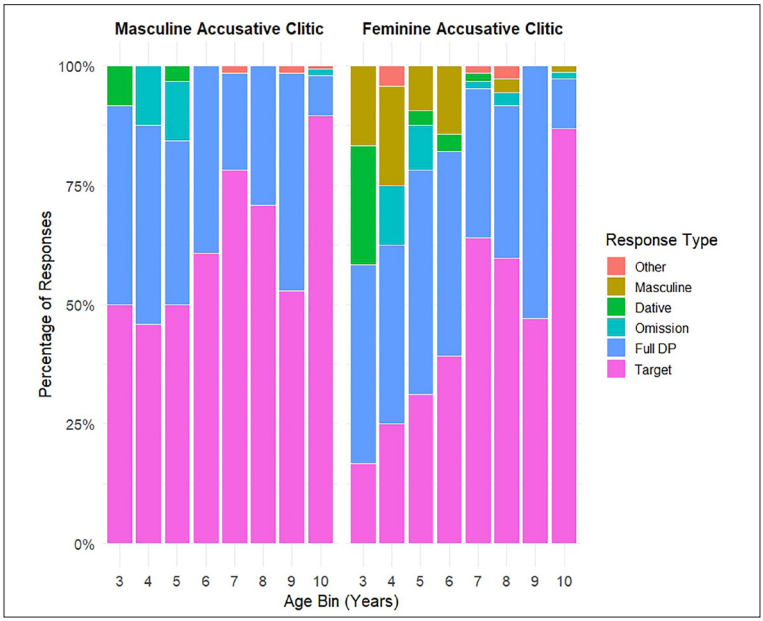



**Figure 4** Recoded Responses for ACC Contexts, by Gender and Age

Binomial GLMMs were used to examine the development of clitic production in relation to age, case (ACC vs DAT), and clitic gender (masculine vs feminine). For ACC, results showed a significant effect of age ($p$ <.001), with accuracy increasing over time. Masculine forms were produced significantly more accurately than feminine ones ($p$ <.001), and this difference decreased with age, as shown by a significant age × gender interaction ($p$ =.006).

## 4.2 DAT Contexts

DAT clitics were the most challenging in our task. Strategies employed in DAT contexts are quantified in Table 6 (masculine) and 7 (feminine), with slight differences across genders. The most frequent alternative strategies for both genders are the use of *full PPs* and *omissions*, which persist up to age 11, unlike ACC, where omissions were minimal. A third alternative strategy was replacing the DAT clitic with an ACC one; the opposite (using DAT for ACC) was very rare.

**Table 6** Distribution of Response Strategies (in %) for Masculine DAT Contexts by Age Groups

| Age Group(*M*) | Target | Full DP | Accusative | Omission | Cluster | Doubling | Other |
|---|---|---|---|---|---|---|---|
| **3;6-4;9** (4;2) | 22.22 | 19.44 | 13.89 | 41.67 | 0 | 0 | 2.78 |
| **5;1-5;9** (5;5) | 21.88 | 28.13 | 6.25 | 37.5 | 3.13 | 3.13 | 0 |
| **6;3-7;2** (6;9) | 14.58 | 39.58 | 12.5 | 14.58 | 8.33 | 10.42 | 0 |
| **7;2-8;1** (7;8) | 28.57 | 25 | 5.36 | 26.79 | 10.71 | 1.79 | 0 |
| **8;3-9;1** (8;8) | 30.88 | 32.35 | 1.47 | 32.35 | 1.47 | 1.47 | 0 |
| **9;3-10;2** (9;10) | 36.96 | 20.65 | 2.17 | 33.7 | 3.26 | 3.26 | 0 |
| **10;3-11;2** (10;8) | 56.25 | 15.18 | 0 | 18.75 | 4.46 | 3.57 | 0 |

**Table 7** Distribution of Response Strategies (in %) for Feminine DAT Contexts by Age Groups

| Age Group(*M*) | Target | Full DP | Accusative | Omission | Cluster | Gli |
|---|---|---|---|---|---|---|
| **3;6-4;9** (4;2) | 2.78 | 33.33 | 13.89 | 30.56 | 11.11 | 8.33 |
| **5;1-5;9** (5;5) | 3.13 | 43.75 | 3.13 | 31.25 | 0 | 18.75 |
| **6;3-7;2** (6;9) | 2.08 | 33.33 | 20.83 | 20.83 | 0 | 22.92 |
| **7;2-8;1** (7;8) | 7.14 | 21.43 | 0 | 28.57 | 10.71 | 28.57 |
| **8;3-9;1** (8;8) | 16.18 | 38.24 | 1.47 | 22.06 | 1.47 | 20.59 |
| **9;3-10;2** (9;10) | 16.3 | 25 | 0 | 34.78 | 1.09 | 22.83 |
| **10;3-11;2** (10;8) | 16.96 | 16.07 | 0.89 | 17.86 | 3.57 | 44.64 |

In feminine DAT contexts, some responses involved the default DAT clitic *gli*, which is a generalized strategy and has been recoded as a target response, as well as the use of clitic clusters and DAT doubling for statistical analysis and visualization. Figure 5 shows this recoding: default *gli* in feminine contexts is coded with the etymological feminine *le* as *target*; and clusters or DAT doubling are also treated as target responses.

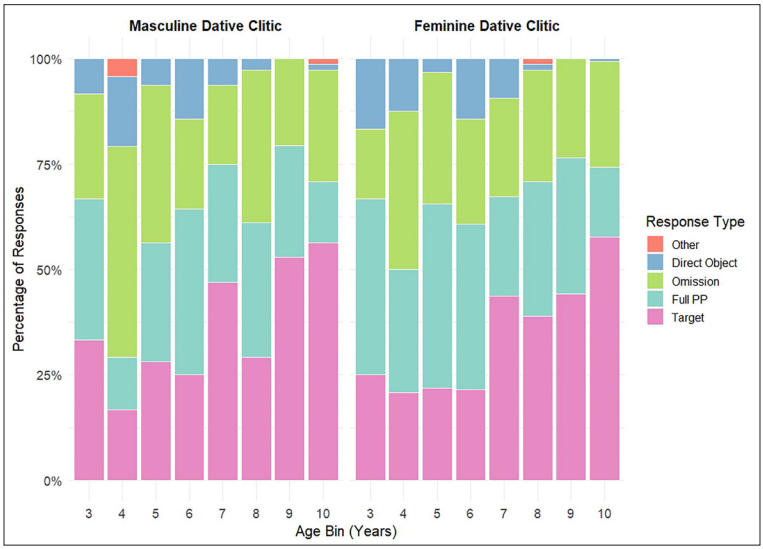



**Figure 5** Recoded Responses for DAT Contexts, by Gender and Age

DAT clitics accuracy improves with age: only age was a significant predictor ($p$ <.001); gender ($p$ =.666) and the age × gender interaction (p =.688) were not significant. Both *gli* and *le* were analyzed as *target* responses. Unlike ACC, DAT clitic production improved similarly over time for both genders. Both clitic types, ACC and DAT, show age-related improvement, but DAT clitics (*gli* and *le*) are produced later and show more persistent non-target strategies. This difficulty does not seem to be gender-specific, as gender is not a relevant factor in DAT contexts. A third GLMM tested the interaction of case (ACC vs. DAT), gender (masculine vs. feminine), and age. Age ($p$ <.001), gender ($p$ =.0035), and case (p <.001) are significant predictors: overall performance improves with age, and accuracy is higher for masculine and ACC contexts. No significant three-way interaction was found ($p$ =.145), but a significant case × gender interaction ($p$ =.0059) confirmed that gender effects differed across ACC and DAT forms.

Given the contrast between our results and those reported previously for comparable language users (Cardinaletti et al. 2021), we further examined the difficulty of DAT constructions by analyzing the type of verb used to elicit DAT clitics. DAT contexts were divided into true ditransitive constructions, where the DAT is a goal argument (verbs *dare*, *regalare*), and transitive + benefactive constructions, where the DAT is pragmatically required by the given context but not by the verb's thematic structure (*preparare*, *fare*). This distinction was somewhat significant in Romanian (Babyonyshev, Marin 2006)

but not in Catalan (Gavarró, Mosella 2009), despite a significantly reduced production of benefactive DAT reported in Mosella (2007). It has not been investigated in Italian (Cardinaletti et al. 2021; Cerutti, Cardinaletti, Volpato 2024), even though both DAT constructions appeared in previous experimental tasks (*regalare*, *portare*, *dare* vs. *leggere*, *lanciare* from their experimental items). In our data, this semantic distinction proved relevant, as the statistical model indicates.

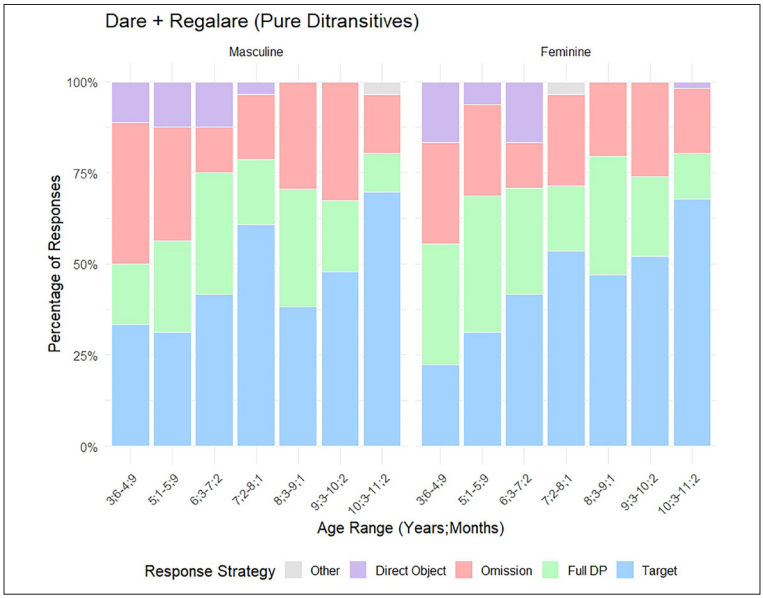



**Figure 6** Production of DAT clitics according to verb type

Figure 6 shows the proportion of response types for children aged 3-10 in tasks targeting masculine (left) and feminine (right) DAT clitics in Italian, categorized by verb type and role of the DAT elicited (true ditransitives with a goal argument vs. transitive verbs used as ditransitives with a benefactive). Developmental trajectories differed by verb/DAT type. For true ditransitives, target DAT clitics (goals) gradually increased with age, and omission is less prevalent. In contrast, for non-true ditransitives that elicited a benefactive indirect object, the production of DAT clitics remains low (~25%) until around age 10, and children rely on full lexical PPs and omissions to a similar extent to target clitics to express the benefactive role, suggesting that transitive verbs used ditransitively in this methodological design are not optimal for eliciting DAT clitics. A GLMM with accuracy as the dependent variable and verb type and age as fixed factors showed that these two verb types elicited DAT clitics to different extents (*p*

<.001), with an age × verb type interaction ($p$ <.05) indicating that this asymmetry persists throughout development.

## 5 Discussion

The present study examined the acquisition of ACC and DAT clitic pronouns in masculine and feminine contexts, in Italian-speaking children aged 3-11, focusing on developmental trajectories and alternative strategies. The results revealed asymmetries between ACC and DAT clitics, both in accuracy and shape of non-target strategies. While both clitic cases show steady improvement with age, ACC clitics – particularly masculine forms – reach near-ceiling levels by age ten, whereas DAT clitics, especially feminine ones, remain less stable and more variable. Recall that the statistical analysis revealed no significant differences between the acquisition of masculine and feminine DAT forms once *gli* was coded as an acceptable option in feminine contexts. Thus, although the DAT clitic is less specified with respect to its phi-features (we treat it as genderless), it still lags behind with respect to the ACC clitic. Indeed, ACC clitics are hardly omitted, whereas omission of DAT clitics is pervasive. Gender effects, while significant for ACC, were not found for DAT, aligning with Cerutti, Cardinaletti, and Volpato's (2024) proposal that Italian DAT clitics lack gender specification. The default form *gli* – frequently used across genders in both child and adult Italian – emerged as a productive strategy among older children. We interpret this result as evidence that difficulties in acquisition do not stem from morphological specification, but rather from the antecedent's argument position, its theta role, and the structural complexity involved. This idea is further supported by the asymmetries found between the different types of DAT (goal vs. benefactive) and the verb constructions employed to elicit DAT clitics. DAT clitics that referred to argumental DAT (goals) elicited with true ditransitive verbs were produced significantly more than DAT clitics that referred to benefactives elicited with transitive verbs employed ditransitively. Still, no DAT clitic reached the levels of production of ACC clitics, which were elicited with significantly simpler sentences. This suggests that ditransitive constructions are structurally more complex than transitive ones, particularly if they introduce an additional argumental layer which increases semantic complexity. Thus, the delayed mastery of DAT, we argue, reflects greater processing, structural, and semantic demands as it requires a more complex derivation, in line with the Complexity Hypothesis (Jakubowicz, Nash, Rigaut 1998; Jakubowicz 2011). Children appear to rely on lexically overt alternatives (full PPs) when unable to map the DAT position onto a pronominal clitic, maintaining grammaticality through compensatory means. The third alternative strategy, the

replacement of a DAT with an ACC clitic, provides further evidence of children's reliance on syntactically simpler forms, as the ACC position is closer to the verb rather than preposition-mediated. This substitution implies that the mapping of DAT arguments to DAT clitic morphology may remain problematic even after children have mastered the mechanics of cliticization for ACC.

This finding contrasts with previous studies reporting higher accuracy for DAT than for ACC clitics (e.g., Cardinaletti, Cerutti, Volpato 2021), findings that were also explained in terms of complexity, in this case, morphological complexity (Tuller et al. 2011). However, a note of caution is warranted, as our task design may also have inadvertently primed the use of lexical DPs or PPs, leading to their occurrence at higher rates than typically expected. If this were the case, though, we believe the effect would likely extend to both ACC and DAT contexts.

## 6 Conclusions

This study provides new evidence that DAT clitics are acquired later and less robustly than ACC clitics in Italian, especially in complex syntactic configurations such as ditransitives in contrastive contexts. The findings reinforce the notion that clitic acquisition is sensitive to syntactic, semantic, and processing complexity, not (only) to morphological gender marking. The data also reveal that alternative strategies – particularly lexical substitution – remain productive throughout the acquisition process, reflecting children's adaptive mechanisms for maintaining grammaticality given the experimental design of the task.

From a theoretical perspective, the results support a complexity-based model of clitic acquisition and argue against purely morphological explanations. They highlight the need to consider both structural and discourse-related factors in the acquisition of pronominal clitics. Methodologically, the study underscores the importance of testing clitic production and replicating results with several experimental methodologies and in syntactically rich contexts, as tasks may underestimate the true difficulty of DAT constructions.

Future research should further explore how input frequency, processing load, syntactic, and semantic complexity interact in shaping the acquisition of different clitic types. Longitudinal data, cross-linguistic experimental comparisons (e.g., Catalan, Spanish, or French), as well as diversified methodologies that include production and comprehension, could help clarify whether the observed patterns reflect universal developmental constraints, language-specific properties, or merely task effects in Italian cliticization.

## Bibliography

Antelmi, D. (1997). *La prima grammatica dell'italiano: Indagine longitudinale sull'acquisizione della morfosintassi italiana*. Bologna: il Mulino.

Arosio, F.; Branchini, C.; Forgiarini, M.; Roncaglione, E.; Carravieri, E.; Tenca, E.; Guasti, M.T. (2010). "SLI Children's Weakness in Morphosyntax and Pragmatics". Yukio, O. (ed.), *The Proceedings of the Tenth Tokyo Conference on Psycholinguistics*. Tokyo: Hituzi Syobo Press, 57-75.

Arosio, F.; Branchini, C.; Barbieri, L.; Guasti, M.T. (2014). "Failure to Produce Direct Object Clitic Pronouns as a Clinical Marker of SLI in School-Aged Italian-Speaking Children". *Clinical Linguistics and Phonetics*, 28(9), 639-63. https://doi.org/10.3109/02699206.2013.877081.

Babyonyshev, M.; Marin, S. (2006). "Acquisition of Pronominal Clitics in Romanian". *Catalan Journal of Linguistics*, 5(1), 17-44. https://doi.org/10.5565/rev/catjl.71.

Blasco, M. (2000). *The Acquisition of Pronominal Object Clitics in Spanish* [PhD Dissertation]. New York: CUNY.

Caprin, C.; Guasti, M.T. (2009). "The Acquisition of Italian Clitic Pronouns: Syntactic and Pragmatic Aspects". *Applied Psycholinguistics*, 30(3), 481-512.

Cardinaletti, A. (2008). "On Different Types of Clitic Clusters". De Cat, C.; Demuth, K. (eds), *The Bantu-Romance Connection: A Comparative Investigation of Verbal Agreement, DPs, and Information Structure*, 41-82. https://doi.org/10.1075/LA.131.06CAR.

Cardinaletti, A. (2010). "Sulla presunta identità categoriale di articoli determinativi e pronomi clitici". Balboni P.E.; Cinque G. (a cura di), *Seminario di linguistica e didattica delle lingue. Scritti in onore degli ottant'anni di Giovanni Freddi*. Venezia: Cafoscarina, 99-113. https://doi.org/10.30687/978-88-6969-683-1/012.

Cardinaletti, A.; Casani, E. (2019). "Pragmatica nell'uso dei pronomi clitici diretti di terza persona singolare in bambini dislessici con e senza disturbo specifico del linguaggio". Nuzzo, E.; Vedder, I. (a cura di), *Lingua in contesto. La prospettiva pragmatica*. Milano: AItLA, 9-27.

Cardinaletti, A.; Cerutti, S.; Volpato, F. (2021). "On the Acquisition of Third Person Dative Clitic Pronouns in Italian". *Lingue e Linguaggio*, 20(2), 311-41.

Casani, E. (2020). "Production of Direct Object Clitic Pronouns by Italian Children with Different Acquisition Modes". Dovetto, F.M. (a cura di), *LINGUA E PATOLOGIA. I sistemi instabili.* Roma: Aracne, 445-60. https://doi.org/10.5209/cfit.74522.

Cerutti, S.; Cardinaletti, A.; Volpato, F. (2024). "On the Production and Omission of Dative and Accusative Clitics in Italian Children with Learning Difficulties". Torrens, V. (ed.), *Language Acquisition in Romance Languages*. Amsterdam: John Benjamins Publishing Company, 232-52. https://doi.org/10.1075/bpa.18.10cer.

Cipriani, P.; Chilosi, A.M.; Bottari, P.; Pfanner, L. (1993). *L'acquisizione della morfosintassi in italiano*. Padova: Unipress.

Gavarró, A. (2012). "Object Clitics in Typically Developing and SLI Catalan-Speaking Children". *Probus*, 24(2), 251-77.

Gavarró, A.; Mosella, L. (2009). "The Acquisition of Clitics in Catalan". Grohmann, K. (ed.), *Romance Languages and Linguistic Theory 2007*. Amsterdam: John Benjamins, 105-18.

Guasti, M.T. (1993-1994). "Verb Syntax in Italian Child Grammar: Finite and Non-Finite Verbs". *Language Acquisition*, 3(1), 1-40. https://doi.org/10.1207/s15327817la0301_1.

Guasti, M.T. (2017). *Language Acquisition: The Growth of Grammar.* Cambridge: MIT Press.

Hamann, C. (2002). "The Acquisition of the Pronominal System in French—The Production of Subject and Object Clitics". Hamann, C. (ed.), *From Syntax to Discourse: Pronominal Clitics, Null Subjects and Infinitives in Child Language*, 21-63. Dordrecht: Springer Netherlands. https://doi.org/10.1007/978-94-010-0432-9_2.

Jakubowicz, C. (2011). "Measuring Derivational Complexity: New Evidence From Typically Developing and SLI Learners Of L1 French". *Lingua, Specific Language Impairment*, 121(3), 339-51. https://doi.org/10.1016/j.lingua.2010.10.006.

Jakubowicz, C.; Nash, L.; Rigaut, C. (1998). "Determiners and Clitic Pronouns in French-Speaking Children with SLI". *Language Acquisition*, 7(2-4), 113-60. https://doi.org/10.1207/s15327817la0702-4_3.

Jakubowicz, C.; Rigaut, C. (2000). "L'acquisition des clitiques nominatifs et des clitiques objets en français". *Revue Canadienne de Linguistique*, 45, 119-57. https://doi.org/10.1017/s0008413100017631.

Kayne, R. (1975). *French Syntax: The Transformational Cycle.* Cambridge: MIT Press.

Mosella, M. (2007). *L'adquisició del clític d'objecte indirecte en català* [treball de recerca]. Barcelona: Universitat Autònoma de Barcelona. https://doi.org/10.23923/pap.psicol2020.2937.

Rizzi, L.; Shlonsky, U. (2007). "Strategies of Subject Extraction". Sauerland, U.; Gärtner, H. (eds), *Interfaces + Recursion = Language?: Chomsky's Minimalism and the View from Syntax-Semantics*. Berlin; New York: De Gruyter Mouton, 115-60. https://doi.org/10.1515/9783110207552.115.

Schmitz, K.; Müller, N. (2008). "Strong and Clitic Pronouns in Monolingual and Bilingual Acquisition of French and Italian". *Bilingualism: Language and Cognition*, 11(1), 19-41. https://doi.org/10.1017/s1366728907003197.

Soto-Corominas, A. (2018). *Acquisition of Catalan and Spanish Morphosyntax in the Catalan-Spanish Bilingual Context* [PhD Dissertation]. Electronic Thesis and Dissertation Repository. 5441. London: The University of Western Ontario.

Soto-Corominas, A. (2020). "Acquisition of Quantified Partitivity in Catalan-Spanish Bilingualism: Influence from Child-Level and Language-Level Factors". *Linguistic Approaches to Bilingualism*, 11(6), 873-908. https://doi.org/10.1075/lab.19016.sot.

Tuller, L.; Delage, H.; Monjauze, C.; Piller, A.; Barthez, M. (2011). "Clitic Pronoun Production as a Measure of Atypical Language Development in French". *Lingua*, 121(3), 423-41. https://doi.org/10.1016/j.lingua.2010.10.008.

Varlokosta, S.; Belletti, A.; Costa, J.; Friedmann, N.; Gavarró, A.; Grohmann, K.K.; Guasti, M.T.; Tuller, L.; Lobo, M.; Anđelković, D.; Argemí, N.; Avram, L.; Berends, S.; Brunetto, V.; Delage, H.; Ezeizabarrena, M.; Fattal, I.; Haman, E.; van Hout, A.; Jensen de López., K.; Katsos, N.; Kologranic, L.; Krstić, N.; Kuvac Kraljevic, J.; Miękisz, A.; Nerantzini, M.; Queraltó, C.; Radic, Z.; Ruiz, S.; Sauerland, U.; Sevcenco, A.; Smoczyńska, M.; Theodorou, E.; van der Lely, H.; Veenstra, A.; Weston, J.; Yachini, M.; Yatsushiro, K. (2016). "A Cross-Linguistic Study of the Acquisition of Clitic and Pronoun Production". *Language Acquisition*, 23(1), 1-26. https://doi.org/10.1080/10489223.2015.1028628.

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# Treatment of Movement Derived Sentences Using an Educational Game: The Case of a Boy with Cornelia de Lange Syndrome

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**Abstract** The study explores language variation in a 13-year-old Italian-speaking boy with Cornelia de Lange Syndrome in the production and the comprehension of restrictive relative clauses and the production of *wh*-questions. Assessments were conducted before and after a linguistic training intervention based on the explicit teaching of verb argument structure, Theta criterion, and *wh*-movement in object relative clauses. The participant's performance was compared with that of four typically developing controls. Post-intervention results indicate an improvement in the participant's performance, which nevertheless remained significantly lower than that of the control group. Follow-up data suggest that the training effects were sustained only in the production of subject *wh*-questions.

**Keywords** Cornelia de Lange Syndrome. Linguistic training intervention. Relative clauses. wh-questions.

**Summary** 1 Introduction. – 2 Materials and Methods. – 3 Results. – 4 Discussion.

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## 1 Introduction

This paper describes a linguistic training intervention administered to a 13-year-old Italian-speaking boy with Cornelia de Lange syndrome (CdLS) presenting with significant morphosyntactic impairments. This study investigates whether the intervention improves the production and comprehension of movement-derived structures, specifically relative clauses and *wh*-questions, and whether these effects generalize to untrained structures or persist after a three-months follow-up.

CdLS is a heterogeneous congenital condition characterized by distinctive facial features, growth delays, and intellectual disability, often accompanied by specific deficit in language development (Kline et al. 2007; 2019; Ajmone et al. 2013). Based on linguistic abilities, individuals with CdLS are categorized into four groups: *Talkers* exhibit language development within the typical range, though they reach milestones slightly later than their typically developing peers; *Late talkers* produce their first words at 30 months and first sentences at 6 years, but fail to reach typical syntactic proficiency; *Limited talkers* initiate language production around age 7 but never achieve adequate linguistic competence; *Guarded talkers* do not reach verbal expression beyond the isolated production of two or three words (Goodban 1993). Their linguistic output typically features short sentences (Mean Length of Utterances (MLU) under 10 words) and ungrammatical, atypical structures (Vizziello et al. 2010; Ajmone et al. 2014; Kline et al. 2019).

Regarding complex syntax, previous research has primarily analyzed *wh*-questions in English-speaking individuals, finding a tendency to produce ungrammatical *in-situ* interrogatives where the auxiliary is omitted (Goodban 1993). Similar impairments are observed in patients with aphasia (Thompson et al. 1998; 2003; Stadie et al. 2008), children and adolescents with Developmental language disorder (DLD, Levy, Friedmann 2009), and deaf children with cochlear implants (D'Ortenzio, Volpato 2020). These structures, along with relative clauses, involve syntactic movement from a base position to the sentence's beginning (Chomsky 1977; 1981). Such sentences exhibit a subject-object asymmetry (Utzeri 2007; Volpato, Adani 2009; Volpato 2012): subject-movement structures are easier to process, while object-movement structures suffer from intervention effects caused by the embedded subject (Rizzi 1990), particularly in clinical populations (Grillo 2008).

Extensive research indicates that focused training on syntactic rules, such as verb argument structure (Chomsky 1981), Theta criterion (Chomsky 1981), and syntactic movement (Chomsky 1977), can improve performance. This methodology has proven effective across diverse populations, including English-speaking children with

DLD (Ebbels 2014), English speaking adults with aphasia (Thompson, Shapiro 2005), Italian speaking deaf children with cochlear implants (D'Ortenzio 2023), L2 learners (Volpato, Bozzolan 2017; Volpato, De Nichilo 2020), and Italian-speaking individuals with dyslexia (Cardinaletti et al. 2022). This methodology was found to be effective also for supporting the teaching of grammatical rules in the school context (Lupo, Campanella 2024). Furthermore, training on relative clauses may induce generalization effects to *wh*-questions (Thompson, Shapiro 2005), as both structures are derived by the same movement, though the latter is easier to process. Stadie et al. (2008) found that also passive sentences can be improved following training on relative clauses, given their comparatively simpler syntactic structure.

These findings encouraged the development of a teaching tool called *Il mio GIGI – Gioco Interattivo di Grammatica Inclusiva* "Interactive Game for Inclusive Grammar" (Albiero 2020) which was previously used as complementary tool for teaching relative clauses in Primary School (Lupo, Campanella 2024). This tool was selected for this case study and it is described in section 2.3.

## 2 Materials and Methods

### 2.1 Participants

The participant is a 13;10-year-old Italian-speaking boy with a mild Cornelia de Lange Syndrome (CdLS) phenotype, classified as a *Late talker*. Since the age of 2, his linguistic development has been supported by Augmentative and Alternative Communication (AAC) combining graphic symbols and signs from the Italian Sign Language (LIS), alongside speech therapy until age 8; he acquired reading skills at age 7. His current production assessed with the tests described in section 2.2 is characterized by short sentences (MLU = 4), morphosyntactic agreement impairments, and frequent omission of function words. Cognitive assessment via WISC-IV (Wechsler Intelligence Scale for Children-IV Edition; Wechsler 2012) revealed a general IQ of 40, indicating moderate intellectual disability, and a moderate deficit in the area of communication (Verbal Comprehension Index: 52).

A control group of four typically developing Italian-speaking adolescents (age range 11;10-14;5; mean: 13;2) was included for comparison in the experimental tasks.

## 2.2 Assessment's Procedure

The participant was assessed with standardized and experimental tests. Experimental tests were administered before training (T0), immediately after (T1), and at a three-month follow-up (T2). Tests were administered by one of the authors (M.C.M.) during regular speech therapy sessions. Controls were assessed only once. Responses were audio-recorded and lately transcribed on Excel for later analysis.

Standardized tests were used to assess the participant's lexical production (Boston Naming Test; Kaplan et al. 2001)[1] and comprehension (Peabody Picture Vocabulary Test – PPVT; Dunn, Dunn 2000), as well as morphosyntactic comprehension (Test for Reception of Grammar – TROG-2; Bishop 2009).

Experimental tests evaluated the participant's production and comprehension of relative clauses (Volpato 2010; 2012; 2019) and the production of *wh*-questions (Guasti et al. 2012; 2015).

The production of subject relative (SR) and object relative (OR) clauses was assessed through a shortened version of the elicited production task developed by Volpato (2010; 2012; 2019). Each trial is supported by two pictures depicting different scenarios. Figure 1 and (1) illustrate an item to elicit an SR.

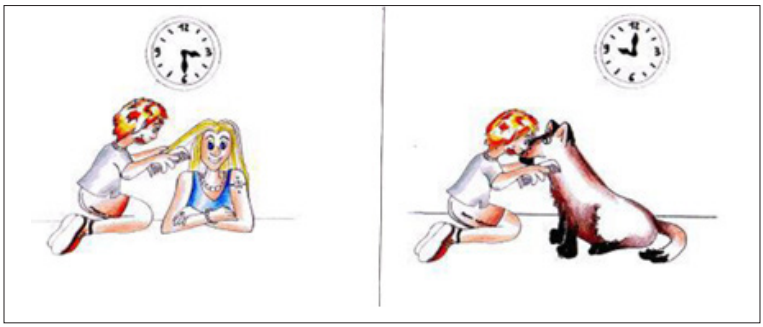


**Figure 1** Item eliciting a SR

(1) Experimenter: "There are two pictures. In the first, the child combs the mother; in the second, the child combs the dog. Which child do you prefer? Start the sentence with "I like the child…"
Target: "I like the child that combs the mother/the dog".

**1** The Boston Naming Test was selected for verbal production because other instruments commonly used with children, such as the *Batteria per la Valutazione del Linguaggio 4-12* (BVL 4-12; Marini et al. 2015), are specifically designed for children under 13 years of age.

Comprehension of relative clauses was assessed via a referent selection task (Volpato 2010; 2012; 2019). Each trial featured two pictures, each involving two types of referents (singular or plural), as shown by Figure 2. The participant was required to select the correct answer among four potential referents. Example (2) shows the assessment of the comprehension of an SR, while (3) shows the procedure for an OR.



**Figure 2** item for the comprehension of a SR or an OR

(2) Experimenter: "Show me the bear that greets the turtles".
Correct answer: A

(3) Experimenter: "Show me the turtles that the bear greets".
Correct answer: B

Items consisted of semantically reversible sentences with present-tense verbs to avoid auxiliary-related confounding variables (Chesi 2006). Additionally, both tasks controlled for number features.

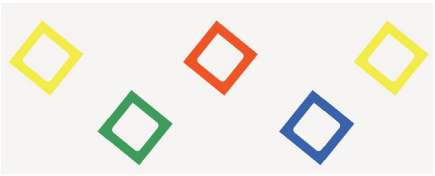
Subject and object questions introduced by *chi* 'who' or *quale*+NP 'which+NP' were assessed using an elicited production task presented via PowerPoint (Guasti et al. 2012; 2015). Depending on whether a subject or object question was being elicited, one of the characters involved in the action was covered by a geometric shape.

## 2.3 Training

The training consisted of ten 60-minute sessions over two and a half months, adapting the protocol by D'Ortenzio (2023). We utilized

*Il mio GIGI – Gioco Interattivo di Grammatica Inclusiva* (Albiero 2020), an educational tool that employs physical tiles to represent sentence constituents. This tool was developed based on the previous experiments involving Italian-speaking deaf or dyslexic children and adolescents (D'Ortenzio et al. 2020; Cardinaletti et al. 2022). The different types of tiles are described in Table 1.

**Table 1** Description of the tile types used in the intervention

| Tile type | Description | Example / Features |
|---|---|---|
| **Name-tiles** | Square tiles featuring the printed word and its corresponding picture |  Proper names or common nouns |
| **Verb-tiles** | Rectangular-shape |  3rd person verbs singular and plural |
| **Function-tiles** | Small tiles for grammatical markers |  Complementizers (e.g., *che*), articles, and auxiliaries |
| **Theta-frames** | Color-coded frames representing Theta roles |  Agent (e.g., blue), Theme (e.g., red) |
| **Trace-tile** | Circular tiles marking the original position of a moved constituent |  Visual placeholder for the syntactic gap |

The intervention followed three phases: (i) instruction on verb argument structure and Theta Criterion using AAC symbols for clarity; (ii) explicit teaching and practice of *wh*-movement in object relatives (ORs); and (iii) a final review. In phase (ii), the participant constructed simple sentences, joined them using the complementizer *che* 'that', and was guided to move the relevant argument while leaving a trace as shown by Figure 3.

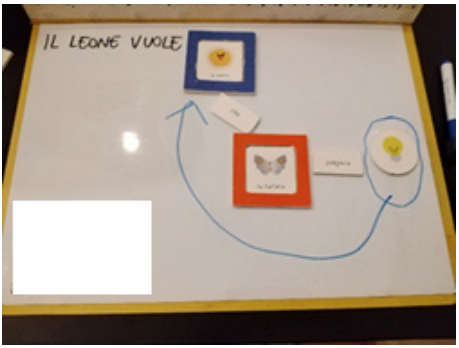



**Figure 3** Explicit explanation of A' syntactic movement using Il mio GIGI

## 2.4 Statistical Analyses

To evaluate the training effects across the three assessment sessions (T0, T1, T2), we conducted a series of one-way repeated-measures ANOVAs with the assessment sessions as the within-subjects factors. Given the single-case nature of the study, we also considered the results of the Friedman's test for non-parametric comparison. Statistical analyses were performed using JASP (2024).

Following Levy and Friedmann (2009), we compared the participant's performance at each time point to the mean performance of the four control participants using the Crawford t-test (Crawford, Garthwaite 2007). This procedure is specifically designed to compare a single-case score against a small control sample. These analyses were conducted in RStudio (Version 2024.04.2; Posit Team 2024).

# 3 Results

Both the PPVT (Dunn, Dunn 2000) and the Boston Naming Test (Kaplan et al. 2001) show participant's impaired lexical abilities, since the participant scored less than -2 standard deviation.

Performance on the TROG-2 (Bishop 2009) placed his morphosyntactic comprehension within the clinical range (1st percentile). Error analysis

indicated persistent difficulties with reversible constructions (e.g., in/on reversals, subject–verb reversals, reversible passives). Items containing a postponed main clause were consistently misinterpreted as object relative clauses. In some cases, responses suggested a strategy of attributing modifiers to the nearest noun, resulting in a canonical SVO interpretation of the stimulus sentences.

As for the experimental tasks, the participant shows a measurable improvement immediately following the intervention. Table 3 shows the participant's longitudinal scores compared to the control group.

**Table 3** Data showing means and standard deviations of the participant's assessment at T0, T1, and T2. SR: subject relatives, OR: object relatives with preverbal subject; S-wh: subject wh questions; O-wh: object wh questions

| | CdLS T0 M(SD) | CdLS T1 M(SD) | CdLS T2 M(SD) | Control participants M(SD) |
|---|---|---|---|---|
| **SR production** | 0.17 (0.41) | 0.83 (0.41) | 0.17 (0.41) | 0.92 (0.28) |
| **OR production** | 0.17 (0.41) | 0.17 (0.41) | 0.17 (0.41) | 0.08 (0.41) |
| **SR comprehension** | 0.92 (0.29) | 0.92 (0.29) | 0.58 (0.51) | 0.96 (0.20) |
| **OR comprehension** | 0.22 (0.42) | 0.45 (0.50) | 0.25 (0.44) | 0.97 (0.18) |
| **S-*wh* production** | 0.50 (0.52) | 0.75 (0.45) | 0.92 (0.29) | 0.98 (0.14) |
| **O-*wh* production** | 0.50 (0.52) | 0.67 (0.49) | 0.50 (0.52) | 0.98 (0.14) |

Considering the participant's whole performance, the Friedman test showed a significant effect ($X^2_F[2] = 10.792$, $p < .005$, Kendall's $W = .057$) with a quadratic trend ($p < .002$) as shown by Figure 4

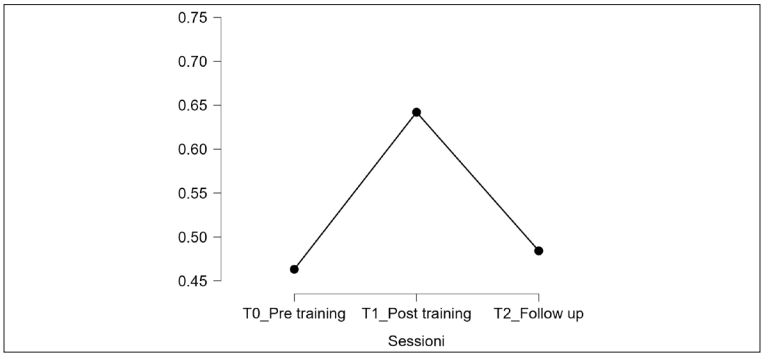



**Figure 4** Participant's total number of correct answers given during the three tests across the three sessions

A Bayesian test for single-case assessment (Crawford, Garthwaite 2007) was used to compare the participant's performance at T0 to that of the control participants. The participant's score (Raw =

44.00, Z = -58.79, percentile = 0.00) was significantly lower than that of the control sample (M = 92.00, SD = 0.82; $p_p$ =.001). The analysis indicated that the participant scored below 100% of the control population (95% CI [0.00, 0.00]). The same test was used also to compare the participant's performance at T1 to that of the control participants. The participant's score (Raw = 61.00, Z = -37.97, percentile = $1.01 * 10^{-313}$) was significantly lower than that of the control sample (M = 92.00, SD = 0.82; $p_p$ =.001). The analysis indicated that the participant scored below 100% of the control population (95% CI [0.00, 0.00]). Finally, the same analysis was performed also at T2. The participant's score (Raw = 46.00, Z = -56.34, percentile = 0.00) was significantly lower than that of the control sample (M = 92.00, SD = 0.82; $p_p$ =.001). The analysis indicated that the participant scored below 100.00% of the control population (95% CI [0.00, 0.00]).

## 4 Discussion

This study investigated language variation in a 13-year-old Italian-speaking boy with Cornelia de Lange syndrome (CdLS) following explicit syntactic training targeting object relative clauses (ORs). We hypothesized generalization to subject relatives (SRs) and *wh*-questions, with maintenance at three-month follow-up. These predictions were only partially confirmed.

Regarding the production of relative clauses, the participant exhibited significant impairment in both SRs and ORs at baseline (T0), frequently producing ungrammatical sentences lacking the complementizer *che* 'that' or sentences with altered semantic meaning. At T1, SR production improved, whereas ORs remained problematic, often replaced by structures with inverted thematic roles. These gains were not sustained at T2, as performance returned to baseline levels. Notably, unlike typically developing peers who avoid ORs by producing passive alternatives, reflecting age-appropriate linguistic ability (Belletti 2014), the participant relied on ungrammatical structures.

In comprehension, SRs were better preserved than ORs. Errors with ORs comprehension involved either inversion of the relative head or reversal of thematic roles, suggesting profound difficulty in processing marked word order. While comprehension improved immediately post-training, the effects vanished at follow-up, where accuracy fell significantly below that of controls.

In the production of *wh*-questions, the participant initially performed better on subject-*who* questions (0.83) than on other structures analyzed (subject-*which*: 0.17; object-*who*: 0.50; object-*which*: 0.50). By T1, performance remained stable for subject- and

object-*who* questions, but improved for both subject-*which* (0.67) and object-*which* (0.83) questions. Interestingly, at T2, a further improvement was observed in subject-*who* (1.00) and -*which* questions (0.83), while object *wh*-questions declined. Despite this improvement, the participant's performance remained significantly lower than that of the control participants. The continued improvement in subject *wh*-questions during the follow-up may be interpreted as a generalization effect of the OR-based training. As noted by Thompson and Shapiro (1995; 2005) and Stadie et al. (2008) it is possible to achieve generalization on structures that are syntactically less complex than the training targets.

The participant showed higher accuracy in the production of subject *who*-questions than subject *which*-questions consistent with previous research (Guasti et al. 2012; 2015; Belletti, Guasti 2015), attributing this to the greater complexity of the *which*+NP element. Specifically, *which*-questions involve the movement of a *wh*-element with pied-piping of the nominal restriction and require complex agreement relations (Belletti, Guasti 2015).

Interestingly, the participant performed better on object *which*-questions. In light of previous research on children with intellectual disabilities (Koizumi et al. 2019), this result may be explained by the structure of the experimental stimuli: each referent was introduced on a separate slide, which may have facilitated the participant's comprehension of the visual context and, consequently, the interpretation of the target sentence.

The observed subject-object asymmetry across all tasks, with better performance on subject-derived sentences, aligns with the intervention effects framework (Rizzi 1990). In Italian, subject-derived sentences preserve the canonical SVO word order, facilitating processing (Volpato, Vernice 2014). Conversely, object-movement structures suffer from the intervention of the embedded subject (Utzeri 2007; Volpato, Adani 2009; Volpato 2012).

The lack of long-term maintenance for relative clauses may be attributed to the limited duration of the training. While ten sessions were sufficient for populations in previous studies, this participant's significant lexical and morphosyntactic deficits, evident in his initial struggles with verb argument structure, suggest that a more intensive and prolonged application of the GIGI tool is necessary. Given that individuals with CdLS often require extensive repetition, a longer training period might better consolidate these grammatical rules.

Despite these limitations, our findings are promising. This study fills a critical gap in the literature, as, to our knowledge, no previous research has provided such an in-depth investigation of morphosyntactic abilities in Italian-speaking individuals with CdLS.

## Bibliography

Ajmone, P.F. et al. (2014). "Communication, Cognitive Development and Behavior in Children With Cornelia De Lange Syndrome (CdLS): Preliminary Results". *American Journal of Medical Genetics Part B: Neuropsychiatric Genetics*, 165(3), 223-9. https://doi.org/10.1002/ajmg.b.32224.

Albiero, C.M. (2020). *Il mio Gigi – Gioco Interattivo di Grammatica Inclusiva* [Bachelor's Thesis]. Venice: IUAV University.

Belletti, A. (2014). "Notes on Passive Object Relatives". Svenonius, P. (ed.), *Functional Structure from Top to Toe*. Oxford: Oxford University Press, 97-114. https://doi.org/10.1093/acprof:oso/9780199740390.003.0004.

Belletti, A.; Guasti, M.T. (2015). *The Acquisition of Italian: Morphosyntax and Its Interfaces in Different Modes of Acquisition*. Amsterdam: John Benjamins Publishing Company.

Bishop, D.V.M. (2009). *TROG-2 – Test per la Comprensione Grammaticale*. Transl. by A.P.B. Suraniti; P. Ferri; S. Neri. Firenze: Giunti. Transl. of *The Test for Reception of Grammar, Version 2 (TROG-2)*. London: Psychological Corporation.

Cardinaletti, A.; Piccoli, E.; Volpato, F. (2022). "Dyslexia and Syntactic Deficits: Overview and a Case Study of Language Training of Relative Clauses". Cappelli, G.; Noccetti, S. (eds), *A Linguistic Approach to the Study of Dyslexia*. Bristol: Multilingual Matters, 188-210. https://doi.org/10.21832/9781800415973-010.

Chesi, C. (2006). *Il linguaggio verbale non standard dei bambini sordi*. Rome: Edizioni Universitarie Romane.

Chomsky, N. (1977). "On Wh-Movement". Culicover, P.; Wasow, T.; Akmajian, A. (eds), *Formal Syntax*. New York: Academic Press, 77-132.

Chomsky, N. (1981). *Lectures on Government and Binding*. Dordrecht: Foris Publication.

Crawford, J.R.; Garthwaite, P.H. (2007). "Comparison of a Single Case to a Control or Normative Sample in Neuropsychology: Development of a Bayesian Approach". *Cognitive Neuropsychology*, 24(4), 343-72. https://doi.org/10.1080/02643290701290146.

D'Ortenzio, S. (2023). *Le frasi derivate da movimento nei bambini con impianto cocleare: Dalla valutazione al training linguistico*. Venezia: Edizioni Ca' Foscari. https://doi.org/10.30687/978-88-6969-722-7.

D'Ortenzio, S. et al. (2020). "A Syntactically Based Treatment of Relative Clauses". Torrens, V. (ed.), *Typical and Impaired Processing in Morphosyntax*. Amsterdam: John Benjamins Publishing Company, 64, 177-207. https://doi.org/10.1075/lald.64.09dor.

D'Ortenzio, S.; Volpato, F. (2020). "How Do Italian-Speaking Children Handle Wh-Questions? A Comparison between Children with Hearing Loss and Children with Normal Hearing". *Clinical Linguistics & Phonetics*, 34(4), 407-29. https://doi.org/10.1080/02699206.2019.1677779.

Dunn, L.M.; Dunn, L.M. (2000). *PEABODY - Test di Vocabolario Recettivo*. Transl. by G. Stella; C. Pizzioli; P.E. Tressoldi. Torino: Omega Edizioni. Transl. of *Peabody Picture Vocabulary Test-Revised*. Circle Pines, MN: American guidance service, Incorporated.

Ebbels, S.H. (2014). "Effectiveness of Intervention for Grammar in School-Aged Children with Primary Language Impairments: A Review of the Evidence". *Child Language Teaching and Therapy*, 30, 7-40. https://doi.org/10.1177/0265659013512321.

Goodban, M.T. (1993). "Survey of speech and language skills with prognostic indicators in 116 patients with Cornelia de Lange syndrome". *American Journal of Medical Genetics*, 47(7), 1059-1063. https://doi.org/10.1002/ajmg.1320470725.

Grillo, N. (2008). *Generalized Minimality: Syntactic Underspecification in Broca's Aphasia*. Amsterdam: LOT Nederlands Graduate School of Linguistics.

Guasti, M.T.; Branchini, C.; Vernice, M.; Barbieri, L.; Arosio, F. (2015). "Language Disorders in Children with Developmental Dyslexia". Stavrakaki, S. (ed.), *Specific Language Impairment. Current Trends in Research*. Amsterdam: John Benjamins Publishing, 35-55. https://doi.org/10.1075/lald.58.02gua.

Guasti, M.T.; Branchini, C.; Arosio, F. (2012). "Interference in the Production of Italian Subject and Object Wh-Questions". *Applied Psycholinguistics*, 33(1), 185-223. https://doi.org/10.1017/s0142716411000324.

JASP Team. (2024). JASP (Version 0.19.3) [Computer software]. https://jasp-stats.org/.

Kaplan, E.; Goodglass, H.; Weintraub, S. (2001). *Boston naming test*. Philadelphia: Lea & Febiger.

Kline, A.D. et al. (2007). "Cornelia de Lange Syndrome: Clinical Review, Diagnostic and Scoring Systems, and Anticipatory Guidance". *American Journal of Medical Genetics Part A*, 143A(12), 1287-1296. https://doi.org/10.1002/ajmg.a.31757.

Kline, A.D. et al. (2019). "Diagnosis and management of Cornelia de Lange syndrome: first international consensus statement". *Nature Reviews Genetics*, 19(10), 649-66. https://doi.org/10.1038/s41576-018-0031-0.

Koizumi, M.; Saito, Y.; Kojima, M. (2019). "Syntactic Development in Children With Intellectual Disabilities-Using Structured Assessment of Syntax". *Journal of Intellectual Disability Research*, 63(12), 1428-1440. https://doi.org/10.1111/jir.12684.

Levy, H.; Friedmann, N. (2009). "Treatment of Syntactic Movement in Syntactic SLI: A Case Study". *First Language*, 29(1), 15-49. https://doi.org/10.1177/0142723708097815.

Lupo, F.; Campanella, L. (2023). *Insegnare strutture linguistiche complesse dell'italiano nella scuola primaria: un approccio metalinguistico* [Master's Thesis]. Venezia: Ca' Foscari University.

Marini, A.; Marotta, L.; Bulgheroni, S.; Fabbro, F. (2015). *BVL 4–12: Batteria per La Valutazione Del Linguaggio in Bambini Dai 4 Ai 12 Anni*. Florence: Giunti OS.

Posit Team (2024). RStudio: Integrated Development Environment for R (Version 2024.04.2) [Computer software]. Posit Software, PBC. https://posit.co/.

R Core Team (2024). R: A Language and Environment for Statistical Computing [Computer software]. R Foundation for Statistical Computing. https://www.R-project.org/.

Rizzi, L. (1990). *Relativized minimality*. Cambridge, MA: MIT Press.

Stadie, N. et al. (2008). "Unambiguous Generalization Effects after Treatment of Non-Canonical Sentence Production in German Agrammatism". *Brain and Language*, 104(3), 211-29. https://doi.org/10.1016/j.bandl.2007.08.006.

Thompson, C.K.; Shapiro, L.P.; Kiran, S.; Sobecks, J. (2003). "The Role of Syntactic Complexity in Treatment of Sentence Deficits in Agrammatic Aphasia: The Complexity Account of Treatment Efficacy (CATE)". *Journal of Speech, Language, and Hearing Research*, 46(3), 591-607. https://doi.org/10.1044/1092-4388(2003/047).

Thompson, C.K.; Ballard, K.J.; Shapiro, L.P. (1998). "The Role of Syntactic Complexity in Training Wh-Movement Structures in Agrammatic Aphasia: Optimal Order for Promoting Generalization". *Journal of the International Neuropsychological Society*, 4(6), 661-74. https://doi.org/10.1017/s1355617798466141.

Thompson, C.K.; Shapiro, L.P. (2005). "Treating Agrammatic Aphasia within a Linguistic Framework: Treatment of Underlying Forms". *Aphasiology*, 19(10-11), 1021-36. https://doi.org/10.1080/02687030544000227.

Utzeri, I. (2007). "The Production and Acquisition of Subject and Object Relative Clauses in Italian". *Nanzan Linguistics Special Issue*, 3, 283-314.

Vizziello, P. et al. (2010). "Receptive Language and Intellectual Disability in CDLS. Importance of Instruments of Evaluation in a Cohort of 10 Patients". *XIII SSBP Annual Scientific Meeting* (Pavia, 23rd-25th October 2010), *Journal of Intellectual Disability Research*, 54(10), 885-93. https://doi.org/10.1111/j.1365–2788.2010.01329.x.

Volpato, F. (2010). *The Acquisition of Relative Clauses and Phi Features in Hearing and Hearing-Impaired Populations* [PhD Dissertation]. Venice: Ca' Foscari University.

Volpato, F. (2012). "The Comprehension of Relative Clauses by Hearing and Hearing-Impaired, Cochlear-Implanted Children: The Role of Marked Number Features". Ferré, S. et al. (eds), *Selected Proceedings of the Romance Turn IV Workshop on the Acquisition of Romance Languages* (Tours, 25-27 August 2010). Newcastle upon Tyne: Cambridge Scholars Publishing, 284-308.

Volpato, F. (2019). *Relative Clauses, Phi Features, and Memory Skills. Evidence from Populations with Normal Hearing and Hearing Impairment*. Venice: Edizioni Ca' Foscari.

Volpato, F.; Adani, F. (2009). "The Subject/Object Relative Clause Asymmetry in Italian Hearing-Impaired Children: Evidence from a Comprehension Task". Moscati, V.; Servidio, E. (eds), *Proceedings XXXV Incontro di Grammatica Generativa* (Siena, 26-28 febbraio 2009). STiL – Studies in Linguistics, 3, 269-81.

Volpato, F.; Bozzolan, G. (2017). "Explicit Teaching of Syntactic Movement in Passive Sentences and Relative Clauses: The Case of a Romanian/Italian Sequential Bilingual Child". *Annali di Ca' Foscari. Serie Occidentale*, 51, 357-81. http://doi.org/10.14277/2499–1562/AnnOc–51–17–18.

Volpato, F.; De Nichilo, A. (2020). "Multimodalità e multimedialità in un intervento didattico sull'italiano L2 a scuola. Il caso di uno studente bengalese". Voghera, M.; Maturi, P.; Rossi, F. (eds), *XX Convegno Nazionale GISCEL 2018. Orale e scritto, verbale e non verbale. La multimodalità nell'ora di lezione* (Salerno, 12th-14th April 2014). Florence: Franco Cesati Editore, 69-84.

Volpato, F.; Vernice, M. (2014). "The Production of Relative Clauses by Italian Hearing and Hearing-Impaired Children". *Lingua,* 139, 39-67. https://doi.org/10.1016/j.lingua.2013.10.010.

Wechsler, D. (2012). *WISC–IV: Wechsler Intelligence Scale for Children – Quarta Edizione.* Transl. by A. Orsini; L. Pezzuti; L. Picone. Florence: Giunti Psychometrics. Transl. of *WISC–IV: Wechsler Intelligence Scale for Children – Fourth Edition*. London: Pearson.

**Language Optionality and Variation**
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# Language Acquisition in Hearing L2 Learners of LIS: Adapting to a Different Modality

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**Abstract** The study examines the acquisition of LIS as a second language by adult hearing beginner students providing a qualitative analysis of the errors detected in the production of phonological parameters. LIS learners' errors pattern with those described in the literature for M2L2 learners of other sign languages, showing a hierarchy of difficulty with handshape being the most difficult and location the easiest parameter to master. Results are discussed against the major SSLA theoretical models.

**Keywords** Italian sign language. Phonology. Sign Second Language Acquisition. M2L2 learners. Visual-manual modality.

**Summary** 1 Introduction. – 2 The Acquisition of Sign Language Phonology across Different Populations of Signers. – 3 The Present Study. – 4 Results. – 5 Discussion. – 6 Conclusions.

## 1 Introduction

The paper presents an exploratory study on the acquisition of Italian Sign Language (LIS) as a second language (L2) by adult hearing first-year BA students, with no prior knowledge of LIS or other sign languages (SLs), in order to provide a preliminary qualitative analysis of the errors detected within the phonological domain.

Although in the shape of a preliminary research work, this is, to our knowledge, the first study investigating the acquisition of LIS as

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L2. Research on Sign Second Language Acquisition (SSLA) has been growing only recently, as a response to the increasing interest in learning SLs manifested by hearing and deaf students (see Schönström, Marshall 2022 for a recent overview). SSLA is particularly interesting to study from both a linguistic and pedagogical perspective: linguistically, it offers the opportunity to examine how L2 learners adapt to the visual-manual modality (M2) by reorganising their use of body, space, and facial expressions to convey linguistic meaning (Ortega, Morgan 2015; a.o.); pedagogically, it allows to identify M2L2 students' learning difficulties, thus supporting the development of proper teaching strategies.

The paper is organised as follows: § 2.1 provides a concise overview of the development of the phonological domain during SL acquisition by deaf L1 children, which constitutes a baseline for comparing L2 acquisition of hearing signers, addressed in § 2.2 along with the theoretical models advanced in the literature to account for the errors observed in this population. § 3 outlines the goals and the methodological details of the study. § 4 presents the results, while § 5 offers a discussion of the data. § 6 draws the conclusions.

## 2 The Acquisition of Sign Language Phonology across Different Populations of Signers

The literature on the acquisition of SL phonology shows that the articulation of signs necessitates fine motor skills (Sandler 1989) and a precise ability to mentally rotate the sign produced by the interlocutor in order to interpret and reproduce it correctly from the signer's point of view (Emmorey 2002). These factors matter in both L1 and L2 sign language acquisition of the phonological domain, although to a different extent, as we shall address in what follows.

### 2.1 The Development of the Phonological Domain in L1 Deaf Signers

The few studies on the L1 acquisition of the phonological domain argue that the location parameter is the first to be mastered because it does not involve the articulatory-motor complexity characterizing handshape and movement (see for ASL: Bonvillian, Siedlecki 1996; Conlin et al. 2000; for BSL: Morgan, Barrett-Jones, Stoneham 2007).

Movement represents the second parameter to be acquired. Researchers find that L1 signers first produce path movements and then hand-internal movements (see for ASL: Marentette, Mayberry 2000; for BSL: Morgan, Barrett-Jones, Stoneham 2007) and replace wrist and finger movements with movements more proximal to the trunk (see for ASL: Marentette, Mayberry 2000; a.o.).

Due to its complexity, handshape is the last parameter to be acquired, and the one recording the highest number of errors during early productions in L1 signers (see for ASL: Boyes-Braem 1990; Bonvillian, Siedlecki 1996; Conlin et al. 2000; a.o.). Boyes-Braem (1990) formalises handshape acquisition based on anatomical development and on a peculiar phenomenon called serial finger order, according to which handshapes involving adjacent finger positions are acquired earlier because they are simpler to produce. Conversely, handshapes requiring independent finger isolation are more complex and, therefore, acquired later. Boyes-Braem (1990) identifies four developmental stages: the first involves motorically simple handshapes (the unmarked handshapes), which are similar to children's everyday spontaneous gestures (e.g., pointing or grasping); in the second stage, variants of previously produced handshapes begin to appear (e.g., finger spreading or bending); the third and fourth stages mark the emergence of more complex handshapes (the marked handshapes) that require finer motor control (e.g., the inhibition of movement in certain fingers or the coordination of non-adjacent fingers). The study shows that children tend to simplify more complex handshapes by replacing them with the ones acquired at the same stage or at an immediately preceding one.

The existing literature does not report observations regarding children's errors in the orientation parameter, except for the preference to produce palm orientation towards themselves rather than towards the neutral space (see for ASL: Siedlecki, Bonvillian 1993).

With respect to the acquisition of NMMs, children produce affective NMMs during their first year, then they begin to master grammatical NMMs (see for ASL: Reilly, McIntire, Bellugi 1990, a.o.; for LIS: Pizzuto 2002). The later acquisition of grammatical NMMs might result from the children's difficulty in identifying facial and body expressions as linguistic aspects and in articulating them simultaneously with the manual components of signs.

## 2.2 The Development of the Phonological Domain in L2 Hearing Signers

The literature on SSLA is quite scarce if compared to L1 acquisitional studies, however, interesting parallels with respect to the order of acquisition of the phonological parameters emerge. Location seems to be the parameter that is most accurately mastered and reproduced, as detected by Jissink (2005), Ortega, Morgan (2015) and Bochner et al. (2011) across M2L2 signers of Sign Language of the Netherlands (NGT), British Sign Language (BSL) and ASL, respectively. These studies also show that the movement parameter is more difficult to master than location, but easier than handshape. Moreover, Mirus,

Rathmann, Meier (2001) show that, when asked to reproduce isolated unfamiliar signs, ASL M2L2 adult signers frequently articulate the proximalisation of movements by replacing the sign canonical movement with one closer to the torso. They also show that handshape is particularly difficult to master for M2L2 learners, especially when producing iconic rather than arbitrary signs through repetition tasks (see Ortega 2013 for BSL; Chen Pichler 2009; 2011 for ASL).

As for orientation, the studies provide mixed results placing it between the acquisition of location and movement or handshape.

Finally, with respect to NMMs, Mesch, Schönström (2021) administer a retelling task to L2 learners of Swedish Sign Language (STS) and observe a high frequency of mouthings in the students' productions.

A further study worth mentioning is Rosen (2004). Rather than discussing the order of acquisition of the phonological parameters, he provides a detailed description of ASL M2L2 learners' errors collected through a longitudinal study. He detects errors based on motor dexterity (i.e., the ability to control the coordination of hands and movements, the alignment of fingers and facial expressions to correctly produce signs), and errors based on perception (i.e., the visual processing and attention to phonological features of the input signs produced by someone else, e.g., the teacher). The types of errors observed are illustrated in Table 1.

**Table 1** Rosen's (2004) errors typologies for each parameter

| | **Dexterity** | **Perception** |
|---|---|---|
| **Handshape** | Incomplete formation<br>Substitutions<br>Displacements<br>Switches | / |
| **Location** | Wrong placement of the point of contact between fingers or hands | Mirrorisations[1]<br>Addition or deletion in compound signs |
| **Movement** | Incomplete movement<br>Switches<br>Displacements | Mirrorisations |
| **Orientation** | Switches | Parallelisations |
| **NMMs** | Substitution | Absence |

**1** Mirrorisation recalls the 'mirror effect', that refers to the learner's incapacity of producing the sign in a reversed fashion from the teacher input, thus copying the teacher (Rosen 2004).

In order to explain the patterns detected across M2L2 learners, researchers working in the framework of SSLA have advanced different theoretical proposals, which can be grouped into three categories depending on the factors considered relevant. We shall briefly address each in turn.

In the first category, we find the transfer model (or Cross-linguistic influence, CLI model), which, in the spoken SLA literature, refers to the phenomenon whereby learners adopt the strategies of their L1 during L2 acquisition (Odlin 1989). In the context of SLs, this model is advocated by Chen Pichler (2009; 2011) and Ortega (2013), who account for the lower accuracy detected in the production of iconic signs by assuming that M2L2 learners transfer the use of the gestures related to their L1 spoken language culture into the L2 SL. The use of gestures from spoken languages constitutes an example of negative transfer, since L1 features negatively interfere with the correct production of L2 SL structures. The transfer hypothesis is also adopted by Mesch, Schönström (2021) in their analysis of the errors observed in L2 STS learners, as the use of mouthings during STS productions is likely to be the result of transfer from the students' L1, Swedish, into their L2, STS.

With respect to the second category, we mention the Universal Grammar (UG) model, adopted by both Jissink (2005) and Mirus, Rathmann, Meier (2001) to account for the M2L2 order of acquisition of the phonological parameters and for the preference for proximal movements matching the data reported in the literature on L1 sign language acquisition in NGT and ASL respectively (§ 2.1).

The third category includes proposals building on the role played by modality specific features of SLs. Bochner et al. (2011) and Ortega, Morgan (2015) attribute the phonological difficulties faced by beginners to the perception and intrinsic complexity of sign structures, rather than to issues connected to transfer or UG. Along similar lines, Rosen (2004) argues that transfer models do not allow to capture L2 acquisitional patterns and errors because the phonological differences between the L1 spoken language and the L2 SL may make it difficult for L2 sign language learners to rely on their spoken L1. Although ASL M2L2 acquisitional patterns are in line with those exhibited by ASL L1 signers, he argues that the errors of M2L2 signers cannot be compared to that of L1 children, as the latter stem from the ongoing anatomical development, an explanation inapplicable to adult learners. To capture the observed errors (lack of accuracy in sign perception and poor motor articulation in sign production) in a unified model, Rosen (2004) proposes the Cognitive Phonology Model (CPM), according to which M2L2 learners exploit cognitive strategies, such as control of the alignment and coordination of the hands, to learn, remember and articulate signs. Both sign perception accuracy and dexterity in sign articulation are

costly cognitive processes which may lead to errors across novice learners, who may lack the cognitive readiness necessary for a full mastery of sign perception and articulation.

## 3 The Present Study

The present study aims at analysing the first four months of the acquisition of LIS by M2L2 novice learners in order to provide a preliminary description of production errors (if any) in the domain of phonology. We developed a qualitative investigation to address the following research questions: i) is the process of learning LIS as L2 characterised by phonological errors in production? ii) Are the phonological error types identified similar to those detected for L2 learners of other SLs?[2] iii) Do errors provide evidence for the models of transfer and UG, or are they better captured through cognitive models such as the CPM (Rosen 2004)?

### 3.1 Participants

The paper draws on the data collected by one author for the purposes of her master's degree thesis (Digiorgio 2024). The study involved 62 (5 men, 57 women) L1 Italian students of LIS as L2 aged 18-21, attending the first-year of a BA course during the a.y. 2023/2024. Before taking part in the study, participants gave their written informed consent to be recorded during classes and to appear in papers or conference presentations for data illustration purposes. A short questionnaire was used to collect information about their knowledge of SL and contact with the deaf community. Participants were selected based on their lack of knowledge of LIS or other SLs prior to university enrollment.

### 3.2 Methodology

#### 3.2.1 Data Collection

Data were collected during the first year of LIS language practices, taught by a deaf native LIS lecturer. LIS language practice classes are organised as annual courses divided into two semesters. In order

**2** Recall that the phonological inventories of SLs can differ from one language to another (Brentari 1998). We will approach the cross-linguistic comparisons proposed in our work with caution.

to focus on the initial phase of LIS learning, we chose to observe only the first semester, whose program is focused on fingerspelling exercises and production of simple dialogues. Consequently, the types of errors we report reflect this initial phase and concern the production of fingerspelling and a limited set of lexical signs, given the simplicity of the sentences produced. Students were observed by one of the authors during production exercises proposed by the teacher, no specific test was administered to elicit the data. Students' linguistic interactions (among them or with the teacher) were also recorded to allow for a more detailed subsequent analysis. We used two digital video cameras placed in the classroom: one capturing a general view of the students during the lesson, and the other one positioned on the teacher's desk in front of the students in order to record them when they were invited by the teacher to stand up and get closer to the teacher's desk for linguistic productions. Students were observed once a week between September and December 2023, for a total of 21 hours of lesson recordings.

### 3.2.2 Analyses

The researcher attending LIS classes wrote down the fingerspelled sequences and lexical signs exhibiting phonological deviations from the target production. Successively, SL dictionaries such as Spreadthesign[3] were used to check whether the detected recorded deviations actually differed from the correct articulation of LIS fingerspelling and from the signs' citation forms, and, if so, they were annotated in an Excel spreadsheet as errors pertaining to the different parameters. An in-depth qualitative analysis allowed to categorise the 116 tokens (24 fingerspelling and 92 lexical signs) into distinct error typologies for each phonological parameter. Finally, the collected data were processed to calculate the frequency of occurrence for both the affected parameters and the identified error types.

## 4 Results

Overall, the annotated data show that errors of substitution, reversion and internal assimilation are found for the following phonological parameters: handshape, movement, orientation and NMMs. No errors occur in the parameter of location. Interestingly, the same types of error substitution and reversion are detected for both fingerspelling and lexical signs, thus they are discussed together. The analysis

**3** https://www.spreadthesign.com/.

delineates a hierarchy of difficulty, with handshape emerging as the most difficult parameter, followed by movement, orientation, and finally NMMs. In Table 2 below, we summarise errors' frequency and distribution across the detected typologies pertaining to each parameter.

**Table 2** Percentage of errors distribution and frequency

| **Handshape** | | **Movement** | | **Orientation** | | **NMMs** | **Others**[4] |
|---|---|---|---|---|---|---|---|
| Handshape substitution | Handshape internal assimilation | Reversed movement | Movement internal assimilation | Reversed orientation | Orientation substitution | NMMs absence | |
| 57.7% | 2.5% | 14.6% | 3.4% | 10.3% | 5.1% | 3.4% | |
| Total: 60.3% | | Total: 18.1% | | Total: 15.5% | | Total: 3.4% | Total: 1.7% |

In the remainder of this section, we address each phonological parameter in turn by describing the typologies of errors detected in students' productions, along with the percentages of errors' occurrence and distribution. Descriptions are supported by figures. The canonical forms of LIS signs are illustrated through examples taken from Spreadthesign, in which the signer is the LIS teacher who taught the first-level LIS course we considered. Pictures illustrating students' errors are real screenshots from our recordings.[5] For the correct interpretation of the results, it should be noted that all students are right-handed.

## 4.1 Handshape

Our analysis reveals that handshape records the highest percentage of errors (60.3%), distributed between handshape substitution (57.7%) and handshape internal assimilation (2.5%).

i. Handshape substitution. In one-handed signs, some students replaced , , ,  and  with  or . This is illustrated

**4** This category includes only two items pertaining to the following error types: addition of non-dominant hand in one-handed sign and body contact (where no contact was required).

**5** In a few cases (e.g., fig. 4), for privacy reasons figures do not feature original student footage but rather represent reconstructions of the original data.

through the LIS sign TO _ BE _ FAMILIAR _ WITH,[6] standardly produced with  **[fig. 1]**, realised instead with  **[fig. 2]**.



**Figure 1** TO_BE_FAMILIAR_WITH



**Figure 2** Students' production of TO_BE_FAMILIAR_WITH

Other instances concern the substitution of , with , as in the sign SURNAME **[fig. 3]** modified as in Figure 4.



**Figure 3** SURNAME

**6** In this paper, the glosses for signs are given in small capitals following standard SL transcription conventions.



**Figure 4** Students' production of SURNAME

We also observe the substitution of  and  with , as in the sign TO _ BE _ BORN, provided in Figure 5 and Figure 6, respectively.



**Figure 5** TO_BE_BORN



**Figure 6** Students' production of TO_BE_BORN

This type of error is also attested in two-handed asymmetrical signs, where students replaced the handshape of the non-dominant hand with a different one, usually . For example, the asymmetrical sign BILL, which selects  for both hands in its citation form **[fig. 7]**, was articulated with  in the non-dominant hand **[fig. 8]**.



**Figure 7** BILL



**Figure 8** Students' production of BILL

The data show the occurrence of handshape substitution within fingerspelling as well. For instance, some students substitute E  with A .

ii. Handshape internal assimilation. Some students in our corpus applied this phonological process to the two-handed asymmetrical sign for the number SIX, which, in its canonical form, is produced with  on the non-dominant hand and  on the dominant hand **[fig. 9]**. In the students' production, the handshape of the non-dominant hand mirrors the handshape of the dominant hand **[fig. 10]**.



**Figure 9** SIX



**Figure 10** Students' production of SIX

No errors of this type are identified in fingerspelling.

## 4.2 Movement

In our data, movement follows handshape in the hierarchy of difficulty, with 18.1% of error occurrence. Movement error types can be grouped into reversed movement (14.6%) and movement internal assimilation (3.4%).

i. Reversed movement: this error is observed for the sign VENICE, a two-handed symmetrical sign produced with a forward circular movement **[fig. 11]**. Students produced the sign with an inward circular movement, thus reversing the movement articulation **[fig. 12]**.



**Figure 11** VENICE



**Figure 12** Students' production of VENICE

The same error of reversing the movement articulation is observed for signs and fingerspelling displaying a sideward path movement. For instance, the one-handed sign NAME **[fig. 13]** and S-S **[fig. 15]**, both displaying an ipsilateral movement, were produced with a movement towards the opposite direction, the contralateral side **[fig. 14; fig. 16]**.

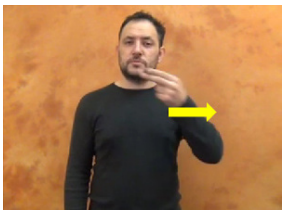


**Figure 13** NAME



**Figure 14** Students' production of NAME

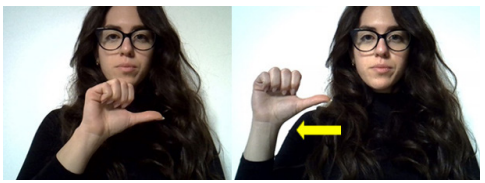


**Figure 15** S-S



**Figure 16** Students' production of S-S

ii. Movement internal assimilation: when producing asymmetrical two-handed signs, some students copied the movement of the dominant hand on the non-dominant hand, thus producing a wrong version of the target sign. This is the case of the sign SEVEN _ HUNDRED **[fig. 17]**, whose citation form consists of  on the dominant hand, also displaying fingers bending, and  on the non-dominant hand. As a result of the assimilation of the dominant hand internal movement, students produced bending of the fingers on the non-dominant hand as well **[fig. 18]**.



**Figure 17** SEVEN_HUNDRED



**Figure 18** Students' production of SEVEN_HUNDRED

No errors of this type are identified in fingerspelling.

## 4.3 Orientation

As for palm orientation, errors occur in 15.5% of the instances, either as reversed orientation (10.3%) or orientation substitution (5.1%).

i. Reversed orientation: this error is observed with some signs whose palm is oriented toward the signer in their citation form. Students tend to change the palm orientation by facing it outwards. An example is the one-handed sign NOVEMBER **[fig. 19]** represented in the modified version in Figure 20.



**Figure 19** NOVEMBER

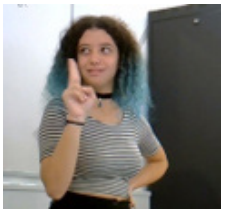


**Figure 20** Students' production of NOVEMBER

The data show the same error type in some students' fingerspelling production. For instance, some students produced Y  with the palm facing inward, i.e., toward the signer **[fig. 21]**, rather than outward.



**Figure 21** Students' production of Y

ii. Orientation substitution: it refers to the students' tendency of replacing the sign orientation with a wrong one. Some students failed in articulating the sign YOU **[fig. 22]**, a one-handed sign produced in the neutral space with  and the palm facing the contralateral side. The modified version was produced by some students with the palm facing downwards **[fig. 23]**.



**Figure 22** YOU

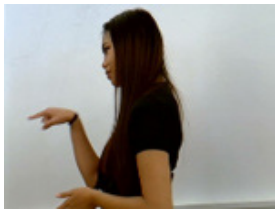


**Figure 23** Students' production of YOU

The same error is detected in the production of the fingerspelled B . Some students substituted the target contralateral palm orientation with the palm facing outward **[fig. 24]**.

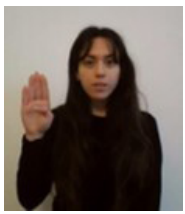


**Figure 24** Students' production of B

## 4.4 NMMs

A low percentage of error occurrences characterise NMMs (3.4%).[7] We find only one error type: LIS first-year students tend to omit phonological NMMs, specifically we observe the omission of mouth gestures (lexically specified in the phonological structure of some

**7** We will treat the low error percentage in NMMs with caution, as it may be due to the limited number of signs with phonological NMMs produced by students during classes, rather than to a lower level of difficulty with this parameter.

signs and thus compulsory in LIS (Ajello, Mazzoni, Nicolai 2001)). We provide an illustrative example of the sign SOFT, obligatorily produced in LIS with protruded lips, puffed cheeks and lowered eyebrows **[fig. 25]**, which are absent in the student's production **[fig. 26]**.



**Figure 25** SOFT



**Figure 26** Students' production of SOFT

## 5 Discussion

With this study, we aimed at investigating whether novice LIS M2L2 learners' productions are characterised by the same phonological errors attested in the literature on M2L2 learners of other SLs, and providing a qualitative analysis of the detected errors. A further goal was to try to account for the data by identifying which SSLA model best captures our results.

As outlined in § 4, we observe errors in all phonological parameters except for location. Specifically, the data show that handshape is the most difficult parameter to master with an error occurrence of 60.3%, followed by movement (18.1%), orientation (15.5%) and NMMs (3.4%). The results are consistent with other studies on M2L2 learners (Mirus, Rathmann, Meier 2001; Jissink 2005; Ortega, Morgan 2015; Bochner et al. 2011). Several types of phonological errors have been detected in the students' productions: substitution, reversion and internal assimilation. In what follows, we discuss the phonological errors detected in both lexical signs and fingerspelling against the SSLA models illustrated in § 2.2, noting that some errors support the

transfer model, others align with the UG model, and yet others are better accounted for by Rosen's (2004) CPM.

The transfer model seems to capture orientation substitutions in lexical signs involving the substitution of the target orientation with a wrong one. Specifically, the orientation error in the sign YOU (produced by some students with the palm facing downwards) recalls the findings by Ortega (2013) and Chen Pichler (2009; 2011) regarding iconic signs (§ 2.2), as the downward orientation is characteristic of the Italian gesture for the second singular person, thus we analysed it as a negative transfer.

The UG model seems to explain the lack of errors in the location parameter (the first to be acquired by deaf children exposed to SL from birth) and the great difficulty with handshape (the last parameter acquired by L1 signers, § 2.1) in producing both lexical signs and fingerspelling. Moreover, the tendency to substitute the target handshape with an easier one in both lexical signs and fingerspelling, such as the substitution of marked handshapes (, , , , ,  and ) with unmarked ones (,  or ), the substitution of handshapes like , , ,  with  and the substitution of  with  recalls the acquisitional pattern according to which children acquiring a SL as L1 tend to replace target handshapes with the ones belonging to the same stage of acquisition or an immediately preceding one (§ 2.1). Similarly, the tendency of LIS M2L2 learners to initially omit the required phonological NMMs is in line with the first productions of L1 signers (§ 2.1). These data seem to suggest that L2 learning appears to be supported by the same Universal Grammar that is active during L1 acquisition.

Nevertheless, we agree with Rosen's (2004) claim that while L1 phonological errors may be explained in terms of an immature motor system, the errors detected across M2L2 LIS learners seem to be rather due to difficulties in employing the body for linguistic purposes, such as learning how to correctly select fingers, arrange hands and coordinate movements to produce signs. In other words, despite showing some of the universal trends of L1 acquisition, our data also seem to support the dexterity and perception predictions advanced by Rosen (2004) in his CPM, especially when considering instances of orientation substitution in fingerspelling, handshape internal assimilation and movement internal assimilation in lexical

signs.[8] Furthermore, errors such as reversed movement and reversed orientation in both lexical signs and fingerspelling seem to correspond to those called by Rosen as movement mirrorisation and parallelisation of palm orientation. Specifically, movement mirrorisation in ASL learners is attributed to the fact that students reproduce the teacher's signs using a mirror effect (§ 2.2). In our study, however, the teacher is left-handed, while the students are right-handed. If the same mirror effect was present in our LIS students, we would have expected a faithful reproduction of the signs, yielding no reversed movement errors. Thus, regardless of the presence or absence of the mirror effect, learners may struggle to mentally rotate the sign produced by the teacher in front of them, and may opt for reproducing the sign from the teacher's perspective, rather than from their own, due to the cognitive cost required to correctly perceive and reproduce the sign.

From a crosslinguistic perspective, the typologies and frequencies of errors detected in this study replicate the patterns described for other SLs, suggesting that they may characterise the process of sign language acquisition in M2L2 students in general. Further in-depth research into the acquisition of SLs as L2 is needed in order to confirm these preliminary observations.

## 6 Conclusions

In this paper, we present a first exploratory study on the acquisition of LIS as M2L2 by first-level students. Although preliminary, the collected data has allowed us to contribute to the existing literature on SSLA at both the empirical and theoretical level.

At the empirical level, we provide a description of the error types detected for each phonological parameter (except for location) emerging during LIS M2L2 learners' productions, namely: substitution, reversion and internal assimilation. Errors' frequency shows that handshape is the most difficult parameter to master, while location is the most accurate. Interestingly, these results replicate the patterns attested in the literature for other SLs. At the theoretical level, we propose that in the context of M2L2 LIS acquisition, the transfer and UG models equally contribute to account for the observed error types. However, other factors strictly related to the process of learning a language in a new modality, such as fine motor skills involved in hand coordination and body movement, visual attention to phonological features, and mental rotation abilities, also

**8** Since LIS fingerspelling is a one-handed system (Meir 2012), our data do not show handshape or movement internal assimilation within fingerspelling.

seem to have a crucial impact on LIS L2 acquisition, thus aligning with Rosen's (2004) CPM. We conclude that our data provide evidence that learners' error types cannot be accounted for by a single model, but rather call for an integration of the three theoretical approaches proposed in the SSLA literature.

Future research is needed to deepen our understanding of the stages and error types involved in SLA in a different modality, potentially comparing M1L2 deaf learners with M2L2 ones. Research in the field of L2 sign language acquisition is crucial not only to foster theoretical knowledge, but also to feed educational programs for SL teachers.

## Bibliography

Ajello, R.; Mazzoni, L.; Nicolai, F. (2001). "Linguistic Gestures: Mouthing in Italian Sign Language (LIS)". Boyes-Braem, P.; Sutton-Spence, R. (eds), *The Hands are the Head of the Mouth. The Mouth as Articulator in Sign Languages*. Ful da: Signu-Verlag, 231-46.

Bochner, J.H.; Christie, K.; Hauser, P.C.; Searls, J.M. (2011). "When is a Difference Really Different? Learners' Discrimination of linguistic contrasts in American Sign Language". *Language Learning*, 61(4), 1302-27. https://doi.org/10.1111/j.1467-9922.2011.00671.x.

Bonvillian, J.D.; I. Siedlecki (1996). "Young Children's Acquisition of the Location Aspect of American Sign Language Signs: Parental report findings". *Journal of Communicative Disorders*, 29, 13-35. https://doi.org/10.1016/0021-9924(94)00015-8.

Boyes-Braem, P. (1990). "Acquisition of the Handshape in American Sign Language". Volterra, V.; Erting, J. (eds), *From Gesture to Sign Language in Hearing and Deaf Children*, 107-27. New York: Springer-Verlag. https://doi.org/10.1007/978-3-642-74859-2_10.

Brentari, D. (1998). "A Prosodic Model of Sign Language Phonology". Cambridge, MA: *The MIT Press*. https://doi.org/10.7551/mitpress/5644.003.0006.

Digiorgio, E. (2024). *L'apprendimento della lingua dei segni italiana (LIS) come L2 in studenti adulti principianti di livello A1: analisi del processo di apprendimento e degli errori fonologico-lessicali* [MA Dissertation]. Venezia: Ca' Foscari University.

Conlin, K.; Mirus, G.R.; Mauk C.; Meier R.P. (2000). "Acquisition of First Signs: Place, Handshape, and Movement". Chamberlain, C.; Morford, J.P.; Mayberry, R.I. (eds), *Language Acquisition by Eye*, 51-70. Mahwah, NJ: Lawrence Erlbaum Associates. https://doi.org/10.4324/9781410601766.

Chen Pichler, D. (2009). "Sign Production by First-Time Hearing Signers: A Closer Look at Handshape Accuracy". *Cadernos de Saúde* [Special volume on sign languages], 2, 37-50.

Chen Pichler, D. (2011). "Sources of Handshape Error in First-Time Signers of ASL". Mathur, G.; Napoli, D.J. (eds), *Deaf around the World: The Impact of Language*, 96-121. Oxford: Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199732548.003.0005.

Emmorey, K. (2002). "The Effects of Modality on Spatial Language: How Signers and Speakers Talk about Space". Meier, R.P.; Cormier, K.; Quinto-Pozos, D. (eds), *Modality*

*and Structure in Signed and Spoken Languages*, 405-21. Cambridge: Cambridge University Press. https://doi.org/10.1017/cbo9780511486777.019.

Jissink, T. (2005). *How Do You Drive Your Car? Phonological Acquisition Order for Hearing Adult Learners of Sign Language of the Netherlands* [MA Dissertation]. Amsterdam: University of Amsterdam.

Marentette, P.; Mayberry, R.I. (2000). "Principles for an Emerging Phonological System: A Case Study of Early American Sign Language Acquisition". Chamberlain, C.; Morford, J.P.; Mayberry, R.I. (eds), *Language Acquisition by Eye*, 71-90. Mahwah, NJ: Lawrence Erlbaum Associates. https://doi.org/10.4324/9781410601766.

Meir, I. (2012). "Word Classes and Word Formation". Pfau, R.; Steinbach, M.; Woll, B. (eds), *Sign language-An International Handbook*, 77-112. Berlin: De Gruyter Mouton. https://doi.org/10.1515/9783110261325.77.

Mesch, J.; Schönström, K. (2021). "Use and Acquisition of Mouth Actions in L2 Sign Language Learners: A Corpus-Based Approach". *Sign Language and Linguistics*, 24, 36-62. https://doi.org/10.1075/sll.19003.mes.

Mirus, G.; Rathmann, C.; Meier, R. (2001). "Proximalization and Distalization of Sign Movement in Adult Learners". Dively, V.; Metzger, M.; Taub, S.; Baer, A.M. (eds), *Signed Languages: Discoveries from International Research*, 103-19. Washington, D.C.: Gallaudet University Press. https://doi.org/10.2307/j.ctv2rh296t.10.

Morgan, G.; Barrett-Jones, S.; Stoneham, H. (2007). "The First Signs of Language: Phonological Development in British Sign Language". *Applied Psycholinguistics* (28), 3-22. https://doi.org/10.1017/s0142716407070014.

Odlin, T. (1989). "Language Transfer: Cross-Linguistic Influence in Language Learning". *Cambridge University Press*. https://doi.org/10.1017/CBO9781139524537.

Ortega, G. (2013). *Acquisition of a Signed Phonological System by Hearing Adults: The Role of Sign Structure and Iconicity* [PhD Dissertation]. London: University College London.

Ortega, G.; Morgan, G. (2015). "Phonological Development in Hearing Learners of a Sign Language: The Influence of Phonological Parameters, Sign Complexity, and Iconicity". *Language Learning*, 65(3), 660-88. https://doi.org/10.1111/lang.12123.

Pizzuto, E. (2002). "The Development of Italian Sign Language (LIS) in Deaf Preschoolers". Morgan, G.; Woll, B. (eds), *Directions in Sign Language Acquisition*, 159-82. Amsterdam; Philadelphia: John Benjamins. https://doi.org/10.1075/tilar.2.07piz.

Reilly, J.S.; McIntire, M.; Bellugi, U. (1990). "The Acquisition of Conditionals in American Sign Language: Grammaticized Facial Expressions". *Applied Psycholinguistics*, 11(4), 369-92. https://doi.org/10.1017/s0142716400009632.

Rosen, R. (2004). "Beginning L2 Production Errors in ASL Lexical Phonology". *Sign Language and Linguistics*, 7, 31-61. https://doi.org/10.1075/sll.7.1.04beg.

Sandler, W. (1989). "Phonological Representation of the Sign: Linearity and Nonlinearity in American Sign Language". *Dordrecht: Foris*. https://doi.org/10.1515/9783110250473.

Siedlecki, T.; Bonvillian, J.D. (1993). "Location, Handshape, and Movement: Young Children's Acquisition of Formational Properties of American Sign Language". *Sign Language Studies*, 78, 31-50. https://doi.org/10.1353/sls.1993.0016.

Schönström K.; Marshall C. (2022). "SLA Linking the Domains of Second Language Acquisition and Sign Language Acquisition". *Language, Interaction and Acquisition*, 13(2), 145-58. https://doi.org/10.1075/lia.00014.eng.

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# Variation in the Early Comprehension of Periphrastic Passive in Romance Languages

## A Comparative Analysis of Italian, Spanish and Catalan Children

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**Abstract** This study is motivated by cross-linguistic differences in the acquisition of periphrastic passive in Italian, Spanish, and Catalan. Maturational theories explain why children initially resort to the adjectival strategy instead of the verbal one. However, Italian data seem to diverge from those of languages such as Catalan and Spanish, suggesting competence with verbal passives as early as 4 years of age. These conflicting acquisitional data represent an opportunity to examine the specific linguistic features underlying these results. Particular attention is devoted to the role and properties of auxiliaries.

**Keywords** Language acquisition. Argumental movement. Verbal passive. Adjectival passive. Event structure.

**Summary** 1 Introduction. – 2 Cross-Linguistic Comparison. – 3 Event-Structure Properties of Verbal Passives. – 4 The Study on Italian Passives. – 5 Comparison among Italian, Catalan, and Spanish Data. – 6 Discussion. – 7 Conclusions.

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## 1 Introduction

The present study investigates the comprehension of passive sentences in preschool typically developing Italian-speaking children and compares their data with previous studies on Catalan- and Spanish-speaking children (Gavarró, Parramon 2017; Oliva, Wexler 2018).

Over the years, cross-linguistic research has reported contrasting findings on the acquisition of the passive.

Empirical findings from diverse languages indicate a delay in passive sentence acquisition (see Armon-Lotem et al. 2016 for a comprehensive review). Pioneering studies asserted that the acquisition of passives is semantically constrained (Maratsos et al. 1985), claiming that children's comprehension of passive sentences is limited to actional verbs. On the other hand, the A-Chain Deficit Hypothesis (ACDH, Borer, Wexler 1987) posits that a syntactic constraint prevents children from comprehending verbal passives before age five, allowing them to access only adjectival passives. Accordingly, they would interpret *broken* in (1a) as an adjective rather than a verb.

(1) a. The window is broken.
b. The window is broken by the wind.

Such a possibility lies in the English-specific feature of homophony between verbal and adjectival passives. Homophonous passives (1a) allow a double reading: namely, stative (the verb denotes a state of the subject) or eventive (the verb describes an event). The addition of a *by*-phrase clarifies ambiguity (1b). However, children would often read any passive participle as an adjective.

Wexler (2004) and Hirsch and Wexler (2006) built upon these premises, claiming that children's early passives are adjectival (either purely stative or resultative), with eventive interpretations emerging later.[1] Wexler (2004) accounts for this pattern by proposing the Universal Phase Requirement (UPR), which restricts children to resultative adjectival passives. Derivations in children's grammar fail

**1** The interpretation conveyed by the passive is analyzed as a continuum ranging from stative to eventive readings, resulting from a cognitive operation of decoding. Embick (2004) proposed an account of passive interpretation based on the alternation of eventivity and agentivity. In his analysis, these concepts alternate in a parametric fashion to yield three distinct passive interpretations: stative, resultative, and eventive. Since all the studies in this work employ short passives in which the agent is not structurally present, the distinction between stative and resultative passives would originate from pragmatic inference that does not interfere with the acquisitional predictions. This is not to be confused with the lexical flavour of resultant state that is inherent to certain verbs, which are discussed in Section 6.

because the internal argument cannot access a higher phase to check its phi-features at the Tense level (Hirsch, Wexler 2006).[2] In other words, under the UPR, passives are ungrammatical in immature systems, which develop the ability to process this structure around age six.

Borer and Wexler's (1987) hypothesis was supported by Gavarró and Parramon (2017) and Oliva and Wexler (2018), who tested Catalan-speaking and Spanish-speaking children, respectively, on their comprehension of adjectival and verbal passives. Oliva and Wexler (2018, 64), observing that children perform better with passives of actional verbs that imply a resultant condition, labelled "children's use of an adjectival interpretation to understand verbal passives" as the Adjectival Interpretation Strategy (AIS).

Italian acquisitional data show a different pattern. Italian children appear to master verbal passives earlier than their Spanish-, Catalan- and English-speaking peers, as early as age four (Volpato et al. 2016; Belletti, Manetti 2019).

The paper proceeds as follows. Section 2 describes the characteristics of short passive sentences in Catalan, Spanish, and Italian, and how their interpretation changes depending on the auxiliary verb. Section 3 shows how eventivity affects verbal passives. Section 4 describes the study on the comprehension of short passives in Italian, presenting participants, materials, and results. Section 5 compares these results with those reported in studies on Spanish and Catalan. Section 6 discusses all the data, and Section 7 offers some concluding remarks.

## 2 Cross-Linguistic Comparison

This study compares Italian, Catalan, and Spanish, which share the auxiliary alternation that encodes either stative or eventive interpretations in periphrastic passives, although they differ in how they do so.

**2** An anonymous reviewer pointed out that, in resultative passives, the subject is still interpreted as the internal argument of the verb and therefore it has to move to a higher position, as in eventive passives. However, following Embick (2004), resultative passives involve different underlying syntax compared to eventive passives, where an argument raises from a low object position. In resultative participles the theme is merged higher, at the edge of vP. As a consequence, although it is still interpreted as the theme, it is more accessible to higher operations, which explains why such structures are not ruled out under UPR.

Catalan passives select either auxiliary *ser* (2) or *estar* (3)[3] together with the passive participle of the main verb. The former conveys an eventive reading, whereas the latter conveys a stative reading. Therefore, the different readings hinge solely on the auxiliary employed. Gavarró and Parramon (2017) exploited the non-syntactic homophony of verbal and adjectival passives to test Borer and Wexler's (1987) A-Chain Delay proposal by assessing Catalan-speaking children. Their stimuli contained 8 actional verbs (*afaitar* 'shave', *eixugar* 'dry', *alimentar* 'feed', *rentar* 'wash', *pentinar* 'comb', *dibuixar* 'draw', *tapar* 'cover', *pintar* 'paint') to provide direct evidence of children's adjectival interpretation.

(2) El germà petit és pentinat. (eventive passive)
The little brother is (being) combed.

(3) El germà petit està pentinat. (stative passive)
The little brother is combed.

Using the same task as in Gavarró and Parramon (2017), Oliva and Wexler (2018) assessed Spanish-speaking children's interpretation of adjectival and verbal passives to provide further empirical support for Borer and Wexler's hypothesis. The verbs were the same as in the study on Catalan, except for the verbs 'dry', 'feed', and 'paint', which were replaced by *mojar* 'wet', *besar* 'kiss', *golpear* 'hit'. Spanish periphrastic passives alternate an eventive reading through auxiliary *ser* followed by a past participle (4), and a stative one through auxiliary *estar* with a past participle (5).

(4) El niño es peinado. (eventive passive)
The boy is (being) combed.

(5) El niño está peinado. (stative passive)
The boy is combed.

In Italian, passive sentences encode stative and eventive interpretations differently. In short passives with auxiliary *essere* (be), both interpretations are possible (6). Using the auxiliary *venire* (come), the interpretation is unequivocally eventive (7). When both

**3** Both auxiliaries are translated with English 'be'. However, auxiliary *estar* was rendered with the English correspondent of verb 'be' due to the lack of a more precise translation as indicated in Gavarró and Parramon (2017).

(6) and (7) are interpreted as eventive, the implicit external argument is systematically inferred to be disjoint from the patient.

(6) Il fratellino è pettinato. (eventive or stative passive)
The little brother is combed.

(7) Il fratellino viene pettinato. (eventive passive)
"The little brother comes combed"
The little brother is combed.

The comparable (yet different) language-specific properties of Catalan, Spanish and Italian in auxiliary alternation paved the way to convert the testing material to pursue a cross-linguistic comparison in Section 5.

## 3 Event-Structure Properties of Verbal Passives

The minimal pair of short *essere*- (6) vs. *venire*- (7) passives in Italian demonstrates how eventivity unambiguously emerges in the latter structure, but not in the former (Gallardo 2024). Gallardo (2024) built on Biggs and Embick's (2022) proposal for English 'be' and 'get' passive auxiliaries.

Biggs and Embick (2022) argue that *get*- and *be*-passives differ in their underlying event structure, a contrast they motivate through a comparative analysis of *get*-passives (8a), *be*-passives (8b), and *get*-causatives (8c).

(8) a. Mary got arrested by the police.
b. Mary was arrested by the police.
c. Susan got Mary arrested by the police.

Biggs and Embick's proposal is based on two preliminary observations. First, the verbal structure that characterizes auxiliary *get* (9a) is semantically eventive, unlike its stative counterpart with *be* (9b). This observation is supported by applying McIntyre's (2012) analysis of adjectival phrases.

(9) a. Mary got sick.
b. Mary was sick.

Biggs and Embick use this minimal pair to show how *get* contributes to eventive meaning even without a verbal participle. Transitivity

alternations originate in the core projection VoiceP, following Kratzer (1996) and Alexiadou et al. (2015). Second, Biggs and Embick argue that the passive participle can be eventive independently of its embedding element. Building on this, they claim that *get*-passives involve two eventive components: one at the auxiliary level and one at the participle level. This double sub-eventive structure helps distinguish *get*-passives from *be*-passives, which present one eventuality at the participle level.

Gallardo (2024) extends this analysis to Italian auxiliary alternation, suggesting that auxiliary *venire* encodes an unambiguous eventive interpretation due to its unique event structure.

This proposal makes specific predictions for acquisitional data. The unambiguously eventive nature of auxiliary *venire* might facilitate comprehension of passive sentences.

## 4 The Study on Italian Passives

### 4.1 Participants

The participants in the Italian study were 51 monolingual and typically developing preschoolers (3;3-6;5 years). Children were divided into three age groups: G1 ($n$=20, mean age=4;2), G2 ($n$=18, mean age=5;5) and G3 ($n$=13, mean age=6;2). A group of 12 adults (20-25 years) was also included in the study (G4).

### 4.2 Materials

The Italian test was adapted by Rech (2020) from the test used in the Catalan study. It consisted of 14 passive sentences containing the following verbs: *rasare* (shave), *coprire* (cover), *asciugare* (dry), *truccare* (put make-up on), *lavare* (wash), *pettinare* (comb), *disegnare* (draw). The original study included one additional verb in Catalan: *alimentar* (feed), which was excluded from the present material, since its Italian translation sounded unnatural. Each verb was presented with auxiliaries *essere* and *venire*, forming 7 ambiguous sentences and 7 verbal passives. None of the sentences contained a *by*-phrase, so the interpretation of the passive could only be guided by the auxiliary. All characters were animate (*il nonno* "the grandpa", *la mamma* "the mom", *il fratellino* "the younger brother", *il fratello maggiore* "the elder brother", and *la sorella maggiore* "the elder sister"). Each picture represented two characters, corresponding to the agent and the patient in the case of a dynamic interpretation.

A sample of an experimental picture is shown in Figure 1. The participants had to select one of two pictures that matched a sentence read by the experimenter. One of the pictures portrayed an event, whereas the other represented a result state. Ambiguous short passives with auxiliary *essere*, such as *Il nonno è rasato* (The grandpa is shaved), could be associated with both pictures. In fact, both stative and eventive interpretations are felicitous with this construction. Only sentences with auxiliary *venire* (*Il nonno viene rasato* the grandpa comes shaved, "The grandpa is being shaved") could cause a mistake, if interpreted as stative, given their uniquely eventive reading.



**Figure 1** Sample of the experimental picture for Il nonno è/viene rasato. Pictures adopted from Gavarró and Parramon (2017, 19)

This feature constitutes a crucial difference between Italian and Catalan. In Italian, only 'true' verbal passives with auxiliary *venire* can be misinterpreted as stative. Consequently, the present task evaluates Italian children's preferred reading of short *essere*-passives rather than their accuracy levels. Accuracy levels are only available for *venire* verbal passives. Conversely, Catalan passives are either verbal (auxiliary *ser*) or adjectival (*estar*), yielding unambiguous eventive and stative readings, respectively.

### 4.3 Results

Table 1 shows the participants' interpretation of short passives with auxiliaries *essere* (verbal or adjectival passive) and *venire* (verbal passive).

**Table 1** Interpretation results per age group: percentage (%) and standard deviation (SD) of cases of stative reading in essere-passives and accurate eventive comprehension in venire-passives

| Age Groups | Auxiliary *essere* preferred stative interpretation | Auxiliary *venire* eventive interpretation |
|---|---|---|
| | % (SD) | % (SD) |
| G1: 4-year-olds | 51% (0.50) | 64% (0.48) |
| G2: 5-year-olds | 56% (0.49) | 79% (0.41) |
| G3: 6-year-olds | 86% (0.35) | 85% (0.36) |
| G4: adults | 92% (0.28) | 100% (0.00) |

Table 1 shows children's preferred reading of Italian short ambiguous *essere*-passives. An interesting trend emerged: from 4 to 5 years, children seem to assign equal percentages of eventive and stative interpretation to ambiguous *essere*-passives. Instead, the older group of children (G3) prefer a stative reading at a much greater rate. As for *venire* verbal passive, four-year-olds already show early and robust comprehension, which increases with age, reaching 85% accuracy by age 6.

Following Jaeger (2008) and Dixon (2008) and given the categorical (dichotomous) nature of the dependent variable, a repeated-measures logistic regression analysis was conducted in R Core Team (v4.2.1; 2022). 'Group' and 'Accuracy' were the independent and dependent variables, respectively. Subject and Items were added as random factors intercepts. A group effect emerged from the analysis. First, the analysis was conducted on ambiguous *essere*-passives, treating the stative interpretation as the accurate one, forcing the dependent variable to be dichotomous. Considering the stative reading for *essere*-passives, G1 is significantly less accurate than G3 (Wald Z = 4.82, $p$ <.01) and G4 (Wald Z = 5.346, $p$ <.01). However, G1 does not differ significantly from G2 (Wald Z = 0.752, $p$ =.452). G2 is significantly different from both G3 (Wald Z = 4.210, $p$ <.01) and G4 (Wald Z = 4.848, $p$ <.01). From age 4 to 5, preschoolers interpreted ambiguous *essere*-passive as stative/resultative or eventive. Significant differences in the assigned reading appear at age 6: a preferred stative/resultative interpretation in G3 suggests that older children resemble adults in the processing of ambiguous passives.

Finally, the analysis was conducted for eventive *venire*-passives. A main effect of group emerged. G4 performed at ceiling. G1 performed significantly poorer than G2 (Wald Z = 589.661, $p$ <.001) and G3 (Wald Z = 906.903, $p$ <.001). G3 outperformed both G1 (Wald Z = -906.955, $p$ <.001) and G2 (Wald Z = -317.405, $p$ <.001), which in turn outperformed G1.

At the item level, a quantitative analysis of response types is provided. Table 2 presents interpretation rates for each verb and

auxiliary, based on cumulative data from the entire sample of children.

**Table 2** Distribution of children's eventive and stative readings for each verb, based on the auxiliary alternation. The asterisk indicates that the stative reading is incompatible with the passive construction containing the auxiliary *venire*

| Items | *Essere* | | *Venire* | |
|---|---|---|---|---|
| | **Eventive** | **Stative** | **Eventive** | **Stative*** |
| 1 – *rasare* | 43% | 57% | 92% | 8% |
| 2 – *coprire* | 24% | 76% | 75% | 25% |
| 3 – *asciugare* | 43% | 57% | 57% | 43% |
| 4 – *truccare* | 22% | 78% | 61% | 39% |
| 5 – *lavare* | 37% | 63% | 84% | 16% |
| 6 – *pettinare* | 35% | 65% | 84% | 16% |
| 7 – *disegnare* | 63% | 37% | 72% | 28% |

Overall, when verbs are preceded by *essere*, the interpretation is predominantly stative. When they occur with *venire*, an eventive reading tends to prevail. However, certain verbs contribute more than others to a specific interpretation. Lexical semantics influenced the interpretation of *essere* passives. Certain verbs significantly increased the probability of stative interpretation: for instance, *coprire* 'cover' (Wald Z = 2.94, $p$ =.003) and *truccare* 'make up' (Wald Z = 3.15, $p$ =.001) yielded more stative readings compared to *asciugare* 'dry'. As for *venire* passives, *asciugare* 'dry' differed significantly from *coprire* 'cover' (Wald Z = 2.07, $p$ =.039), *lavare* 'wash' (Wald Z = 3.21, $p$ =.001), *pettinare* 'comb' (Wald Z = 3.21, $p$ =.001), *rasare* 'shave' (Wald Z = 4.03, $p$ <.001).

## 5 Comparison among Italian, Catalan, and Spanish Data

As pointed out in section 3, a further aim of our study is to compare the data obtained from the Italian-speaking participants with those collected from 120 Catalan-speaking children (3;1-8;11 years, Gavarró, Parramon 2017) and 60 monolingual Spanish speakers (3;0-6;11 years, Oliva, Wexler 2018). The comparison among these Romance languages is based on the assumption that auxiliary alternation encodes distinct interpretations in periphrastic passives. This pattern is summarized in Table 3.

**Table 3** Auxiliary distribution in stative vs. eventive periphrastic passives across languages

| Type of passive | Italian | Catalan | Spanish |
|---|---|---|---|
| Stative passive | *Essere* | *Estar* | *Estar* |
| Eventive passive | *Venire /Essere* | *Ser* | *Ser* |

Table 4 reports the percentages of accurate eventive interpretations of short verbal passives. These constructions are formed using auxiliary *venire* in Italian, *ser* in Catalan, and *ser* in Spanish.

**Table 4** Accuracy of Italian, Catalan and Spanish children in short verbal passive comprehension

| Age Groups | Italian | Catalan | Spanish |
|---|---|---|---|
| | ***venire*** | ***ser*** | ***ser*** |
| 3-year-olds | - | 38% | 27.5% |
| 4-year-olds | 64% | 35% | 37.5% |
| 5-year-olds | 79% | 23% | 35.0% |
| 6-year-olds | 85% | 28% | 40.8% |
| 7-year-olds | - | 90% | - |
| 8-year-olds | - | 92% | - |

Italian children show earlier access to eventive passives than Catalan and Spanish children. Moreover, comprehension of Italian eventive passive increases gradually with age. In Catalan, children show poor initial comprehension, which surprisingly decreases at ages 5 and 6, followed by a marked improvement at age 7. Spanish children show a more linear increase in comprehension. Nonetheless, accuracy percentages are substantially lower than those in Italian.

Table 5 reports the percentages of resultative interpretations of adjectival passives formed with *essere* in Italian and *estar* in Catalan and Spanish. Italian short *essere* passives are preferentially interpreted as stative/resultative, though they may receive an eventive reading. For this reason, this analysis assesses participants' preference for stative/resultative versus eventive readings.

**Table 5** Percentages of stative/resultative interpretation of the three languages in short adjectival passives

| Age Groups | Italian | Catalan | Spanish |
|---|---|---|---|
| | ***essere*** | ***estar*** | ***estar*** |
| 3-year-olds | - | 63% | 68% |
| 4-year-olds | 51% | 70% | 72% |
| 5-year-olds | 56% | 83% | 81% |
| 6-year-olds | 86% | 81% | 83% |
| 7-year-olds | - | 95% | - |
| 8-year-olds | - | 99% | - |

Italian preschoolers' resultative interpretation of ambiguous *essere* passives appears uncertain in the first stages of language development. Conversely, the percentages of resultative interpretations in the Spanish and Catalan *estar*-passives are already relatively high in the early stages and increase over time.

## 6 Discussion

This study provides some experimental evidence on the acquisition of stative/resultative and eventive passives by preschool children. Using a task originally developed to investigate these properties in Catalan, short passives containing auxiliaries *essere* and *venire* were tested with Italian-speaking children aged 3 to 6 years. Italian data showed that children are sensitive to morpho-syntactic cues both when ambiguity and non-ambiguity are encoded. Two distinct developmental trajectories in the acquisition of these structures were identified. Ambiguous *essere*-passives are interpreted in a balanced way, with equal frequency of stative or eventive interpretations. Significant differences in the resolution of *essere*-passive were detected between children and adults. Stative and eventive interpretations are equally used until a preference for the adult (stative) reading emerges around the age of 6. In the case of *venire*, verbal passive comprehension is active early on and improves progressively over time. The non-ambiguous auxiliary guides development: a gradual consolidation of verbal passives appears, thanks to the lexico-aspectual cues of *venire*-passive. The notion of agentivity might also be needed to account for the alternation of *essere* versus *venire* when aspectual features are marked. The agentive trait is relevant in passive alternation, since it is deemed to

operate at the level of VoiceP (Kratzer 1996; Alexiadou et al. 2015).[4] The unique role of *venire* as a marker of eventive interpretation allows for direct measurement of verbal passive comprehension in Italian, providing insight into A-Chain competence. The results on early acquisition of verbal passives replicate previous findings on Italian children (Volpato et al. 2016; Belletti, Manetti 2019), supporting the claim that non-ambiguity facilitates access to this structure and movement of an argument from theme position to subject position. Taken as a whole, new and existing Italian data argue against previous maturational approaches.

Apart from new Italian data, this study presented a cross-linguistic comparison with findings from previous studies on Catalan (Gavarró, Parramon 2017) and Spanish (Oliva, Wexler 2018) that used the same experimental design. Therefore, some language-specific factors should account for the divergent results obtained across the three languages. In the study on Catalan, children's adjectival strategy holds until 7 years of age. Nonetheless, the authors observed that the distinctive function of *ser* and *estar* is not particularly prominent. Such a difference is further obscured by the possibility of Catalan adjectival decausatives to derive alternatively with one or the other auxiliary (*La porta està/és oberta* "The door is open").[5] Oliva and Wexler (2018) claim that their data on Spanish comply with the UPR. Children would interpret verbal eventive passives as resultative ones. Accordingly, Spanish-speaking preschoolers would not compute the syntactic derivation of verbal passives. Children resort to the adjectival strategy at 6 years, in line with the Catalan results. Their comprehension would be dependent on the degree of resultativity of the passivized verbs. However, since all experimental studies adopted actional telic verbs, the cross-linguistic difference among Italian, Spanish, and Catalan cannot be attributed to the interpretation that those verbs convey. In other words, if children uniformly applied a stative strategy, similar results would have been expected across languages.

The overall trajectory emerging from the cross-linguistic comparison is an early access to verbal passives in Italian. Assuming that these three languages derive verbal passives through verb movement, the question of why one language allows earlier access to this instance of verb movement remains unresolved. The reason may

**4** Agentivity plays a relevant role if the interpretation that can stem from passivization is assumed as a continuum and Embick's (2004) definition of passive readings is considered.

**5** While most Catalan participles are selected by *estar* to convey stativity, *ser* may also appear in typical stative readings, as reported in the IEC Catalan grammar (2016: §22.3.1). This characteristic explains the partial ambiguity in sentences such as *El germà petit és pentinat*, which are supposedly eventive but affected by the temporal-aspectual features of *ser*, leading to a non-dynamic disambiguation.

lie in the event structure of auxiliaries. Italian verbal passives might be mastered already at 4 years of age, because the eventive nature of *venire* would offer a semantic bootstrap mechanism. In a certain sense, Spanish and Catalan *estar* passives resemble the acquisitional trajectory of Italian eventive passives. The mirror-image patterns of Italian verbal passives and Spanish and Catalan adjectival passives support the idea that unambiguous features are mastered earlier. The double valency of *essere* is disambiguated later on, as the statistical analysis confirmed. Italian 3- to 5-year-olds adopted significantly different strategies compared to 6-year-olds and adults: ambiguity is reflected in young children's aleatory interpretation. One possible explanation for these findings may lie in the semantic strength of the auxiliaries encoding stative/resultative or eventive passives. In a cross-linguistic perspective, *venire*-passives may be considered as unambiguous as Catalan and Spanish *estar*-passives. Italian *venire* leads even younger speakers to a dynamic reading, unlike Catalan and Spanish *ser*. Conversely, Italian *essere* misleads preschoolers' interpretation in a similar fashion to Catalan and Spanish *ser*. In sum, children's development is affected by the degree of ambiguity of the morphosyntactic cues. A light verb-based approach (Gallardo 2024) explains the variation in access to verbal passives. Assuming an extra aspectual phrase in the derivation of *venire* could account for the mastery of Italian verbal passives. Such an eventive structure could be the responsible factor guiding young children's comprehension of dynamicity rather than stativity or resultativity. On the contrary, Catalan and Spanish *ser* seem to lack this inherent aspectual feature and are therefore misunderstood by children.

From a lexico-aspectual standpoint, the verbs employed in the three experimental studies encode actionality and telicity. Under the lens of *Aktionsart* (Vendler 1967), most of these verbs are classified as accomplishments: dynamic and durative processes comprising a result state endpoint. A few exceptions to this definition are found in the Spanish study. Oliva and Wexler (2018) included *besar* 'kiss' and *golpear* 'hit', which can hardly represent a result in the sense of a change of state once the dynamic process is over. These two verbs are telic and punctual, at least considering the passivized structures here observed. They lack durativity and are classified as achievements. Crucially, their passive interpretation excludes a visible change of state in the patient of the predicate. The same rationale can be applied to Catalan *alimentar* 'feed', which was omitted from the Italian adaptation. These are the only differences across the experimental designs of the Italian, Spanish and Catalan studies. Although the use of (largely) the same verbs across the three languages reduces potential effects of lexical aspect, it does not control for the distinction between resultative and non-resultative verbs, which may influence the data interpretation. Therefore,

although auxiliary verbs remain the plausible source of variation in this study, their role should be considered alongside these aspectual factors in future research.

## 7 Conclusions

This study contributes to the debate on passive sentence acquisition. Variation in the developmental curves was grounded on the description of syntactic and semantic features of auxiliaries. The cross-linguistic perspective suggests that the acquisitional trajectory of the passive is not determined solely by syntactic complexity. Crucially, it is shaped by semantic and aspectual properties. This conclusion was reached by comparing data from Italian, Spanish and Catalan-speaking children. The Italian eventive auxiliary *venire* offers unambiguous semantic cues. This feature would facilitate early access to the Italian verbal passive, compared to the Spanish and Catalan counterparts. Italian *venire* is claimed to exhibit an inherent eventive structure, which allows for the correct interpretation of short eventive passives in the absence of further linguistic cues typically associated with a dynamic interpretation, such as overt agentivity or aspectual progressiveness. The conflicting acquisitional data presented here offer insights into the linguistic features that increase the complexity of verbal passives in Catalan and Spanish.

## Bibliography

Alexiadou, A.; Anagnostopoulou, E.; Schäfer, F. (2015). *External Arguments in Transitivity Alternations: A Layering Approach*. Oxford University Press.

Armon-Lotem, S.; Haman, E.; Jensen de López, K.; Smoczynska, M.; Yatsushiro, K.; Szczerbinski, M.; van Hout, A.; Dabašinskienė, I.; Gavarró, A.; Hobbs, E.; Kamandulytė-Merfeldienė, L.; Katsos, N.; Kunnari, S.; Nitsiou, C.; Sundahl Olsen, L.; Parramon, X.; Sauerland, U.; Torn-Leesik, R.; van der Lely, H. (2016). "A Large-Scale Cross-Linguistic Investigation of the Acquisition of Passive". *Language Acquisition*, 23(1), 27-56. https://doi.org/10.1080/10489223.2015.1047095.

Belletti, A.; Manetti, C. (2019). "Topics and Passives in Italian-Speaking Children and Adults". *Language Acquisition*, *26*(2), 153-82. https://doi.org/10.1080/10489223.2018.1508465.

Biggs, A.; Embick, D. (2022). "On the Event-Structural Properties of the English *Get*-Passive". *Linguistic Inquiry*, 53(2), 211-54. https://doi.org/10.1162/ling_a_00405.

Borer, H.; Wexler, K. (1987). "The Maturation of Syntax". Roeper, T.; Williams, E. (eds), *Studies in Theoretical Psycholinguistics*, 4. https://doi.org/10.1007/978-94-009-3727-7_6.

Dixon, P. (2008). "Models of Accuracy in Repeated-Measures Designs". *Journal of Memory and Language*, 59, 447-56. https://psycnet.apa.org/doi/10.1016/j.jml.2007.11.004.

Embick, D. (2004). "On the Structure of Resultative Participles in English". *Linguistic Inquiry*, 35(3), 355-92. https://doi.org/10.1162/0024389041402634.

Gallardo, M. (2024). "The Aspectual Properties of Italian *Venire* Passives". *Isogloss. Open Journal of Romance Linguistics*, 10(2), 1-17. https://doi.org/10.5565/rev/isogloss.287.

Gavarró, A.; Parramon, X. (2017). "On the Adjectival Interpretation of Passives in Acquisition". *Lingua*, 185, 11-24. https://doi.org/10.1016/j.lingua.2016.07.003.

Hirsch, C.; Wexler, K. (2006). "Children's Passives and Their Resulting Interpretation". Deen, K.U.; Nomura, J.; Schulz, B.; Schwartz, B.D. (eds), *Proceedings of the Inaugural Conference on Generative Approaches to Language Acquisition–North America*, 125-36. Vol. 4, *University of Connecticut Occasional Papers in Linguistics*.

Institut d'Estudis Catalans (2016). Gramàtica de la llengua catalana. https://giec.iec.cat/.

Jaeger, T.F. (2008). "Categorical Data Analysis: Away from ANOVAs (Transformation or Not) and towards Logit Mixed Models". *Journal of Memory and Language*, 59, 434-46.

Kratzer, A. (1996). "Severing the External Argument from Its Verb". Rooryck, J.; Zaring, L. (eds), *Phrase Structure and the Lexicon*, 109-37. Dordrecht: Springer Netherlands. https://doi.org/10.1007/978-94-015-8617-7_5.

Maratsos, M.; Fox, D.E.C.; Becker, J.A.; Chalkley, M.A. (1985). "Semantic Restrictions on Children's Passives". *Cognition,* 19(2), 167-91.

McIntyre, A. (2012). "The BECOME=CAUSE Hypothesis and the Polysemy of *Get*". *Linguistics*, 50(6), 1251-87. https://doi.org/10.1515/ling-2012-0040.

Oliva, J.; Wexler, K. (2018). "The Acquisition of Spanish Passives: The Comparison Between Subject Experiencer versus Actional Verbs and Direct Aspectual Semantic Evidence for the Adjectival Interpretation". In Gavarró, A. (ed.), *On the Acquisition of the Syntax of Romance*, 57-90. Amsterdam: John Benjamins Publishing Company. https://doi.org/10.1075/lald.62.04oli.

Rech, Y. (2020). *Children's Comprehension of Verbal and Adjectival Passives: An Analysis* [BA thesis]. Venice: Ca' Foscari University of Venice.

R Core Team (2022). *R: A Language and Environment for Statistical Computing*. Vienna: R Foundation for Statistical Computing. https://www.R-project.org/.

Vendler, Z. (1967). "Verbs and Times". *Linguistics in Philosophy*, 97-121. Ithaca, NY: Cornell University Press.

Volpato, F.; Verin, L.; Cardinaletti, A. (2016). "The Comprehension and Production of Verbal Passives by Italian Preschool-Age Children". *Applied Psycholinguistics*, 37(4), 901-31. https://doi.org/10.1017/S0142716415000302.

Wexler, K. (2004). "Theory of Phasal Development: Perfection in Child Grammar". *MIT Working Papers in Linguistics*, 48, 159-209.

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# Existential Definiteness in Italian Speakers of L2 Spanish

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**Abstract** This study investigates how Italian-speaking learners of Spanish acquire the properties of the Definiteness Effect (DE) in existential sentences. In an oral production task, 33 Italian learners showed relatively early control of the Spanish *haber/estar* contrast but initial difficulties with definiteness restrictions. Findings support the interpretation of the DE as governed by universal principles and conform to interface-based theories, suggesting that the integration of semantic and pragmatic features into syntactic structures may develop later than morphosyntactic knowledge.

**Keywords** Existential Sentences. Definiteness Effect. Spanish as a Second Language. Italian as a First Language. Locative Paradigm. Ser/Estar/Haber.

**Summary** 1 Introduction. – 2 Theoretical Background. – 3 Method. – 4 Results. – 5 Discussion.

## 1 Introduction

The Definiteness Effect (DE) is a cross-linguistic restriction that prevents definite Noun Phrases (NPs) from appearing in existential constructions (Jenkins 1975). In English, *There is a man in the room* is acceptable, while *There is the man in the room* is not. This phenomenon reflects a complex interplay between syntax, semantics, and discourse pragmatics. In Spanish, when introducing a definite theme, a locative construction with *estar* is used instead

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of the existential *haber*. Conversely, Italian and other Italo-Romance languages allow existential constructions with *essere* (or *stare* in some regional varieties) to introduce both definite and indefinite NPs, making Italian a valuable domain for studying DE restrictions.

Research on L2 acquisition indicates that speakers of languages that do not always obey the DE, such as Russian and Turkish, acquire it easily in English, suggesting that universal principles might govern it (White et al. 2012). In Spanish, L1 speakers of English, Arabic, and Catalan produce existential constructions with low error rates (Perpiñán 2014; 2015). However, cross-linguistic variation and verb alternations (*ser/estar/haber*) add complexity to the task.

This study investigates whether Italian speakers learning Spanish as an L2 can adjust their L1 locative paradigm to include the Spanish DE restriction in existential constructions. It addresses morphosyntactic and semantic-pragmatic aspects, contributing to ongoing discussions on feature reassembly (Lardiere 2008) and the syntax-pragmatics interface in L2 acquisition (Sorace 2011).

## 2 Theoretical Background

### 2.1 Existential Sentences

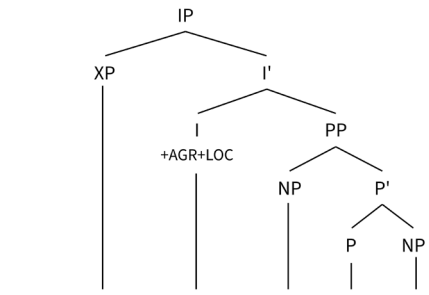
Existential sentences (ES) express propositions about the existence or presence of someone or something in a context. They are characterized by non-canonical word order, usually consisting of the following structure:

| | | | | | | |
|---|---|---|---|---|---|---|
| (1) | a. | There | is | a man | in the room | *English* |
| | b. | | Hay | un hombre | en la habitación | *Spanish* |
| | c. | C’ | è | un uomo | nella stanza | *Italian* |
| | | PROFORMA | COPULA | PIVOT | CODA | |

The PIVOT, i.e., the NP that in (1) occurs in post-copular position and is semantically identified as the *theme*, is universally available; in contrast, the presence of other components may vary across languages (Bentley, Ciconte, Cruschina 2015). This is the case of the PROFORMA, which is productive in Italian but grammaticalized (*y*) and no longer productive in Spanish (1b). The PIVOT can be followed by a CODA, which is typically a locative expression (1). Linear word order is another source of variation across and within languages. In languages with no fixed word order, existential word-order variation correlates with information-structure variation (Bentley, Ciconte, Cruschina 2015).

Being the sole obligatory element, the PIVOT has been used to interpret the nature of ES. In this study, we adopt the *locative hypothesis* (Freeze 1992), which posits the existence of a unified universal locative paradigm. It proposes a D-structure (2) that underlies three possible S-structures: existential (2a), predicate locative (2b), and possessive (2c).

(2) Locative paradigm (adapted from Freeze 1992), with English as a sample of SVO languages with a locative PROFORMA.




a. $[_{IP}[_{SPEC}\text{There}]_i$ $[_{I'}$ are] $[_{PP}[_{SPEC}\text{keys}]$ $[_{P'}$ on $[_{NP}\text{the table}]]_i]]$ *Existential*
b. $[_{IP}[_{NP}\text{The keys}]_i$ $[_{I'}$ are $[_{PP}t_i$ $[_{P'}$ on $[_{NP}\text{the table}]]]]]$ *Predicative locative*
c. $[_{IP}[_{NP}\text{Paul}]_i$ $[_{I'}[_{IP}\text{has}]_i$ $[_{NP}\text{some keys}]$ $t_i$ $t_i\,]]$ *Possessive*

Assuming the *theme* and *location* arguments within a predicate PP, the XP position, initially empty, is filled by syntactic movement of either the *theme* or the *location* argument, leading to three possible structures. Movement is governed by the [±definiteness] feature of the *theme*. In the framework of the locative hypothesis, ES are locative structures with an indefinite PIVOT as the *theme* and a CODA as the locative argument. They arise when the locative PP moves to the IP-Spec position, while the *theme* remains in the post-copular position, which is reserved for indefinite NPs (2a), which in Spanish require *haber*. A definite NP in the post-copular position is typically ungrammatical (3a, b). Thus, the definite *theme* moves to the subject position, resulting in a *predicate locative* (2b), which is marked in Spanish by the verb *estar*. If the locative argument has human features, it moves to the subject position, yielding a possessive structure (2c), with the verb *tener* in Spanish.

## 2.2 Definiteness Effect

The locative paradigm assumes definiteness as a crucial point of syntactic variation for ES. According to the Definiteness Effect (DE),

only weak-definite expressions[1] can occupy the ES post-copular position (Milsark 1977). Definite NPs are typically excluded from ES[2] and instead found in locative predications. Languages like English and standard Spanish[3] are subject to this constraint (Milsark 1977). In contrast, languages like Italian and Catalan do not appear to be constrained by it (3).

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| (3) | a. | *There | are | the keys | on | the | table | *English* |
| | b. | | *Hay | las llaves | sobre | la | mesa | *Spanish* |
| | c. | Ci | sono | le chiavi | sopra | il | tavolo | *Standard Italian* |
| | d. | Hi | ha | les claus | sobre | la | taula | *Catalan* |

Standard Spanish employs three different verbs for predicate locatives and ES, depending on the semantics of the theme: *estar* to locate objects or individuals (4a); *ser* to locate events (4b); *haber* for ES (4c).

| | | | | | |
|---|---|---|---|---|---|
| (4) | a. | *Las llaves* | *están* | *en el* | *hotel* |
| | | the keys | $estar_{\text{3rd-plur-pres}}$ | in the | hotel |
| | | The keys | are | in the | hotel |
| | b. | *El discurso* | *será* | *en el* | *hotel* |
| | | the speech | $ser_{\text{3rd-sing-fut}}$ | in the | hotel |
| | | The speech | will be | in the | hotel |
| | c. | *Hay* | *unas llaves* | *en el* | *hotel* |
| | | $haber_{\text{imp-sing-pres}}$ | some keys | in the | hotel |
| | | There are | some keys | in the | hotel |

Italian uses only a *be* copula (5), realized as *essere* in standard Italian or as *stare* in Rome and other central/upper-southern Italian varieties. The *stare* variant is typically used to locate objects (5a) and for ES (5c), but not to locate events (5b).

| | | | | | |
|---|---|---|---|---|---|
| (5) | a. | *Le chiavi* | *sono / stanno* | *in* | *camera* |
| | | the keys | $essere / stare_{\text{3rd-plur-pres}}$ | in | bedroom |
| | | The keys | are | in the | bedroom |

**1** Weak-definite expressions include indefinite markers such as *a*, *some*, cardinal numerals, and bare plurals, or definite expressions with no requirement of uniqueness. Strong-definite expressions typically consist of definite markers like *the*, *all*, *every*, *each*, possessives, personal pronouns, and proper names.

**2** DE does not apply to list readings.

**3** For minimal diatopic variations in European Spanish, see Agulló 2023.

| | | | | | | |
|---|---|---|---|---|---|---|
| b. | *Il discorso* | *sarà / *starà* | | | *nella* | *sala conferenze* |
| | the speech | *essere / *stare*$_{\text{3rd-sing-fut}}$ | | | in-the | room conference |
| | The speech | will be | | | in the | conference room |
| c. | *Ci* | *sono / stanno* | *delle chiavi* | | *nel* | *cassetto* |
| | there | *essere / stare*$_{\text{3rd-plur-pres}}$ | some keys | | in-the | drawer |
| | There | are | some keys | | in the | drawer |

The copula *avere* (have), however, is present in some dialects of southern Italy, specifically in Salento and Calabria (6), as well as in Logudorese and Nuorese Sardinian (Cruschina 2015; 2016).

| | | | | | | |
|---|---|---|---|---|---|---|
| (6) | a. | *Ave* | *soruta* | *intru* | *la cucina* | (*Soleto, Salento*) |
| | | *Avere*$_{\text{imp-sing-pres}}$ | sister-your | inside | the kitchen | |
| | | There's | your sister | in | the kitchen | |
| | b. | *Ave* | *doi cristiani* | *alla* | *porta* | |
| | | *Avere*$_{\text{imp.sing-pres}}$ | two Christians | at-the | door | |
| | | There are | two people | at the | door | |

In languages that use an expletive subject (e.g., *there* in English, *ci* in Italian) for ES, this is generally considered a locative element, too, and is in complementary distribution with a locative argument subject (see note 1).

The DE has been interpreted from pragmatic (Lumsden 1988), semantic (Milsark 1977), and syntactic (Safir 1985) perspectives. From a pragmatic standpoint, ES serve to introduce new entities in the discourse; these entities must be discourse-new and not previously identifiable, that is, indefinite (Holmback 1984). However, *there*-sentences do not always require indefinite NPs (7), but *brand-new* or *hearer-new* NPs (Prince 1992). These are a subset of discourse-new entities that are not assumed to be in the addressee's long-term memory store (Abbott 1997) or culturally copresent (Clark, Marshall 1981).

(7) a. There were the same people at both conferences
b. There was the usual crowd at the beach
c. There was the stupidest article on the reading list

Lyons (1999) characterizes DE as a semantic-pragmatic constraint rather than a syntactic one, noting that it has broad cross-linguistic representation but varies in strength across languages. He distinguishes between *definiteness*, which refers to identifying a unique referent shared by both speaker and hearer, and *specificity*, which refers to a particular element that may not be identifiable to the

hearer. These distinctions are particularly relevant to understanding why some languages seem not to be subject to the DE.

Cruschina (2016) analyzed the locative paradigm in Italo-Romance languages and argued that Italian ES with definite NPs are not *existential proper* but locative sentences. He recognized three types of locatives: *inverse locatives* (8a) result from post-verbal focalization of the (pseudoexistential) subject and clitic resumption of a dislocated or implicit topic (locative) constituent; *deictic locatives* (8b) are characterized by a deictic and locative interpretation of the proforma *ci* (there) that differs from the existential; *presentational sentences* (8c) introduce a new NP referent in the discourse that, unlike ES, has no locative anchoring but is intended to be available for subsequent predication rather than to predicate an argument or property.

(8) a. *C'è tuo fratello in salotto*
there's your brother in the living room
Your brother is in the living room
b. *C'è il treno!*
There's the train!
c. *C'è il sig. Rossi che chiede di te*
There is Mr. Rossi, who is asking for you

Pseudoexistential sentences would be characterized by a common underlying locative predication, whereas existential proper structures would be characterized by a possessive predication, which allows for their recognition despite their common surface features (Cruschina 2015).

## 2.3 DE and L2 Acquisition

The DE has been rarely investigated in L2 acquisition. Research on determiner acquisition shows that even fossilized L2-English speakers with Chinese (Lardiere 2004) or Turkish (White 2003) as L1 do not exhibit particular issues with DE, despite frequent determiner omission. Additionally, studies involving L1-Turkish and L1-Russian speakers of L2 English (Belikova et al. 2010; White et al. 2012) indicate that they can appropriately reject definite NPs in affirmative and negative ES, though Russian and Turkish do not feature the DE in negative constructions. White et al. (2012) explain this in terms of a universal principle that governs DE

and its relatively straightforward acquisition. Catalan-dominant[4] bilingual speakers (Catalan-Spanish) moderately accepted existential sentences with definite NPs, which are ungrammatical in Spanish (Perpiñán 2015). From a semantic-pragmatic perspective, Perpiñán explains ungrammatical acceptance in terms of fluctuation between parameter settings (Ionin, Ko, Wexler 2004), particularly between *definiteness* and *specificity* (see Section 2.2). Catalan definite NPs in ES may not have the same definite and specific referent as in Spanish because definite *themes* in Catalan may only have a *specific* reading, not necessarily a *definite* one, so they may not be identifiable to the hearer. From a syntactic perspective, she also considers that *themes* in Catalan ES may escape the existential closure domain if it is smaller than in Spanish, hence subjects could move more freely; as a result, the *theme* could be interpreted as indefinite in meaning, not violating the DE.

## 2.4 Research Questions and Learnability Tasks

The difference in ES between Spanish, which employs *haber*, and Italian, which apparently does not obey the DE and generally employs only a *be* copula (*essere/stare*, depending on regional variation) for both ES and locative constructions, may significantly affect L2-Spanish acquisition. The present study asks *(1)* whether Italian learners of Spanish can restructure their locative paradigm semantically and pragmatically, by avoiding definite NPs in ES; and *(2)* how they restructure it syntactically, by limiting the use of *essere/stare* and incorporating *haber*.

Assuming that DE is governed by universal principles, DE restrictions could be present in other areas of the Italian language. In Italo-Romance languages, these areas have been viewed as the reflection of formal properties continuing or overlapping with a source construction, i.e., the locative predication when *be* copula is selected, or possessive predication when the existential proper copula *have* (5) is selected (Cruschina 2015). This means that, contrary to traditional assumptions, there may be no true exceptions to DE in Italian, and L1-Italian learners should possess the semantic-pragmatic principles that rule DE. Building on a feature-based approach (Chomsky 1995, 2001), we posit that semantic features are universal but can be grammaticalized differently across the languages involved (Slabakova 2008). In second language acquisition, learners must therefore reconfigure features as they are encoded in the first language into novel formal arrangements, potentially

**4** Recall that Catalan behaves very similarly to Italian with respect to DE.

associated with distinct lexical or morphological items in the L2 (Lardiere 2009, 173). This perspective entails full transfer from the L1 while simultaneously allowing for the reorganization of the interlanguage grammar, a process plausibly guided by Universal Grammar. Consequently, L2 learners are required to identify, select, and, when necessary, (re)assemble the relevant semantic features within the appropriate functional lexicon. Assuming the *Full Transfer/ Full Access Hypothesis* (Schwartz, Sprouse 1996) and the *Feature Reassembly Hypothesis* (Lardiere 2008, 2009), our L2 learners need to select the feature [±temporal boundedness] that determines the use of the *ser/estar* copula in locative [+temporally bounded] constructions (Perpiñán, Marín 2021); the feature [± definiteness] as for the semantics of the *theme*, together with the appropriate pragmatic conditions of introducing [new/old information], which determine the use of *estar* (locative, i.e.: definite, old) or *haber* (existential, i.e.: indefinite, new). In short, L2 learners need to restrict Spanish *haber* to ES and *estar* to locative structures and learn that *haber* cannot combine with definite NPs.

If *Full Transfer* (Schwartz, Sprouse 1996) occurs, we would expect beginner learners to use *ser* (or *estar,* depending on their variety) for all locative and existential uses. As they advance in their development, they may realize that locative constructions, which are typically [+temporally bounded], require *estar* in Spanish. This task is expected to develop earlier, since our learners' variety (*Romanesco*) already employs *stare* for locatives. Later, we predict that L2 learners would realize that *estar* in Spanish is in complementary distribution with another functional item, *haber*, and that their distribution is determined by a combination of semantic [± definiteness] and pragmatic [new/old] information. According to the *Feature Reassembly Hypothesis*, acquiring a new category (*haber*) may be easier than reassembling an already existing category (*estar*).

## 3 Method

### 3.1 Participants

A total of 54 individuals (age range=17-66, *M*=32, *SD*=11) participated in the study: 33 Italian learners of Spanish enrolled at the *Instituto Cervantes* in Rome, and 21 monolingual native Spanish speakers.

Among L2 speakers, 24 held a university degree (one of which was a doctoral degree), and 9 had secondary education (3 of whom attended technical schools). All of them had Italian as their L1 and reported knowing English, with 19 listing it as their best-known L2. For 14 L2 participants, Spanish was their 2nd best-known L2

after English; for 5, it was their 3rd best-known L2 after English and French; for 2, it was their 4th best-known language after English, French, and other non-declared languages. In addition, 3 of them stated that they spoke German, 3 spoke Portuguese, and 2 spoke Catalan; 4 also declared that they spoke an Italian dialect. The L2 speakers were divided into two proficiency groups based on the results they obtained in a reduced version of the *DELE* test: upper-beginners (n=14, *M*=50%) and upper-intermediates (n=19, *M*=75%). For details on L2 group formation, see 4.1.

## 3.2 Materials and Procedures

### 3.2.1 Task 1: Proficiency Test

A 25-item multiple-choice test from the vocabulary and grammar sections of *DELE*[5] superior tests was administered online to assess general Spanish proficiency. No items related to *ser/estar/haber* were included.

### 3.2.2 Task 2: Oral Production Task (OPT)

The expression of Spanish ES and locative constructions was analyzed through an elicited OPT. It consisted of a *spot-the-difference* game with five pairs of almost identical pictures **[fig. 1]** presenting differences in the existence/inexistence of certain animals or objects, or in some elements' position, color, size, etc. (Perpiñán 2014; 2015; Perpiñán, Marín 2021). Participants were instructed to localize and verbally describe the differences. Oral production was audio-recorded.

Utterances were transcribed and coded by two native Spanish speakers through CLAN from the CHILDES[6] system. Predicates expressing location or existential meaning, as well as the theme semantics, were coded as follows:

- *Haber* with an existential meaning
- *Estar/ser* + locative adverb or a prepositional phrase expressing location
- *Llevar* (to carry/wear) and *tener* (to have/possess) as possessives,
- Other
- Semantics of the THEME: definiteness/quantification/negation.
- Information structure: first or second mention.

**5** *Diploma de Español como Lengua Extranjera*.

**6** `https://talkbank.org/childes/`.




**Figure 1** Elicited OPT task sample item

## 4 Results

### 4.1 Task 1: Proficiency Test

Results of the proficiency test are displayed in Table 1.

**Table 1** Proportional results of the Spanish proficiency test for Spanish native speakers (L1), upper-beginners (L2-up-beg), and upper-intermediate (L2-up-int) L2 learners

| Group | *M* | *SD* | min | max |
|---|---|---|---|---|
| L1 | .94 | .06 | .83 | 1 |
| L2-up-beg | .50 | .09 | .36 | .60 |
| L2-up-int | .75 | .07 | .68 | .92 |

A *Kruskal-Wallis* test revealed a significant group effect ($\chi^2(2, 54)=44.99$, $p<.001$). Dunn's post-hoc comparisons indicated that the mean rank of L1-Spanish speakers ($R=43.38$) was significantly higher than that of both L2-up-beg ($R=7.50$, $p<.001$) and L2-up-int ($R=24.68$, $p<.001$) groups, and that the mean rank of the L2-up-int group was significantly higher than that of the L2-up-beg group ($p=.01$).

### 4.2 Task 2: OPT

We analyzed a total of 2,582 locative or existential tokens. The L1 group produced 869 tokens ($M=43.45$, $SD=42.5$), L2-up-begs produced 673 tokens ($M=48.071$, $SD=45$), and L2-up-ints produced

1,040 tokens ($M$=54.737, $SD$=52). All of these were included in the subsequent analysis of locative and existential patterns.

Figure 2 displays the proportions of verbs used to express locative and existential constructions across groups.

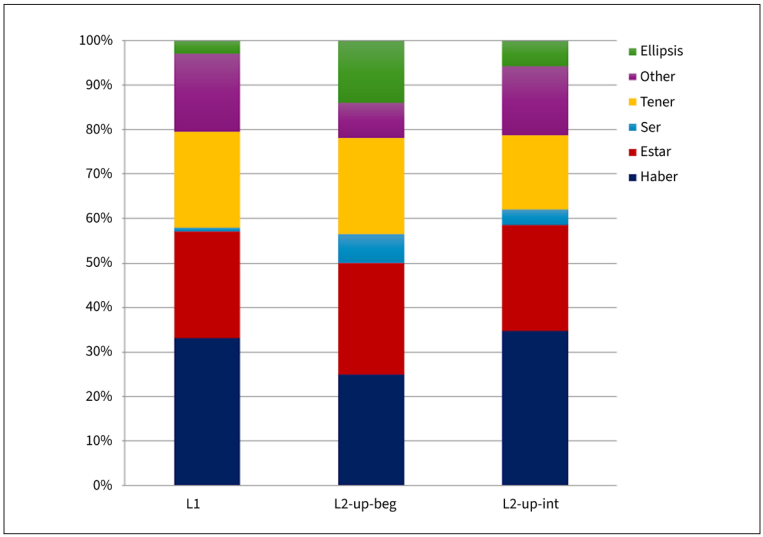



**Figure 2** Proportions of verb type by each group

The L1 and L2-up-int groups showed comparable proportional distributions, producing *haber* in 34% of cases and *estar* in approximately 24%, with numerically higher use of *haber*. In contrast, L2-up-beg learners produced an equal proportion of predicates with *haber* and *estar* (24% each), 6.5% with *ser,* and a large amount of acceptable ellipsis (14%), as in (9), which could be considered an avoidance strategy. L2-up-begs used significantly less *haber* than L2-up-ints ($\chi^2$(2, 53)=7.914, $p$=.02; *Bonferroni* $p$=.02).

The proportion of *ser* was minimal across all three groups, but L2-up-begs and L2-up-ints produced it significantly more often than L1 speakers ($\chi^2$(2, 53)=12.01, $p$=.002; *Bonferroni* $p$=.01). Ellipsis was significantly more frequent in L2-up-begs than in both L1 speakers and L2-up-ints ($\chi^2$(2, 53)=11.33, $p$=.003; *Bonferroni* .004<$p$<.02).

(9) *antes* *está* *el gato* *davanti*$_{_IT}$ *a la mujer* [L2-up-beg#307]
before estar the cat in-front to the woman
***y ahora*** ***no más***
and now no more
Before there is a cat, in front of the woman, and now there isn't

## Inappropriate/Ungrammatical Uses

The L1 group did not produce inappropriate sentences. L2-up-begs produced errors in 19.3% of their total productions, and L2-up-ints errors in 7.4% of their total productions. There were three types of inappropriate/ungrammatical uses, in order of frequency: the use of *estar* as a presentational verb to introduce indefinite NPs (where Spanish requires *haber*); the use of *ser* as a locative; and the use of *haber* with a definite DP.

Figure 3 displays the error distribution in the two groups.

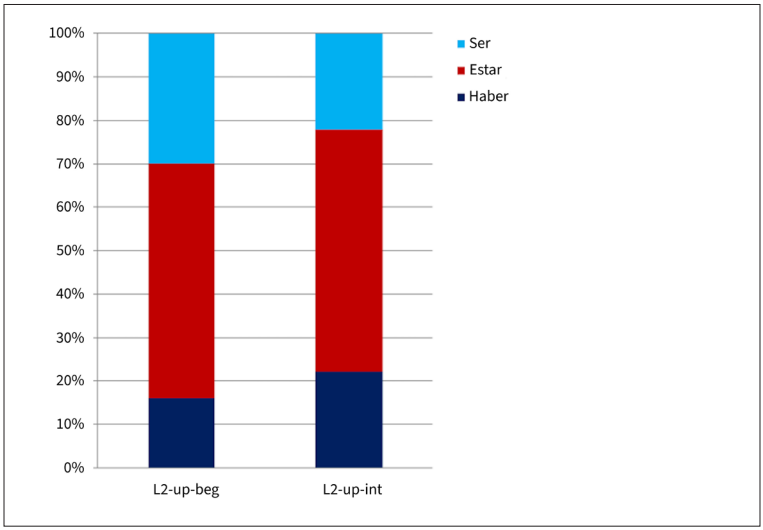



**Figure 3** Distribution of verb types across inappropriate/ungrammatical L2 productions

## Existential *estar*

In the L2-up-beg group, 41.42% ($k$=70/169) of *estar* occurrences were inappropriate, as they were used with existential meaning (10).

(10) *Aquí* ***#está un pájaro*** *y aquí no está el pájaro* [L2-up-beg#303]
Here #*estar* a bird and here not *estar* the bird
Here there is a bird, and here there is no bird

In the L2-up-int group, the proportion of existential *estar* was 17.34% ($k$=43/248). The distribution of these uses is displayed in Figure 4.

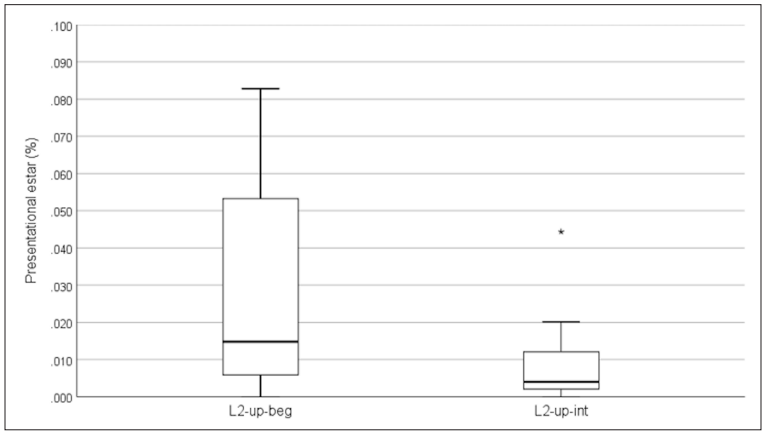



**Figure 4** Distribution of inappropriate existential uses of *estar*

The difference between L2-up-beg and L2-up-int speakers in the inappropriate use of *estar* was significant at the Mann-Whitney test ($U$=82.50, $Z$=-1.86, $p$=.04).

### *Haber*+Definite Nominal Phrases (DP)

In the L2-up-beg group, 12.5% ($k$=21/168) of *haber* occurrences violated the DE, as they were used with definite DPs (11).

| | | | | | |
|---|---|---|---|---|---|
| (11) | | ***hay** | *siempre* | ***la** chica* | [L2-up-beg#301] |
| | | *haber* | always | the girl | |
| | there | is | still | a girl | |

The percentage decreased to 4.7% ($k$=17/362) in the L2-up-int group. The distribution of these uses is displayed in Figure 5.

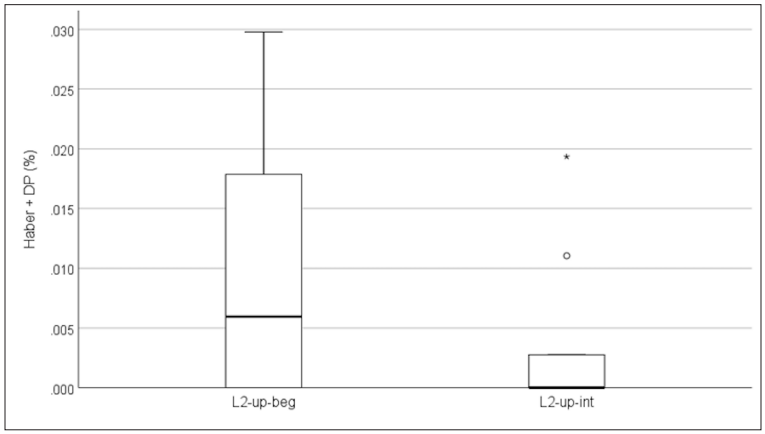



**Figure 5** Distribution of (ungrammatical) uses of *haber*+DP

The difference between L2-up-beg and L2-up-int speakers in the ungrammatical use of *haber* was significant at the Mann-Whitney test ($U$=89.000, $Z$=-1.731, $p$=.044).

A Generalized Linear Mixed Model with total locative expressions as the outcome, *estar*/*haber*/*ser* auxiliaries and groups as single and combined fixed effects, and individuals as a random effect correctly predicted locative expressions ($F$(7, 21)=5.203, $p$=.001), accounting for 96.7% of the total variance. *Estar* was the only significant predictor of total locative expressions (*Coeff*=1.010, *SE*=.299, $t$(1, 21)=3.378, *CI*[.388, 1.633]).

## 5 Discussion

The OPT proved to be effective in eliciting both locative and existential sentences. The L1 and more advanced L2 group (L2-up-int) showed comparable intra-group proportional distributions of *haber/estar* productions, and L2-up-begs produced an equal proportion of predicates with *haber* and *estar*. However, the use of *haber* was underdeveloped among L2-up-begs.

The minimal use of *ser* in the interlanguage suggests that these L2 learners may have moved beyond an initial *Full Transfer* state (Schwartz, Sprouse 1996) and are in the process of restructuring their grammars. However, given that they are from Rome, one would not necessarily expect transfer from standard Italian *essere*. Indeed, *ser* occurred mainly with quantified NPs, which were not considered in Figure 3 or counted as errors since they are appropriate in this context (12).

(12) *Antes había muchísimas flores cerca de la casa y ahora*
before had many flowers near of the house and now
*las flores son solo dos*
the flowers are$_{ser}$ only two
Before there were many flowers near the house and now there are only two [L2-up-int#326]

L2-up-begs produced more omissions than the other groups. If we consider these an avoidance strategy, they suggest that L2-up-begs may be aware that a different mechanism rules the expression of location in Spanish and definiteness in existential sentences, but they do not yet master the morphosyntactic structures to realize it.

Italian speakers did not underuse *estar*, unlike English and Arabic learners (Perpiñán 2014). In fact, a significant proportion of *estar* productions (41%) in L2-up-begs was inappropriate, as *estar* was used as an existential verb to introduce indefinite *themes* in the discourse. This suggests that L2 learners know that new information in the discourse is introduced through indefiniteness (see examples (10), (13), (14)). Still, they do not yet know that *estar* is not the appropriate auxiliary in this case; that is, they know the discourse condition but not the correct verb mapping. These inappropriate uses decreased significantly in L2-up-ints, though they remained present at a notable proportion (17%). This suggests that *estar* is not delayed but rather overextended. Overextension is confirmed by the fact that *estar* was the only significant predictor of all locative expressions, after controlling for individuals. There are two explanations for this fact, which are not mutually exclusive: *(1)* Italian learners could initially assume Spanish *estar* to be the only locative auxiliary, disregarding the semantic information of the *theme*, and hence using it with both definite and indefinite NPs. *(2)* This overextension may be due to the regional origins of the learners, who transfer into Spanish ESs the phonologically close copula *stare*, used in Rome and other Central and upper-Southern Italian varieties. In both cases, overextension of *estar* yields sentences that are morphosyntactically inappropriate in Spanish and could be considered pseudoexistential sentences with a locative predication. This seems supported by the fact that these structures usually contain focalized locative expressions such as (13) or deictic expressions like (14). In the framework of Cruschina (2016), these would be interpretable, respectively, as *presentational* and *deictic locative* sentences, which in Standard Italian are expressed with *essere*.

(13) *#En el imagen antes está un gato cerca* [Up-Beg #313]
in the image before is$_{estar}$ a cat near
*de una chica*
of a girl
In the picture before there was a cat close to a girl

(14) *#Aquí está un pájaro* [Up-Beg #303]
here is$_{estar}$ a bird
Here, there is a bird.

L2-up-begs also violated the DE by using *haber* with DPs (11), but the error rate was much lower (13%) than that for inappropriate *estar* uses. This suggests that beginners possess the pragmatics of the DE but are still working on reorganizing their auxiliary paradigm, which is mostly achieved at higher proficiency levels, in line with Lardiere (2009). Indeed, the difficulty is significantly reduced in L2-up-ints, where violations drop below 5%. It is worth noting that the OPT was administered in person on a laptop, so that the administrator was the learners' interlocutor, who shared with them knowledge of the picture stimuli and, consequently, familiarity with the referents of the target NPs produced. For this reason, the participants could have referred to *specific* referents, i.e., familiar, hearer-old (Prince 1992), or culturally copresent (Clark, Marshall 1981) referents, which they assumed to be in the addressee's long-term memory store (Abbott 1997). Within Lyons' (1999) framework, this would be sufficient to consider them *definite* referents, so that the DE restriction would be unnecessary. Thus, this might be a case of *parameter fluctuation* between speaker and addressee, similar to that described by Perpiñán (2014) in L1-Catalan speakers. In this view, the administration modality of the OPT can be considered a possible limitation of the present study to be addressed in future replications.

To conclude, in response to our research questions, Italian learners of Spanish show greater difficulty with the reconfiguration of the semantic and pragmatic features bundled in *estar* [+temporally bounded; old topic] than with the Definiteness Effect restriction encoded in Spanish *haber* [−definiteness]. In line with Cruschina (2016), this asymmetry may suggest a degree of universality in the DE restriction, despite its surface appearance in Italian.

## Bibliography

Abbott, B. (1997). "Definiteness and Existentials". *Language*, 73(1), 103. https://doi.org/10.2307/416595.

Agulló, J. (2023). "Existential Constructions, Definiteness Effects, and Linguistic Contact: At the Crossroads between Spanish and Catalan". *Languages*, 9(1), 11. https://doi.org/10.3390/languages9010011.

Belikova, A. et al. (2010). "Definiteness in Positive and Negative Existentials in the L2 of Russian Speakers". Costa, J.; Castro, A.; Lobo, M.; Pratas, F., *Language Acquisition and Development: Proceedings of GALA 2009*. Newcastle upon Tyne: Cambridge Scholars Publishing, 28-38.

Bentley, D.; Ciconte, F.M.; Cruschina, S. (2015). *Existentials and Locatives in Romance Dialects of Italy*. Oxford: Oxford University Press. https://doi.org/10.1093/acprof:oso/9780198745266.001.0001.

Cammarano, S. (1931). *Maria di Rohan*. Sesto S. Giovanni: A. Barion.

Chomsky, N. (1995). *The Minimalist Program*. Cambridge: The MIT Press.

Chomsky, N. (2001). "Beyond "universal grammar". *Sign Systems Studies*, 29(1), 367-8. https://doi.org/10.12697/SSS.2001.29.1.23.

Clark, H.H.; Marshall, C.R. (1981). "Definite Knowledge and Mutual Knowledge". Joshi, A.K.; Webber, B.L.; Sag, I.A. (eds), *Elements of Discourse Understanding*. Cambridge: Cambridge University Press, 10-63. https://philpapers.org/archive/CLADKA.pdf.

Cruschina, S. (2015). "Patterns of Variation in Existential Constructions". *Isogloss. A Journal on Variation of Romance and Iberian Languages*, 1(1), 33. https://doi.org/10.5565/rev/isogloss.5.

Cruschina, S. (2016). "Pseudo-Existentials and Definiteness Effects in Italian". Fischer, S.; Kupisch, T.; Rinke, E. (eds), *Definiteness Effects: Bilingual, Typological and Diachronic Variation*. Newcastle upon Tyne: Cambridge Scholars Publishing, 120-48.

Freeze, R. (1992). "Existentials and Other Locatives". *Language*, 68(3), 553-95. https://doi.org/10.2307/415794.

Hoekstra, T.; Mulder, R. (1990). "Unergatives as Copular Verbs; Locational and Existential Predication". *The Linguistic Review*, 7(1), 1-80. https://doi.org/10.1515/tlir.1990.7.1.1.

Holmback, H. (1984). "An interpretive Solution to the Definiteness Effect Problem". *Linguistic Analysis*, 3, 195-215.

Ionin, T.; Ko, H.; Wexler, K. (2004). "Article Semantics in L2 Acquisition: The Role of Specificity". *Language Acquisition*, 12(1), 3-69. https://doi.org/10.1207/s15327817la1201_2.

Jenkins, L. (1975). *The English Existential*. Berlin: De Gruyter. https://doi.org/10.1515/9783111357188.

Lardiere, D. (2004). "Knowledge of Definiteness Despite Variable Article Omission". Brugos, A.; Micciulla, L.; Smith, C.E. (eds), *Proceedings of the 28th Annual Boston University Conference on Language Development*, 28. Somerville, MA: Cascadilla Press, 328-39.

Lardiere, D. (2008). "Feature Assembly in Second Language Acquisition". Liceras, J.M.; Zobl, H.; Goodluck, H. (eds), *The Role of Formal Features in Second Language Acquisition*. London: Routledge, 106-40. https://doi.org/10.4324/9781315085340-5.

Lardiere, D. (2009). "Some Thoughts on the Contrastive Analysis of Features in Second Language Acquisition". *Second Language Research*, 25(2), 173-227. https://doi.org/10.1177/0267658308100283.

Lumsden, M. (1988). *Existential Sentences*. London: Routledge. https://doi.org/10.4324/9781315857435.

Lyons, C. [1999] (2009). *Definiteness*. Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511605789.

Milsark, G. (1977). "Toward an Explanation of Certain Peculiarities of the Existential Construction in English". *Linguistic Analysis*, 3, 1-29.

Perpiñán, S. (2014). "Locatives and Existentials in the L2 Spanish of Catalan Native Speakers". *Second Language Research*, 30(4), 485-514.

Perpiñán, S. (2015). "The Locative Paradigm in the L2 Spanish of Catalan Native Speakers". Judy, T.; Perpiñán, S. (eds), *The Acquisition of Spanish in Understudied Language Pairings*. Amsterdam: John Benjamins, 105-32. https://benjamins.com/catalog/ihll.3.05per.

Perpiñán, S.; Marín, R. (2021). "Aspect in the Acquisition of the Spanish Locative Paradigm by Italian L2 Learners". Drijkoningen, F.;Baauw, F.; Meroni, L. (eds), *Current Issues in Linguistic Theory*. Amsterdam: John Benjamins, 192-204. https://benjamins.com/catalog/cilt.357.10per.

Prince, E.F. (1992). "Subjects, Definiteness, and Information-Status". Mann, W.C.; Thompson, S.A. (eds), *Pragmatics & Beyond New Series*. Amsterdam: John Benjamins, 295-326. https://doi.org/10.1075/pbns.16.12pri.

Safir, K.J. (1985). *Syntactic Chains*. Cambridge: Cambridge University Press.

Schwartz, B.D.; Sprouse, R.A. (1996). "L2 Cognitive States and the Full Transfer/Full Access Model". *Second Language Research*, 12(1), 40-72. https://doi.org/10.1177/026765839601200103.

Slabakova, R. (2008). *Meaning in the Second Language*. Berlin: Mouton de Gruyter. https://doi.org/10.1515/9783110211511.

Sorace, A. (2011). "Pinning Down the Concept of 'Interface' in Bilingualism". *Linguistic Approaches to Bilingualism*, 1(1), 1-33. https://doi.org/10.1075/lab.1.1.01sor.

White, L. (2003). "Fossilization in Steady State L2 Grammars: Persistent Problems with Inflectional Morphology". *Bilingualism: Language and Cognition*, 6(2), 129-41. https://doi.org/10.1017/S1366728903001081.

White, L. et al. (2012). "Restrictions on Definiteness in Second Language Acquisition: Affirmative and Negative Existentials in the L2 English of Turkish and Russian Speakers". *Linguistic Approaches to Bilingualism*, 2(1), 54-89. https://doi.org/10.1075/lab.2.1.03whi.

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# Verb Repetition and Production in ASD
## An Investigation of Verbs with Alternating Transitivity in Sentential Context

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**Abstract** This study focuses on verbs with alternating transitivity in school-age Greek-speaking children with Autism Spectrum Disorder (ASD) and neurotypical development. In the first task, children were asked to produce sentences based on provided verbs, while the second task involved sentence repetition. No significant between-group differences were found in almost all conditions. Analyses within the class of unaccusative verbs indicated the same performance pattern by both groups, with better performance on non-active than active forms. Overall, no specific deficits in verbs with alternating transitivity have been found for individuals with ASD.

**Keywords** Autism Spectrum Disorder. Transitive verbs. Unaccusative verbs. Production task. Repetition task.

**Summary** 1 Introduction. – 2 The Study. – 3 Results. – 4 Discussion and Conclusion.

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## 1 Introduction

Autism Spectrum Disorders (ASD) is a neurodevelopmental disorder characterized by deficient social communication and interaction along with restricted and repetitive patterns of behavior and interests (DSM-V, American Psychiatric Association 2013).[1] ASD can be manifested with or without intellectual or language impairment. Language development in autism is heterogeneous, ranging from complete lack of spoken language to typical or even superior language performance (Kjelgaard, Tager-Flusberg 2001).

While the bulk of studies on language abilities of individuals with ASD concern pragmatics (Asada et al. 2022; de Villiers, Myers, Stainton 2013), recent studies were performed on their grammatical abilities. On the one hand, it has been reported that ASD participants show a performance comparable to neurotypically (NT) developing peers. For example, Khetrapal and Thornton (2017) found that high-functioning individuals with autism were capable of computing core grammatical procedures such as operator scope and binding and, by so doing, they showed performance comparable to that of NT individuals. In the same vein, Sukenik and Friedmann (2018) argued that children and adolescents with autism do not have syntactic difficulties. Sukenik and Friedmann used highly sensitive syntactic measures assessing expressive and receptive syntactic abilities and performed detailed error analysis. They suggested that failure in a syntactic task does not reflect a syntactic impairment but can arise from pragmatic or discourse difficulties. Furthermore, Terzi et al. (2014) reported a NT performance pattern by Greek individuals with ASD on passive and reflexive verbs.

On the other hand, other researchers have reported grammatical impairment for a subgroup of children with ASD (Modyanova, Perovic, Wexler 2017) or consistently lower performance than NT individuals on conditions assessing grammatical abilities (Andreou, Lymperopoulou, Aslanoglou 2025). Similarly, others (Peristeri, Andreou, Tsimpli 2017) have found deficient linguistic performance for groups of children with ASD with different language abilities (high and low language ability) in a variety of verbal tasks. In addition, Terzi, Marinis and Francis (2016) reported that children with ASD without language impairment performed poorer than NT children on grammar tests.

In sum, recent findings indicate that the status of grammatical abilities in ASD is a matter of high controversy. However, in our

**1** This paper is a small tribute to the contribution of Anna Cardinaletti in the field of Linguistics. Her distinguished work, generous support and confidence in younger colleagues is a source of motivation for our academic work.

view, it is of great importance to explore the possible origin of the deficient grammatical performance in ASD by providing thoughtful consideration of the linguistic properties affecting grammatical performance and error analysis. Following this reasoning, the present study assesses the performance of Greek-speaking individuals with ASD on the production and repetition of verbs with alternating transitivity in sentential context. Specifically, the participants of our study were tested on transitive and intransitive (unaccusative) verbs, which, despite being lexically identical, can be associated with different syntactic configurations (Alexiadou, Anagnostopoulou 2004; Bastiaanse, van Zonneveld 2002). By so doing, the interaction of syntax with lexical retrieval can be fruitfully tested. Notably, studies on transitive and intransitive verbs including unaccusatives have been extensively conducted in different clinical populations, such as children with DLD and adults with aphasia, in different languages (e.g. Ebbels, Dockrell, van der Lely 2012; Stavrakaki et al. 2011), as the verb argument structure properties have been thought to pose specific challenges for individuals with language difficulties. This holds particularly for unaccusative verbs, which have been considered as complex forms in terms of their argument structure (see Bastiaanse, van Zonneveld 2002). However, to the best of our knowledge, a few studies were conducted on verb argument structure in individuals with ASD. Specifically, Naigles and Piskin (2018) investigated how lexical and syntactic factors impact the acquisition of verb argument structure by children with ASD and NT children. These researchers found that individuals with ASD resemble NT children in many respects. For instance, they used transitive verbs more consistently than intransitive ones. In addition, Ambridge, Bannard and Jackson (2015) studied the verb argument structure in ASD by employing a grammaticality judgment task. They reported that children with ASD, when compared to IQ-matched NT individuals, showed less aversion to verb argument structure violations.

While the present study can be considered as a continuation of the previous ones on the verb-argument structure (Ambridge, Bannard, Jackson 2015; Naigles, Piskin 2018), it innovates in the following ways:

(i) It addresses the question of ASD performance on verbs with alternating transitivity by comparatively assessing it by means of a production and a repetition task.
(ii) It reports data from Greek, a language in which unaccusative verbs appear with active and non-active morphology, a property that provides new insights into the interplay of different linguistic levels (morphology, syntax) over the verb retrieval and recall.
(iii) It provides detailed error analysis to illuminate the linguistic profile of the ASD participants.

Overall, this study contributes to a better understanding of linguistic abilities in ASD by employing a novel experimental design in an understudied language.

## 2 The Study

This study has been a part of the MA Thesis of the first author (PT) under the supervision of the second author (SS) and has been performed in accordance with the Aristotle University of Thessaloniki regulations regarding the completion of MA degree programs. Data collection was conducted by PT, a qualified teacher of preschool education with additional expertise in special education.

### 2.1 Participants

In total, twenty-two school age children participated in this study, seven of whom were diagnosed with ASD by Centers of Interdisciplinary Assessment, Counseling and Support (Kentra Diaforodiagnosis Aksiologisis Symvouleftikis Ypostirixis KE.D.A.S.Y.) in Northern Greece. They were recruited from inclusion classes in primary education settings and from private speech and language therapy centers. Inclusion criteria for ASD individuals were (i) diagnosis in accordance to DSM-V criteria and (ii) ability to communicate verbally. All participants were highly functioning individuals with non-verbal IQ above 85 according to clinicians' reports and the assessments they provided. At the same time, fifteen NT children of the same chronological age (CA) participated in this study, serving as the control group. The participants' demographic data are presented in Table 1.

**Table 1** Demographic data

| Group | CA Mean | CA Range (SD) | Total number of participants (number of males) |
|---|---|---|---|
| ASD | 8.5 | 6-11 (1.8) | 7 (6) |
| Controls | 7.3 | 6-11 (1.5) | 15 (7) |

No significant between-group differences were found in CA, as shown by the non-parametric Mann-Whitney test, which was chosen due to

the small size of the samples included in this study (U=49, $p$=0.84, exact two-tailed).[2]

## 2.2 Materials and Procedure

### 2.2.1 The Production Task

The experimental materials employed in this study were developed by the second author of this study (Stavrakaki et al. 2011), in line with the methodology employed by Bastiaanse and van Zonneveld (2002), to assess the verb transitivity alternations in Greek-speaking individuals. More specifically, these materials consist of 30 verbs in total, 15 of which are transitives and the remaining 15 intransitives (unaccusatives). As will be explained in this section, there were 20 verb forms for unaccusatives due to their specific morphological properties in Greek. Indeed, the Greek morphosyntactic peculiarities were taken into account for the construction of these materials. Greek is a highly inflectional language in which the distinction +/– active voice is shown in the verb ending. Specifically, the analysis proposed by Alexiadou and Anagnostopoulou (2004) for the crucial structural differences between transitives and unaccusatives was followed. According to it, for transitive verbs, active voice is projected at the level of syntax. However, this is not the case for unaccusative verbs with active voice, as the active voice morphology is not projected at the level of syntax. As unaccusatives in Greek can also appear with non-active voice, non-active voice is projected at the level of syntax. Alternating unaccusative verbs fall into three morphological patterns, a classification which was followed for the construction of the experimental materials employed in this study. Therefore, regarding the unaccusative verbs, 5 of them appeared with active morphology (class I), 5 with the non-active morphology (class II) while the remaining 5 can appear with either active or non-active morphology (class III; in total 10 verb forms) (for linguistic details see Alexiadou, Anagnostopoulou 2004; for comprehensive presentation of these materials and the complete verb/sentence list, see Stavrakaki et al. 2011). In total, there were 20 unaccusative verb forms; thus, the complete list included 35 verb forms, 20 unaccusative and 15 transitive verb forms. Examples of the experimental material, taken from Stavrakaki et al. (2011, 663-4), are presented below:

**2** The exact two-tailed $p$ is reported in the between-group statistical analysis throughout this paper due to the small size of samples.

**Table 2** Examples of the experimental material

| | | | | |
|---|---|---|---|---|
| **Transitive verb** | | | | |
| *To* | *Koritsi* | *skorpise* | *Ta* | *louloudia* |
| The | Girl | scattered-ACT | The | flowers |
| **Unaccusative verb with active voice (ACT)** | | | | |
| *Ta* | *Louloudia* | *skorpisan-ACT* | | |
| The | Flowers | scattered-*ACT* | | |
| **Unaccusative verb with non-active voice (NACT)** | | | | |
| *Ta* | *Louloudia* | *skorpistikan-ACT* | | |
| The | Flowers | scattered-NACT | | |

The production task was supported by a set of experimental pictures which showed an activity or an event that could be described by either a transitive or an intransitive verb, respectively. In addition to previous employment of these materials in adult speakers of Greek (Stavrakaki et al. 2011), a pilot implementation phase was conducted with school age children to ensure that the materials can be used for children. Furthermore, at the outset of the experiment, training was provided. In the course of the experimental phase, experimental and distractor pictures were presented to participants, who were individually tested. Simultaneously with the experimental picture presentation, the target verb was orally introduced in the third-person singular of the past tense. Notably, with respect to the class III of unaccusative verbs which can either appear in active or non-active voice, the verb oral presentation included the verb form in active and non-active form; thus, in total, ten verb forms of class III were orally presented, and twenty unaccusative verb forms. Children were asked to use the orally presented verb to describe the picture shown as accurately as possible. For example, children were presented with a picture which showed an activity, e.g. '*a man was opening the door*' (for transitive verbs) or an event, e.g. '*an open door*' (for unaccusative verbs). At the same time, they were orally presented with a verb in the 3rd person singular of the past tense, e.g. '*opened*'. Participants were asked to describe the picture as accurately as possible by using the orally presented word. The experimental verb conditions were pseudorandomized. In total, there were 35 responses per child. For samples of the pictures employed in the production task, see Stavrakaki et al. 2011.

Responses were scored as correct if they met the following two criteria: (i) they had the required argument structure (transitive or unaccusative), and (ii) they appeared with the correct voice marking. Examples of the correct (=target) responses are presented in examples (3) and (4) for transitive and unaccusative structures, respectively. With respect to transitive structures, responses with

subject omission were taken as correct, as Greek is a null subject language. By contrast, object omission (e.g. '*anixe*', '*opened*' *instead of* '*o andras anixe tin porta*', '*the man opened the door*' *in the transitive condition*), noun-adjective responses (e.g. '*adia tsanta*', '*empty bag*' instead of '*to pedi adiase tin tsanta*' '*the child emptied the bag*'), adjectival passives (e.g. '*tentomeno lastiho*', '*stretched rubber*' instead of '*to lastiho tentothike*', '*the rubber got stretched*') or failure to provide a response (no response) were considered erroneous productions.

#### 2.2.2 The Sentence Repetition Task

For this experiment, the same materials as in the first task were employed, with modifications required by the nature of the sentence repetition task. The experimenter presented a sentence orally, which the participant should repeat immediately after the experimenter. 35 sentences were presented in total: 15 transitive sentences, and 20 unaccusative sentences (5 from class I, 5 from class II and 10 from class III, as class III provided the possibility of voice alternation; see Stavrakaki et al. 2011, for the complete list). Responses (35, in total, per child) were scored as correct if they constituted exact repetitions; otherwise, they were classified as incorrect.

## 3 Results

### 3.1 The Production Task

The overall group performance on the production of transitive and unaccusative verbs is presented in Table 3.

**Table 3** Correct group performance on transitive and unaccusative verbs

| Participants | Transitive verbs (Max N=15) Mean (SD) | Unaccusative verbs (Max N=20) Mean (SD) |
|---|---|---|
| ASD | 11.42 (3.18) | 12.86 (2.54) |
| Controls | 14.33 (0.97) | 15.67 (3.12) |

As can be seen in Table 3, both groups show the same performance pattern with higher performance on transitives than on unaccusatives. While the ASD group performed lower than the control group on both

conditions, a significant difference was observed between groups only for the transitives (Mann-Whitney test, U=10.5, $p$=0.002), while the same level of performance was found for the unaccusatives (Mann-Whitney test, U=27.5, $p$=0.075). Within-group analyses indicated the same performance level for individuals with ASD on the transitive and unaccusative conditions (Wilcoxon test, Z=1.58, $p$=0.115), but significantly different performance for those with TD (Wilcoxon test, Z=2.97, $p$=0.003).

Error analysis revealed the same predominant error types for both groups of participants. These consisted in the production of unaccusative structures instead of the transitive ones in the transitive verb condition and, conversely, the production of transitive structures instead of the unaccusative ones in the unaccusative verb condition. Other errors included the production of passive sentences, adjectival passives, nouns and adjectives (without verbs), as well as object omission and no responses. These error types are presented in Table 4.

**Table 4** Error types and number of errors

| **Transitive verb condition** | | |
|---|---|---|
| Error types | ASD | Controls |
| Unaccusative Structure | 16 | 10 |
| Object omission | 6 | 0 |
| Noun- Adjective | 3 | 0 |
| No response | 2 | 0 |
| **Unaccusative verb condition** | | |
| Error types | ASD | Controls |
| Transitive Structure | 41 | 43 |
| Adjectival passive | 2 | 22 |
| Adjective and noun (with linking verb) | 5 | 0 |
| No response | 2 | 0 |

Further analysis was performed to investigate the effect of voice (active vs. non-active) on the correct performance of participants. This analysis is presented in Table 5.

**Table 5** Correct performance on unaccusative verbs with active and non-active voice

| **Group** | **Active Morphology Mean (SD)** | **Non-Active Morphology Mean (SD)** |
|---|---|---|
| ASD | 4.86 (1.68) | 8 (1.63) |
| Controls | 6.60 (2.22) | 9.07 (1.49) |

As shown in Table 5, both groups performed better on unaccusative verbs with non-active morphology than on unaccusative verbs with active morphology. Interestingly, this difference proved to be significant for both groups, indicating that non-active morphology facilitates the production of unaccusative verbs (Wilcoxon test, Z=2.21, $p$=0.03 for ASD and Z=3.08, $p$=0.002 for control participants).

Control participants performed better than those with ASD. However, the Mann-Whitney test indicated no significant difference between the two groups for neither the active (U=30, $p$=0.12) nor the non-active morphology condition (U=30, $p$=0.12).

## 3.2 The Repetition Task

The results from the repetition task are presented in Table 6.

**Table 6** Correct group performance on transitive and unaccusative verbs

| Group | Transitive verbs (Max N=15) Mean (SD) | Unaccusative verbs (Max N=20) Mean (SD) |
|---|---|---|
| ASD | 14.43 (0.53) | 19.43 (0.79) |
| Controls | 14.93 (0.26) | 20 (0.00) |

As shown in Table 6, the groups showed almost identical performance on the repetition task, so no significant group differences were detected (U=26, $p$=0.07 and U=30, $p$=0.12 for transitive and unaccusative verbs, respectively). In addition, no significant within-group differences in both verb conditions were found (Z=4.47, $p$ = 0.65 for ASD participants and Z=1, $p$=0.32 for controls).

The few errors produced by participants fell into the following categories:

(i) Transitive verb condition: object omission (N=4 and N=1 for ASD and controls, respectively).
(ii) Unaccusative verb condition: transitive verbs (N=2); a lexical error (N=1) and a phonological error (N=1).

The effect of voice (active vs. non-active morphology) on the correct performance of participants was also investigated **[tab. 7]**.

**Table 7** Correct performance on unaccusative verbs with active and non-active morphology

| Group | Active morphology (Max N=10) Mean (SD) | Non-active morphology (Max N=10) Mean (SD) |
|---|---|---|
| ASD | 9.57 (0.53) | 9.86 (0.38) |
| Controls | 10 (0.00) | 10 (0.00) |

As can be seen in Table 7, both groups performed at ceiling or almost at ceiling. Within-group analyses indicated no significant difference between the two conditions for ASD participants (Z=1.41, $p$=0.16), while controls performed at ceiling. Between-group analyses indicated the same group performance on both conditions (U=30, $p$= 0.12 for unaccusatives marked with active morphology and U=45, $p$=0.63 for unaccusatives marked with non-active morphology).

### 3.3 Comparison between Task I and Task II

Within-group analyses performed to investigate each group's performance on the production vs. repetition of transitive and unaccusative verbs indicated a significant task effect. Specifically, the participants with ASD performed significantly below on the production task for both verb conditions (Z=2.38, $p$=0.017 for transitives and Z=2.38, $p$=0.018 for unaccusatives). The same performance pattern was exhibited by controls on the unaccusative verb condition (Z=3.19, $p$=0.001). However, marginal significance was found for the transitive verb condition, apparently due to the (almost) ceiling control performance on the production of transitive verbs (Z=1.98, $p$=0.047). Overall, this analysis indicates the advantage of the repetition task over the production one.

## 4 Discussion and Conclusion

This study was set up to investigate whether high functioning individuals with ASD show difficulties in the domain of verb argument structure compared to NT individuals. Two experimental paradigms were employed for this purpose, with different tasks, a production task and a sentence repetition task. The production task aimed to investigate specific limitations in verb-argument structure. Indeed, the target verb was lexically presented in the target tense and voice to eliminate the interference of lexical and morphological factors in sentence production. The repetition task assessed the participants' ability to retain the linguistic material in their verbal short-term

memory and accurately reproduce it. Currently, it has been suggested that the sentence repetition task is in fact a measure of language abilities (Klem et al. 2015).

Overall, although individuals with ASD performed worse on both tasks, a significant difference from NT individuals emerged only in the transitive verb condition of the production task, likely due to the near-ceiling performance of NT participants. These results indicate that the demanding argument structure of unaccusative verbs does not prevent individuals with ASD from showing typical performance. In addition, the near-ceiling performance of ASD participants on sentence repetition is consistent with findings indicating no particular difficulties in recalling the items themselves (Poirier et al. 2011).

Stronger evidence for comparable performance between individuals with ASD and NT individuals comes from the exhibition of the same performance pattern on unaccusatives with active vs. non-active voice morphology in both tasks. In the production task, significantly better performance is shown on unaccusative verbs with non-active morphology. This finding aligns with existing evidence that shows that non-active voice marking for unaccusative verbs facilitates unaccusative verb production. Stavrakaki et al. (2011) found that patients with aphasia showed lower performance on unaccusatives with active than non-active morphology. These researchers argued that this performance arises due to 'the misleading voice directions' ('*associate active voice with no agentive voice head at the level of syntax*'). In other words, inflectional voice morphology provides instructions to the level of syntax. As a result, non-active voice morphology is more likely to be associated with the absence of an agentive voice head at the level of syntax (i.e. unaccusative verbs with non-active morphology) than active voice morphology (i.e. unaccusative verbs with active morphology). In the repetition task, no dissociation between unaccusatives with active and non-active morphology was found for participants with ASD and NT, indicating that the restrictions which hold for production do not apply in the repetition task; hence, the advantage of the repetition task over the production one. In addition, further evidence corroborating the typical performance pattern is provided by error analysis and, especially, by the predominant error patterns in the production experiment (in both verb conditions). As pointed out in the results section, these error patterns were identical.

However, as shown by the within-group analysis for the production experiment, NT individuals – but not the individuals with ASD – showed a discrepancy between transitive and unaccusative sentences. While this performance pattern may be due to the near-ceiling performance level of NT participants, it apparently constitutes a qualitative between-group difference, which warrants further investigation of the ASD verb learning process. Still, the complexity

of unaccusative structures did not prevent the ASD participants from attaining a high-performance level.

While these findings provide evidence for an unimpaired or almost typical performance pattern, they are not in agreement with those reported by Ambridge, Bannard and Jackson (2015), who argued for no typical sensitivity of ASD participants in argument structure violations. This discrepancy can be explained in terms of the metalinguistic demands of the grammaticality judgment task employed by these researchers. In fact, metalinguistic abilities take a long time to develop (Tunmer, Herriman 1984) and thus the performance observed by Ambridge, Bannard and Jackson (2015) may be indicative of a simple delay and not a deviant performance pattern.

Concluding, this study does not show any specific deficit in producing and repeating verbs with alternating transitivity while, in general terms, it provides evidence for neurotypical developmental pattern in this domain. It is important, however, to acknowledge its limitations, especially the small participant samples, which limit the generalizability of our findings. For the future, recruiting a larger number of participants could potentially improve the representativeness of the sample. In addition, the concurrent application of different experimental methods to investigate verb argument structure and verb lexicon in ASD would prove enlightening.

## Bibliography

Asada, K. et al. (2022). "Understanding of the Gricean Maxims in Children with Autism Spectrum Disorder: Implications for Pragmatic Language Development". *Journal of Neurolinguistics*, 63, 101085. https://doi.org/10.1016/j.jneuroling.2022.101085.

Alexiadou, A.; Anagnostopoulou, E. (2004). "Voice Morphology in the Causative–Inchoative Alternation: Evidence for a Non-Unified Structural Analysis of Unaccusatives". Alexiadou, A.; Anagnostopoulou, E.; Everaert, M. (eds), *The Unaccusativity Puzzle*. Oxford: Oxford University Press,114-36.

American Psychiatric Association, DSM-5 Task Force (2013). *Diagnostic and Statistical Manual of Mental Disorders: DSM-5™ (5th ed.).* Washington, DC: American Psychiatric Publishing.

Ambridge, B.; Bannard, C.; Jackson, G.H. (2015). "Is Grammar Spared in Autism Spectrum Disorder? Data from Judgments of Verb Argument Structure Overgeneralization Errors". *Journal of Autism and Developmental Disorders*, 45(10), 3288-96. https://doi.org/10.1007/s10803-015-2487-5.

Andreou, G.; Lymperopoulou, V.; Aslanoglou, V. (2025). "Structural Language in Neurodevelopmental Disorders: Comparison between Autism Spectrum Disorder (ASD) and Developmental Language Disorder (DLD)". *Frontiers in Education*, 10, 1641303. https://doi.org/10.3389/feduc.2025.1641303.

Bastiaanse, R.; van Zonneveld, R. (2002). "The Production of Verbs with Alternating Transitivity in Broca's and Anomic-Wernicke's Aphasia". *Brain and Language*, 83, 76-8. https://doi.org/10.1016/j.jneuroling.2004.11.006.

de Villiers, J.; Myers, B.; Stainton, R.J. (2013). "Revisiting Pragmatic Abilities in Autism Spectrum Disorders: A Follow-Up Study with Controls". *Pragmatics & Cognition*, 21(2), 253-69. https://doi.org/10.1075/pc.21.2.01vil.

Ebbels, S.; Dockrell, J.; van der Lely, H. (2012). "Production of Change-of-State, Change-of-Location and Alternating Verbs: A Comparison of Children with Specific Language Impairment and Typically Developing Children". *Language and Cognitive Processes*, 27(9), 1312-33. https://doi.org/10.1080/01690965.2011.605598.

Khetrapal, N.; Thornton, R. (2017). "C-Command in the Grammars of Children with High Functioning Autism". *Frontiers in Psychology*, 8, 402. https://doi.org/10.3389/fpsyg.2017.00402.

Kjelgaard, M.M.; Tager-Flusberg, H. (2001). "An Investigation of Language Impairment in Autism. Implications for Genetic Subgroups". *Language and Cognitive Processes*, 16, 287-308. https://doi.org/10.1080/01690960042000058.

Klem, M. et al. (2015). "Sentence Repetition is a Measure of Children's Language Skills rather than Working Memory Limitations". *Developmental Science*, 18(1), 146-54. https://doi.org/10.1111/desc.12202.

Modyanova, N.; Perovic, A.; Wexler, K. (2017). "Grammar is Differentially Impaired in Subgroups of Autism Spectrum Disorders: Evidence from an Investigation of Tense Marking and Morphosyntax". *Frontiers in Psychology*, 8, 320. https://doi.org/10.3389/fpsyg.2017.00320.

Naigles, L.; Piskin, J. (2018). "Lexical and Syntactic Influences on Children's Acquisition of Verb Argument Structure: Comparing Typical Children and Children with Autism Spectrum Disorder". Bertolini, A.B.; Kaplan, M.J. (eds), *Proceedings of the 42nd Annual Boston University Conference on Language Development*. Somerville: Cascadilla Press, 572-85.

Peristeri, E.; Andreou, M.; Tsimpli, I.M. (2017). "Syntactic and Story Structure Complexity in the Narratives of High- and Low-Language Ability Children with Autism Spectrum Disorder". *Frontiers in Psychology*, 8(2027). https://doi.org/10.3389/fpsyg.2017.02027.

Poirier, M. et al. (2011). "Short-Term Memory in Autism Spectrum Disorder". *Journal of Abnormal Psychology*, 120(1), 247-52. https://doi.org/10.1037/a0022298.

Stavrakaki, S. et al. (2011). "The Production and Comprehension of Verbs with Alternating Transitivity by Patients with Non-Fluent Aphasia". *Aphasiology*, 25(5), 642-68. https://doi.org/10.1080/02687038.2010.542248.

Sukenik, N.; Friedmann, N. (2018). "ASD Is Not DLI: Individuals with Autism and Individuals with Syntactic DLI Show Similar Performance Level in Syntactic Tasks, but Different Error Patterns". *Frontiers in Psychology*, 9, 279. https://doi.org/10.3389/fpsyg.2018.00279.

Terzi, A.; Marinis, T.; Francis, K. (2016). "The Interface of Syntax with Pragmatics and Prosody in Children with Autism Spectrum Disorders". *Journal of Autism and Developmental Disorders*, 46, 2692-706. https://doi.org/10.1007/s10803-016-2811-8.

Terzi, A. et al. (2014). "Grammatical Abilities of Greek-Speaking Children with Autism". *Language Acquisition*, 21(1), 4-44. https://doi.org/10.1080/10489223.2013.855216.

Tunmer, W.E.; Herriman, M.L. (1984). "The Development of Metalinguistic Awareness: A Conceptual Overview". Tunmer, W.E.; Pratt, C.; Herriman, M.L. (eds), *Metalinguistic Awareness in Children. Springer Series in Language and Communication*. New York: Springer, Berlin, Heidelberg, 15, 12-35. https://doi.org/10.1007/978-3-642-69113-3_2.

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# Verbing in English: An Acquisition Perspective on Denominals

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**Abstract** Unmarked category change is highly productive in English. Research on novel forms is limited but indicates effects of contextual support and the semantic link between nouns and their derived verbs. Additionally, acceptability varies considerably, likely reflecting the need for pragmatic inference. We propose a syntax-pragmatics interface approach arguing that distinct but interacting constraints give rise to hypotheses on how denominal verbs are acquired and processed.

**Keywords** Unmarked category change. Denominal verbs. Syntax-pragmatics interface. Acceptability. Pragmatic inference.

**Summary** 1 Introduction. – 2 Do Young English Children Verb Nouns? – 3 Adult Processing Novel Verbs. – 4 Lexical Innovation without Lexical Machinery: A Syntax-pragmatics Account. – 5 Conclusion and a Final Note on Morphology.

## 1 Introduction

First language acquisition studies have shown that nouns are acquired earlier than verbs (Gillette et al. 1999). Explanations include a cognitive-based approach wherein word learning indexes conceptual development and an experiential-based approach wherein

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emerging syntax and acquired nouns enable the acquisition of verb meaning (cf. Gleitman 1990).

Following Gillette et al (1999) and standard assumptions in the literature, how and when something is acquired depends on the available cues and one's cognitive readiness to exploit them. The Timing Hypothesis (Tsimpli 2014; Schulz, Grimm 2019) attributes later-developing skills to conceptual maturation, including working memory and attention, permitting the integration of syntactic, semantic, and discourse-pragmatic cues (e.g., Hendriks et al. 2013). In this framework, narrow syntactic properties are acquired 'early' or 'very early.' This earliness is due to (i) infants' innate, high-level sensitivity to cues devoid of intrinsic, lexical, or compositional meaning, such as rhythm and prosody (Mehler et al. 1988), as well as (ii) their related ability to focus on linguistic form with infants already sensitive to core syntactic properties (Seidl et al. 2003).

In lexical acquisition, the first form-meaning mappings appear around 12 months in a two-step process during which stored phonological forms are mapped onto meaning units (Jusczyk and Hohne 1997). At this point, the precedence of nouns over verbs *in production* is attested, a fact which input (child-directed speech) cannot account for. Instead, it has been argued this asymmetry derives from the different sets of relevant cues: extralinguistic cues suffice for nouns while the combination of acquired nouns and developing syntactic frames enables acquiring verb meanings (Gillette et al. 1999). Thus, (concrete) noun meaning involves world-to-word pairing, while verb meaning involves structure-to-world pairing (Gleitman 1994). Although this reflects a universal trajectory in lexical acquisition, it assumes that lexical entries are acquired with inextricable category specification. Yet, in adult grammar many lexical items surface with multiple categories, e.g. $\text{paint}_{\text{v}}$/$\text{paint}_{\text{N}}$ which has led syntactic theories to suggest either category-free roots (e.g. Borer 2003) or covert derivational processes in the syntax (e.g., Hale and Keyser 1993). Both of these approaches raise learnability questions: how can children acquire category-free roots when lexical items always appear categorized in the input? But also, how can children acquire complex and covert derivational processes to derive a verb from a noun? Although full responses to these questions are beyond the scope of this chapter, we note that they make different predictions regarding the trajectory and speed of acquisition. If the acquisition task starts with category-free roots, as universals, acquisition of $\text{paint}_{\text{v}}$/$\text{paint}_{\text{N}}$ should be early and uniform. However, if children must acquire specific derivational processes, acquisition should be gradual and piecemeal ($\text{clean}_{\text{Adj}}$/$\text{clean}_{\text{V}}$ vs $\text{paint}_{\text{v}}$/$\text{paint}_{\text{N}}$).

In this study, we discuss the phenomenon of 'verbing' as a productive process for lexical innovation as it relates to developing L1 and L2 grammars of English and its processing by adult L1 speakers.

We will argue that this is more naturally captured via a root-based approach which we will use to generate novel testable predictions regarding language acquisition and L1 sentence processing.

## 2 Do Young English Children Verb Nouns?

Target-like use of category changes requires the acquisition of both the syntactic mechanisms available in the target grammar and awareness of the conditions under which different types of category changes are felicitous. Regarding syntactic mechanisms, previous work on L1 acquisition indicates that in languages permitting unmarked category shifts, such shifts appear very early. Observational studies have reported the production of novel cross-categorial forms (e,.g., 1-3) from around age 2 (Clark 1982; Kuczaj 1978).

(1) Don't broom my mess. [not wanting his mother to sweep his room] (2;11, Clark 1982)

(2) Mummy trousers me. [talking about getting dressed] (2;3, Clark 1982)

(3) You're gunning him. [= shooting with a gun] (5;0, Kuczaj 1978)

This demonstrates that children acquiring a language like English acquire the relevant syntactic mechanism very early. However, production data are not well suited to investigating children's awareness of when/whether such category changes are felicitous, as they cannot distinguish genuine expectations of polysemy from stretching known words to fill communicative gaps (Clark 1978). Consistent with this idea, Clark (1982) observed that non-adult-like innovations (e.g., those blocked by existing lexical items) were frequent in children aged 3-5 but noticeably less so in older children. Therefore, studies on the interpretation may be more instructive of the conditions under which children find unmarked category shifts felicitous.

Bushnell and Maratsos (1984) asked 2-, 5-, and 7-year-olds to act out unmarked category shifts like (4). Unlike 2-year-olds, 5- and 7-year-old children acted these sentences out as doing something with X (e.g., kleenex) to Y (e.g., suitcase) reliably more often than the reverse. However, 7-year-old children recognized sentences with novel forms as 'silly,' suggesting that although they could generate interpretations, they recognised these shifts were not conventionalised (the judgement task was too difficult for younger children).

(4) Can you kleenex the suitcase?

More recently, Lippeveld and Oshima-Takane examined young children's interpretation of novel category shifts from newly taught nouns/verbs, thereby avoiding influence from previous experience. In the nominal version of their task, (Québécois) French-speaking children were first taught a noun (e.g., 'This is a vop.') from a video with exemplars of an unknown tool performing an action. After confirming the acquisition of the noun, children were presented two novel objects, one which performed the same action and one which did not, and were asked to find the 'one that vops.' While both 2.5-year-old and 3-year-old children readily learned the novel nouns, only 3-year-old children were able to reliably extend them and identify the target tool when asked to find the 'one that vops' (Lippeveld, Oshima-Takane 2015b). A similar pattern held in the verbal version of the task. Of the children who were able to learn the novel verb, only the 3-year-olds were able to reliably find 'the vop.' Subsequently Lippeveld and Oshima-Takane (2015a) found that 2.5-year-olds exposed to more cross-categorial pairs in their input were more likely to extend them to novel verb uses, suggesting a role of input as well as maturation.

While these studies show that children extend senses across categories when provided the novel form, other work suggests that they also actively infer novel forms without evidence. Srinivasan et al. (2017) taught 3-5 year olds novel verbs (e.g., dax) referring to the use of an instrument, and tested whether children infer a corresponding nominal form via a mutual exclusivity task. When shown the instrument used for *daxing* alongside other objects (patients/unrelated tools) and asked to find the *kiv*, children 4- and 5-year-olds reliably selected the alternative object, indicating an expectation for cross-categorial polysemy. Given task difficulty, it is unclear whether younger children also have such expectations.

Taken together then, these findings suggest children acquire the syntactic mechanism underlying unmarked category change very early and are sensitive to at least some specific semantic links between N-V pairs by around 3. More broadly, this aligns with evidence that polysemy facilitates, rather than hinders, lexical acquisition (Srinivasan and Rabagliati 2021 and citations therein).

The above also ties in with a long-standing question in language acquisition: are child grammars productive or conservative? Put another way, do their grammars generate forms/interpretations beyond prior experience, or do they resist generalisation? Both positions have been argued. Productivity is attested in syntax-semantics (e.g., generics, Brandone, Gelman 2009) and pragmatic phenomena (e.g., metaphor comprehension in familiar contexts, Vosniadou 1987), but not all types of scalar implicature (cf. Barner, Bachrach 2010; Noveck 2001). Verbing provides further evidence

for productivity in early grammars, as even very young children overgeneralize verbs (Clark 1982).

## 3 Adult Processing Novel Verbs

Previous experimental work with adults has focused on factors influencing interpretation and processing of novel verbs in context. That work has suggested that, like children, adults favour polysemy over accidental homophony. Anecdotal evidence for this comes from Kelly (1998), where participants paraphrased sentences like (5), with 11 out of 12 reported paraphrases incorporating the attested noun (e.g., 'I played my harmonica by the campfire.'). Related evidence can be taken from Vogelzang et al.' (submitted) paraphrase task.

(5) I harmonicaed by the campfire.

However, these interpretations are not unconstrained. In addition to the semantic content of the noun (e.g., Kelly 1998), interpretations are conditioned by their syntactic context. Kaschak and Glenberg (2000) showed that the novel verbs with ditransitive frames were interpreted as implying a transfer event (cf. give, send), unlike their transitive counterparts (see also Goldwater, Markman 2009 on middles).

Beyond the level of the sentence, interpretation and processing are particularly sensitive to the discourse context. Kaschak and Glenberg (2000) showed that while sentences with novel denominal verbs are read more slowly overall (an effect not reducible to their relative unexpectedness, Cairncross et al., submitted), supportive/non-supportive contexts disproportionately affected their processing (e.g., prior mention of a chair with missing wheels would hinder a verbal interpretation of 'chair' in 6). This suggests greater reliance on contextual information, presumably because such verbs lack a stored eventive meaning.

(6) Rachel (brought/chaired) the scientist his mail.

More recent work has shifted its attention from the properties of the stimuli to properties of the participants. Vogelzang et al. (2025; submitted) compared the processing and acceptability of novel denominal verbs to their parent nouns in L1 and L2 English speakers, focusing on individual differences in cognitive skills and language proficiency. Results from L1 speakers showed that, although novel forms were rated as less acceptable, processing was influenced by speakers' contextual linguistic diversity, i.e. the speaker's active and passive exposure to multiple languages (indexed by the CILD-Q, Wigdorowitz et al. 2023); as diversity increased, the processing cost of

novel category shifts decreased. Vogelzang et al. (submitted) suggest this may reflect greater proficiency in pragmatic inferencing across contexts and/or weaker commitments to stored lexical content.

A different pattern emerged for intermediate to advanced L2 speakers. Although they also read sentences with novel denominals more slowly, reading times were not modulated by contextual linguistic diversity. Instead performance was influenced by their L2 proficiency (Vogelzang et al. 2025); more proficient participants were more likely to differentiate acceptability ratings, favouring conventionalised forms. Given increasing proficiency is unlikely to reduce capacity for pragmatic inferencing, Vogelzang et al. (2025) suggest that this reflects greater prescriptivism and/or awareness of the novelty. This partially parallels L1 acquisition where early production of novel category shifts is followed by a decline of non-target forms and increased sensitivity to conventionality (Clark 1982; Bushnell, Maratsos 1984).

## 4 Lexical Innovation without Lexical Machinery: A Syntax-pragmatics Account

Previous analyses of (attested) denominal verbs can be split depending on how the verb relates to its nominal counterpart. Some assume a direct derivational relationship, whereby a nominal base is incorporated into an abstract verb (e.g., Hale and Keyser 1993), with different semantic categories (e.g., locatum vs locatum) derived from different syntactic structures. Others deny the relationship is always direct, arguing that denominal verbs can arise from a category-free root merging with a verbalising element (e.g., Harley 2005; Suozzi, Cardinaletti 2024). Integrating an acquisitional perspective, recall that these two approaches make different predictions regarding the developmental speed and trajectory. As noted above, this phenomenon is very early acquired with children initially innovating more and gradually converging on adult norms. Similarly, L2 speakers accept more lexical innovation in lower proficiency levels and become more conservative with higher proficiency.

Therefore, we adopt a root-based approach, namely Borer's exoskeletal approach (2003 and subsequent work) to account for the observed patterns in L1 and L2 development. A core assumption of this approach is that non-functional lexical items (listemes) are category-free pairings of abstract phonological content and concepts, which play no role in syntax. Consequently, elements such as the mass-count distinction or argument structure are not lexically specified, but arise from functional elements (functional morphemes and features) that build syntactic structures.

In this framework, at a post-syntactic level, the abstract interpretation provided by the syntax is evaluated against the conceptual content of the roots; where mismatches arise, the conceptual content is stretched to fit the rigid interpretation provided by the grammar. Thus, (7) leads to an interpretation in which the steak has been liquified, despite world knowledge.

(7) Kim drank the steak.

In this approach, roots are categorised by their syntactic context. Focusing on verbing, Borer argues that this can happen in several ways: via a functional morpheme like *-ise* which assigns a category (e.g., RADICE vapor-ise); by movement out of the lexical domain (where category-free listemes are first merged) to a position such as T (e.g., RADICE paint-ed); or contextual assignment as in (8). Although there T is filled by *will*, blocking the movement of elements from the lexical domain, *will* forces its complement (the lexical domain, LD, where roots are first merged) to be recategorised as a VP, in turn, forcing some non-maximal element to become its head, i.e., V.

(8) $[_{T}$ will $[_{LD \rightarrow VP}$ RADICE clean -> clean$_{V}]]$

Event structure is then determined by what else is merged into the structure. For example, take (9 & 10). While the former is telic, the latter is atelic. In Borer's approach, this is because the object in (9) is quantized via the presence of the numeral. By re-merging the object into a functional projection which c-commands the VP (AspQ), its quantity value is copied via spec-head agreement, resulting in a telic event. In the case of (10), however, no quantity value is available, resulting in an atelic event.

(9) I ate two apples (in an hour).

(10) I ate apples (*in an hour).

Turning back to novel verbs, under Borer's exoskeletal approach, no N-to-V derivational process is required: novel verbs are roots verbalized by functional elements, AspQ or T, that determine event structure and argument structure. This holds even when roots such as *steak* in (11) for which its conceptual content must be considerably stretched to become eventive. In this framework, novel category shifts are linguistically no different from conventionalised verbs, and the productivity noted by Clark and Clark (1979) and observed in L1 acquisition is expected. Put differently, on the one hand, the productivity of verbing reflects syntactic properties encoded in the exoskeletal approach, while on the other hand, the plausibility of

stretching a concept, given world knowledge, leads to post-syntactic conservativity.

(11) Kim steaked the drink.

This yields new predictions for the processing and interpretation of novel denominal verbs. Focusing on aspect and quantised objects, consider (12) and (13). In (12), listeners may flexibly interpret *cocktail* (e.g., providing cocktails or entertaining in a cocktail-like manner), but the event must be atelic, as the object, though individuated, is not quantised and provides no quantity value for AspQ (Borer 2003 and subsequent work). In (13), by contrast, the object is quantised, allowing an (optionally) telic interpretation. These interpretative differences should come for free in L1 and L2 acquisition and processing provided the relevant functional heads and features are already in place.

(12) They cocktailed guests (*in/for an hour).

(13) They cocktailed two guests (in/for an hour).

Another relevant point is that, unlike the functional morpheme *-ise* which contributes semantic content, verbing via abstract features (e.g., <past>) or contextual assignment imposes no additional restriction on interpretation beyond the event structure. As such, learners and adult L1 comprehenders should entertain a wider range of interpretations for unmarked category shifts than marked ones. However, finding a contextually appropriate interpretation poses a greater burden on pragmatic inferencing of the comprehender (cf. Carston 2021).

Following a relevance-theoretic approach (Sperber, Wilson 1995), lexical entries encode linguistic and encyclopaedic meaning, and utterance interpretation relies on the comprehender's pragmatic inferencing to derive context-specific meaning that balances relevance and cognitive effort (Carston 2002). Thus, interpreting lexical items, particularly novel ones as well as metonymy and polysemy more generally, involves constructing *ad hoc* concepts to evaluate the speaker's intended meaning (Carston 2021; Falkum 2015).

This ability to infer contextually appropriate meanings is available to young children and adults alike (Falkum et al. 2016). In combination with their grammatical competencies (e.g., early acquisition of event structure and its effects on argument structure and telicity; Schulz 2018), this ability supports the production and interpretation of cross-categorial polysemy. It can thereby facilitate lexical development beyond the input and stored mappings, leading to the rapid development of the lexicon through syntax (cf. Gleitman

1990). In this way the combination of syntax and pragmatics can readily account for children's creativity and overgeneralisation of novel Vs in English (Clark 1982; Kuczaj 1978).

A remaining question is how their creativity in production is later constrained. Existing accounts point to the role of the developing lexicon, enabling learners to select from stored items in context (Borer 2004; Tsimpli 2006). In this vein, Tsimpli's (2006) analysis of Voice and transitivity alternations in Greek learners shows that the relevant syntactic properties are acquired early (age 3), with morphosyntax constraining production in the absence of a fully developed lexicon. Extending this to verbing, stored lexical items progressively compete or block novel verbs (e.g., $broom_v$ vs $sweep_v$), while pragmatic inference continues to support lexical innovation across the lifespan. Variation across L1 and L2 speakers would then reflect experiential factors (e.g., language proficiency or contextual linguistic diversity) affecting inferencing. Along these lines then, the conservativity of more proficient L2ers could be taken to emerge for the same reasons as in older L1 children, namely greater influence of stored lexical knowledge. What remains unclear is whether low-proficiency L2 learners show creativity comparable to young L1 learners before such constraints of a larger lexicon emerge.

## 5 Conclusion and a Final Note on Morphology

Based on L1 acquisition and processing data, we argued that verbing in English reflects *syntactic* creativity. Syntax, alongside an innate pragmatic capacity for contextual inference, is responsible for children's very early acquisition of verbing and their readiness to interpret novel verbs. As the lexicon develops, stored lexical items increasingly compete with novel forms in most communicative contexts.

A related and rather underexplored question concerns the role of morphology in the acquisition and processing of verbing. Would non-category changing derivational morphology affect acceptability by providing additional information to constrain interpretation (e.g., re-tree, over-cocktail)? What about inflectional morphology as a cue for category change? Although this is a matter of ongoing research (Cairncross et al., in prep.), our approach would predict that derivational but not inflectional morphology could affect acceptability rates as only the former provides additional semantic information to guide interpretation. Relatedly, although syntactic creativity and pragmatic inferencing should be universal, the availability of unmarked category shifts is language-specific. The role of morphological marking in the L1 warrants further investigation to better compare the acquisition of verbing in L1 and L2 English.

## Bibliography

Barner, D.; Bachrach, A. (2010). "Inference and Exact Numerical Representation in Early Language Development". *Cognitive Psychology*, 60(1), 40-62. https://doi.org/10.1016/j.cogpsych.2009.06.002.

Borer, H. (2003). "Exo-Skeletal vs. Endo-Skeletal Explanations: Syntactic Projections and the Lexicon". Moore, J.; Polinsky, M. (eds), *The Nature of Explanation in Linguistic Theory*, 31-67.

Borer, H. (2004). "The Grammar Machine". Alexiadou, A.; Anagnostopoulou, E.; Everaert, M. (eds), *The Unaccusativity Puzzle: Explorations of the Syntax-Lexicon Interface,* 288-331. https://doi.org/10.1093/acprof:oso/9780199257652.003.0012.

Brandone, A.C.; Gelman, S.A. (2009). "Differences in Preschoolers' and Adults' Use of Generics About Novel Animals and Artifacts: A Window onto a Conceptual Divide". *Cognition,* 110(1), 1-22. https://doi.org/10.1016/j.cognition.2008.08.005.

Bushnell, E.W.; Maratsos, M.P. (1984). "'Spooning' and 'Basketing': Children's Dealing with Accidental Gaps in the Lexicon". *Child Development*, 55(3), 893-902. https://doi.org/10.2307/1130140.

Cairncross, A.; Vogelzang, M.; Tsimpli, I.M. (in prep.). "The Role of Inflectional and Derivational Morphology in the Processing of Novel Category Shifts".

Cairncross, A.; Vogelzang, M.; Tsimpli, I.M. (submitted). "Disentangling Unexpectedness from Novelty in the Processing of Morphologically Unmarked Category Changes in English".

Carston, R. (2002). "Metaphor, ad Hoc Concepts and Word Meaning. More Questions Than Answers". *UCL Working Papers in Linguistics,* 14, 83-105.

Carston, R. (2021). "n". *Mind & Language*, 36(1), 108-33. https://doi.org/10.1111/mila.12329.

Clark, E.V. (1978). "Strategies for Communicating". *Child Development*, 49(4), 953-9. https://doi.org/10.2307/1128734.

Clark, E.V. (1982). "The Young Word-Maker: A Case Study of Innovation in the Child's Lexicon". Wanner, E.; Gleitman, L.R. (eds), *Language Acquisition: The State of the Art,* 390-425.

Clark, E.V.; Clark, H.H. (1979). "When Nouns Surface as Verbs". *Language,* 55(4), 767-811. https://doi.org/10.2307/412745.

Falkum, I.L. (2015). "The How and Why of Polysemy: A Pragmatic Account". *Lingua*, 157, 83-99. https://doi.org/10.1016/j.lingua.2014.11.004.

Falkum, I.L.; Recasens, M.; Clark, E.V. (2016). "'The Moustache Sits Down First': On the Acquisition of Metonymy". *Journal of Child Language,* 44(1), 87-119. https://doi.org/10.1017/s0305000915000720.

Gillette, J.; Gleitman, H.; Gleitman, L.R.; Lederer, A. (1999). "Human Simulations of Vocabulary Learning". *Cognition,* 73(2), 135-76. https://doi.org/10.1016/S0010-0277(99)00036-0.

Gleitman, L.R. (1990). "The Structural Sources of Verb Meanings". *Language Acquisition*, 1(1), 3-55 https://doi.org/10.1207/s15327817la0101_2.

Gleitman, L.R. (1994). "Words, Words, Words". *Philosophical Transactions of the Royal Society of London. Series B: Biological Sciences,* 346(1315), 71-7. https://doi.org/10.1098/rstb.1994.0130.

Goldwater, M.B.; Markman, A.B. (2009). "Constructional Sources of Implicit Agents in Sentence Comprehension". *Cognitive Linguistics,* 20(4), 675-702. https://doi.org/10.1515/COGL.2009.029.

Hale, K.; Keyser, S.J. (1993). "On Argument Structure and the Lexical Expression of Syntactic Relations". Hale, K.; Keyser, S.J. (eds), *The View from Building 20: Essays in honor of Sylvain Bromberger*, 53-110.

Harley, H. (2005). "How Do Verbs Get Their Names? Denominal Verbs, Manner Incorporation, and the Ontology of Verb Roots in English". Erteschik-Shir, N.; Rapoport, T. (eds), *The Syntax of Aspect: Deriving Thematic and Aspectual Interpretation*, 42-65. https://doi.org/10.1093/acprof:oso/9780199280445.003.0003.

Hendriks, P.; Koster, C.; Hoeks, J.C.J. (2013). "Referential Choice Across the Lifespan: Why Children and Elderly Adults Produce Ambiguous Pronouns". *Language, Cognition and Neuroscience,* 29(4), 391-407. https://doi.org/10.1080/01690965.2013.766356.

Hyams, N. (1996). "The Underspecification of Functional Categories in Early Grammar". Clahsen, H. (ed.), *Generative Perspectives on Language Acquisition: Empirical Findings, Theoretical Considerations, and Crosslinguistic Comparisons*, 91-128. https://doi.org/10.1075/lald.14.07hya.

Jusczyk, P.W.; Hohne, E.A. (1997). "Infants' Memory for Spoken Words". *Science,* 277, 1984-1986. https://doi.org/10.1126/science.277.5334.1984.

Kaschak, M.P.; Glenberg, A.M. (2000). "Constructing Meaning: The Role of Affordances and Grammatical Constructions in Sentence Comprehension". *Journal of Memory and Language,* 43(3), 508-29. https://doi.org/10.1006/jmla.2000.2705.

Kelly, M.H. (1998). "Rule- and Idiosyncratically Derived Denominal Verbs: Effects on Language Production and Comprehension". *Memory & Cognition,* 26(2), 369-81. https://doi.org/10.3758/BF03201147.

Kuczaj, S.A. (1978). "Why Do Children Fail to Overgeneralize the Progressive Inflection?" *Journal of Child Language,* 5(1), 167-71. https://doi.org/10.1017/S0305000900002026.

Lippeveld, M.; Oshima-Takane, Y. (2015a). "The Effect of Input on Children's Cross-Categorical Use of Polysemous Noun-Verb Pairs". *Language Acquisition,* 22(3), 209-39. https://doi.org/10.1080/10489223.2014.943902.

Lippeveld, M.; Oshima-Takane, Y. (2015b). "Nouns to Verbs and Verbs to Nouns: When Do Children Acquire Class Extension Rules for Deverbal Nouns and Denominal Verbs?" *Applied Psycholinguistics,* 36(3), 559-88. https://doi.org/10.1017/S0142716413000349.

Lukic, S.; Krauska, A.; Yoshida, M.; Thompson, C.K. (2023). "The Role of Category Ambiguity in Normal and Impaired Lexical Processing: Can You Paint Without the Paint?" *Frontiers in Human Neuroscience,* 17. https://doi.org/10.3389/fnhum.2023.1028378.

Mehler, J.; Jusczyk, P.W.; Lambertz, G.; Halsted, N.; Bertoncini, J.; Amiel-Tison, C. (1988). "A Precursor of Language Acquisition in Young Infants". *Cognition,* 29(2), 143-78. https://doi.org/10.1016/0010-0277(88)90035-2.

Noveck, I.A. (2001). "When Children Are More Logical Than Adults: Experimental Investigations of Scalar Implicature". *Cognition,* 78(2), 165-88. https://doi.org/10.1016/s0010-0277(00)00114-1.

Rabagliati, H.; Marcus, G.F.; Pylkkänen, L. (2010). "Shifting Senses in Lexical Semantic Development". *Cognition*, 117(1), 17-37. https://doi.org/10.1016/j.cognition.2010.06.007.

Schulz, P. (2018). "Telicity in Typical and Impaired Acquisition". Syrett, K.; Arunachalam, S. (eds), *Semantics in Language Acquisition,* 123-50. https://doi.org/10.1075/tilar.24.06sch.

Schulz, P.; Grimm, A. (2019). "The Age Factor Revisited: Timing in Acquisition Interacts With Age of Onset in Bilingual Acquisition". *Frontiers in Psychology*, 9. https://doi.org/10.3389/fpsyg.2018.02732.

Seidl, A.; Hollich, G.; Jusczyk, P.W. (2003). "Early Understanding of Subject and Object Wh-Questions". *Infancy*, 4(3), 423-36. https://doi.org/10.1207/S15327078IN0403_06.

Sperber, D.; Wilson, D. (1995). *Relevance : Communication and Cognition.* 2nd ed.

Srinivasan, M.; Al-Mughairy, S.; Foushee, R.; Barner, D. (2017). "Learning Language from Within: Children Use Semantic Generalizations to Infer Word Meanings". *Cognition,* 159, 11-24. https://doi.org/10.1016/j.cognition.2016.10.019.

Srinivasan, M.; Rabagliati, H. (2021). "The Implications of Polysemy for Theories of Word Learning". *Child Development Perspectives,* 15(3), 148-53. https://doi.org/10.1111/cdep.12411.

Suozzi, A.; Cardinaletti, A. (2024). "Word- or Root-Derived? A Semantic Test for Instrumental Denominal Verbs in Italian". *Isogloss. Open Journal of Romance Linguistics,* 10(7), 1-24. https://doi.org/10.5565/rev/isogloss.412.

Tsimpli, I.M. (2006). "The Acquisition of Voice and Transitivity Alternations in Greek as Native and Second Language". Unsworth, S.; Parodi, T.; Sorace, A.; Young-Scholten, M. (eds), *Paths of Development in L1 and L2 Acquisition*, 15-55. https://doi.org/10.1075/lald.39.03tsi.

Tsimpli, I.M. (2014). "Early, Late or Very Late? Timing Acquisition and Bilingualism". *Linguistic Approaches to Bilingualism,* 4(3), 283-313. https://doi.org/10.1075/lab.4.3.01tsi.

Vogelzang, M.; Carston, R.; Tsimpli, I.M. (2025). "L2 English Speakers' Ability to Process Novel Denominal Verbs: The Role of Proficiency and Language Experience". *Journal of the European Second Language Association,* 9(1), 156-67. https://doi.org/10.22599/jesla.120.

Vogelzang, M.L.; Carston, R.; Tsimpli, I.M. (submitted). "What Happens When You Cocktail Your Guests? On the Processing and Acceptability of Innovative Denominal Verbs".

Vosniadou, S. (1987). "Children and Metaphors". *Child Development*, 58(3), 870-85. https://doi.org/10.2307/1130223.

Wigdorowitz, M.; Pérez, A.I.; Tsimpli, I.M. (2023). "A Holistic Measure of Contextual and Individual Linguistic Diversity". *International Journal of Multilingualism,* 20(2), 469–487. https://doi.org/10.1080/14790718.2020.1835921.

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