IX-2023

Quaderni di Linguistica e Studi Orientali- QULSO

Working papers in Linguistics and Oriental Studies

PRESS

Università degli Studi di Firenze

Dipartimento di Formazione, Lingue, Intercultura, Letterature e Psicologia

Biblioteca di Studi di Filologia Moderna: Collana, Riviste e Laboratorio

Quaderni di Linguistica e Studi Orientali *Working Papers in Linguistics and Oriental Studies*

9

Editors

M. Rita Manzini

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FIRENZE UNIVERSITY PRESS
2023

Quaderni di Linguistica e Studi Orientali / Working Papers in Linguistics and Oriental Studies - -
n. 9, 2023
ISSN 2421-7220
ISBN 979-12-215-0190-2
DOI: http://dx.doi.org/10.13128/QULSO-2421-7220-8

Direttore Responsabile: Arianna Antonielli

The online digital edition of the journal is published in Open Access on http://oaj.fupress.net/index.php/bsfm-qulso

The products of the Publishing Committee of Biblioteca di Studi di Filologia Moderna: Collana, Riviste e Laboratorio (<https://www.forlilpsi.unifi.it/vp-440-laboa.html>) are published with financial support from the Department of Education, Languages, Intercultures, Literatures and Psychology of the University of Florence, and in accordance with the agreement, dated February 10th 2009 (updated February 19th 2015 and January 20th 2021), between the Department, the Open Access Publishing Workshop and Firenze University Press. The Workshop promotes the development of OA publishing and its application in teaching and career advice for undergraduates, graduates, and PhD students in the area of foreign languages and literatures, as well as providing training and planning services. The Workshop's publishing team are responsible for the editorial workflow of all the volumes and journals published in the Biblioteca di Studi di Filologia Moderna series. QULSO employs the double-blind peer review process. For further information please visit the journal homepage (<https://oaj.fupress.net/index.php/bsfm-qulso>).

Editing and layout by LabOA: A. Antonielli (Journal Manager and Managing Editor), G. Rugna (Editorial Assistant), D. Cappelli, L. Dal Pozzo, G. Mazzaggio, Y. Moussaid, A. Paparatty (Copy Editors) and A. Gentile, F. Salvadori, E. Simoncini (Layout Editor).

Cover: Salomè H. Varje

We gratefully record that this issue has been co-financed by the Department of Humanities of the University of Florence.

Via Cittadella, 7, 50144 Firenze, Italy
www.fupress.com

Quaderni di Linguistica e Studi Orientali- QULSO
Working papers in Linguistics and Oriental Studies

Firenze University Press
https://oajournals.fupress.net/index.php/bsfm-qulso

OPEN ACCESS

Citation: (2023) Indice. *Qulso* 9: pp. 5-6. doi: http://dx.doi.org/10.13128/QUSO-2421-7220-15173

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OPEN ACCESS

Citation: M.R. Manzini (2023) Editorial/Editoriale. *Qulso* 9: p. 7. doi: http://dx.doi.org/10.13128/QUSO-2421-7220-15190

Data Availability Statement: All relevant data are within the paper and its Supporting Information files.

Competing Interests: The Author(s) declare(s) no conflict of interest.

Editorial / Editoriale

In sending to print the ninth issue of the journal, I would like to acknowledge the important set of contributions from the 48th Incontro di Grammatica Generativa (IGG), held in Florence on February 16-18, 2023. I would like to thank all of the accepted speakers that have submitted a written version for publication. The resulting selection is in keeping with some important aims both of the conference and of the journal. The authors represented are a mixture of internationally recognized scholars in their field and of younger researchers, some at the beginning of their career. The themes dealt with cover the span from core syntax to both the semantico-pragmatic and the externalization interfaces – and classical investigations using the tools of formal linguistics alternate with frankly experimental approaches.

Equally important are the varied contributions in the remaining part of the journal, reflecting research trends that the journal has consistently hosted in the past, including formal morphosyntax, but also sociolinguistics and L2 studies, relating in particular to language teaching.

Last but not least I would like to thank the editorial team of the journal. A special thank is due to Giuseppe Rugna for his help with the Proceedings of IGG in his double role as part of the organizing committee of the conference and of the editorial team of QULSO.

The Editor

Syntax and Its Interfaces: Selected Papers from the 48th IGG Conference (University of Florence, February 16-18, 2023)

Quaderni di Linguistica e Studi Orientali- QULSO
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Firenze University Press
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The "Return" of Southern Italo-Romance *Tonna*: From Pseudocoordination to Adverb. A Case Study in Grammaticalization*

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OPEN ACCESS

Citation: S.N. Cardullo (2023) The "Return" of Southern Italo-Romance Tonna: From Pseudocoordination to Adverb. A Case Study in Grammaticalization. *Qulso* 9: pp. 11-28. doi: http://dx.doi.org/10.13128/QULSO-2421-7220-15165

Data Availability Statement: All relevant data are within the paper and its Supporting Information files.

Competing Interests: The Author(s) declare(s) no conflict of interest.

Abstract:

The present work constitutes an initial look at the use of *tonna*, an invariable form of *tornare* 'return', used as a relatively uncommon V1 in southern Italo-Romance pseudocoordination structures. Along with losing its ability to inflect, grammaticalization of *tornare*, frequent across Italo-Romance, has consisted in its shift from lexical motion verb to a functional one with repetitive aspectual value, i.e. *tonna mmanciu* 'I eat again'. This paper presents novel data from the variety of Eolian (Italo-Romance dialect of the Eolian Islands), which shows constructions previously unattested with invariable V1s, such as its embedding under functional verbs in non-finite clauses. A cartographic approach building on existing accounts of pseudocoordination V1s – centered on Cinque's (1999, 2006) hierarchy of functional projections – leads us to consider two overarching explanations for *tonna*: that it is (a) a functional, aspectual head (in one of the two "repetitive" projections, viz. $Asp_{Repetitive(I)}$, $Asp_{Repetitive(II)}$) or (b) an adverb, a specifier in these respective projections. Ultimately, the conclusion that it has (re)grammaticalized to the point of becoming a (deficient) adverb in the lower $Asp_{Repetitive(II)}$ proves to be the most convincing from a theoretical perspective. A potential structural consequence is the syncretic status of the $Asp_{Repetitive(II)}$ head.

Keywords: *Grammaticalization, Left Adjunction, Pseudocoordination, Repetitive Aspect, Southern Italian Dialects*

1. Introduction: Southern Italo-Romance pseudocoordination

Pseudocoordination refers to a set of disparate structures, widespread cross-linguistically (Ross 2021: §2), which in southern Italian dialects (SIDs) consist primarily of a movement verb

* I would like to sincerely thank my informants for their openness and patience, and Leonardo Russo Cardona, Ștefania Costea, Vincenzo Nicolò Di Caro, Marco Fioratti, Adam Ledgeway, and two anonymous reviewers for their helpful, constructive suggestions on this work. All remaining errors are my own.

(V1) connected to a lexical verb (V2) by a linking element *a*,[2] *e* (which trigger the presence of fortition[3] on V2), or Ø.[4] In their textbook manifestation, the two predicates are obligatorily coreferential and show the same TMA (tense-modality-aspect) features. Despite alternative accounts (cf. Manzini and Savoia 2005: 688ff.; Manzini, Lorusso and Savoia 2017), many scholars consider pseudocoordination structures to be monoclausal, due to their monoeventive interpretation, the ungrammaticality of adverb interpolation (1) and floating quantifiers (2), as well as obligatory clitic climbing (3), and the possibility for *Wh*-extraction (4), not permitted in canonical coordination (Cardinaletti and Giusti 2003; Di Caro 2019a; Ledgeway 2021). Furthermore, negation may only precede V1 (1), inasmuch as independent negation of V2 is excluded. Order of conjuncts is rigid and other coordinators may not be substituted.

(1) Un vaju (*mai) a ppigghiu (mai) u pani
NEG go.1SG.PRS.IND never A fetch.1SG.PRS.IND never the bread
'I (never) go and/to fetch bread'

(2) I picciotti vannu (*tutti) a ppigghianu (tutti) u pani
the.PL boys go.3PL.PRS.IND all A fetch.3PL.PRS.IND all the bread
'The boys (all) go and/to fetch bread'

(3) U vaju a (*u) ppigghiu (*lu)
it= go.1SG.PRS.IND A it= fetch.1SG.PRS.IND =it
'I go and/to fetch it'
(Marsala [TP], Cardinaletti and Giusti 2001: 388-90)

(4) Cchi bba piglia Ciccio?
what go.3SG.PRS.IND fetch.3SG.PRS.IND Ciccio?
'What is Ciccio going to fetch?'
(Cosenza, Ledgeway 2021: 11)

Though generally found in extreme southern Italian dialects (ESIDs), which this work focuses on, seemingly equivalent structures may be found in the Upper South (USIDs), above the Cetraro-Bisignano-Melissa (Calabria) and Taranto-Ostuni (Apulia) isoglosses which separate the two dialect groups (Manzini and Savoia 2005: 688ff.; Ledgeway 2021: 32). Neapolitan asyndeton to some degree (Ledgeway 1997), and even more so Barese pseudocoordination

[2] Many scholars starting from Ascoli (1896) maintain that this *a* originates from Latin AC, used to coordinate constituents perceived as closely related or forming a single event (cf. VIRI AC FEMINAE 'men and women' [Rohlfs 1969: §760]), otherwise not continued as a productive coordinator in Italo-Romance (cf. a crystallized form in standard Italian numeral *diciassette* 'seventeen'). From a synchronic perspective, it is identical to the reflex of AD (> *a* 'to'), the etymon proposed by Gaspary (1879) and Manzini, Lorusso and Savoia (2017).

[3] On *raddoppiamento fonosintattico* (RF), cf. Loporcaro 1997b.

[4] Ascoli (1896, 1901); Rohlfs (1969: §759, §761, §766); Leone (1973); Sornicola (1976); Sorrento (1977); Cardinaletti and Giusti (2001, 2003, 2019); Manzini and Savoia (2005: 688ff.); Cruschina (2013, 2022); Di Caro and Giusti (2015); Di Caro (2019a, 2019b); Andriani (2016: §5, Forthcoming); Ledgeway (2016, 2021); Manzini, Lorusso and Savoia (2017); Lorusso (2019); Calabrese (2020); Cruschina and Calabrese (2021); Giusti, Di Caro and Ross (2022), *inter alia*.

(Andriani 2016: §5, forthcoming; cf. also Lorusso 2019) have been argued to be comparable to ESID pseudocoordination, but only from a synchronic perspective. They originate from a distinct diachronic path, where a rhizotonic infinitive was reanalyzed as an inflected form.

While not wishing to oversimplify the significant differences between the constructions of different southern varieties, which each show unique, productive systems, the present work features a comparative approach, where different regional manifestations are considered to be part of a single overarching phenomenon. In what follows, patterns of variation are outlined and serve as important linguistic context to understand the behavior of *tonna*, the particle under examination here. In particular, pseudocoordination constructions vary according to multiple factors, including but not limited to the predicates that can occur as V1 and V2, the moods and tenses in which it is licensed, and particularly relevant for the present discussion, the degree of grammaticalization of V1.

The V1s most frequently licensed in this construction are GO[5] (found in most ESIDs), COME (found in many Sicilian and Calabrian varieties), STAY (cf. §3), and WANT (the latter two found primarily in Salento, in southern Apulia). To a lesser extent, other predicates may trigger this construction, including SEND, PASS BY, and – focus of the present account – RETURN (cf. §2), all three of which have been documented in Sicily. In addition to different V1s, the following examples exhibit the different types of linking elements that may be found in southern varieties (*e*, Ø – witness the lack of RF –, and *a*).

(5) Vaju e ccattu u pani
go.1SG.PRS.IND E buy.1SG.PRS.IND the bread
'I go and/to buy the bread'
(Feroleto [CZ], Toscano 2022)

(6) Vìegnu vivu
come.1SG.PRS.IND drink.1SG.PRS.IND
'I come and/to drink'
(Cosenza, Ledgeway 2021: 10)

(7) [u stɔnə[6] (a) cˈcamənə]
he= stay.3SG.PRS.IND A call.3SG.PRS.IND
'They're calling him'
(Martina Franca [TA], Manzini and Savoia 2005: 690)

Furthermore, pseudocoordination may show both inter- and intra-paradigmatic restrictions. In particular, instead of being available in all tenses, this construction is frequently limited to only a subset. After the imperative – which licenses pseudocoordination across many Italo-Romance varieties (cf. Ledgeway 1997) – the frequency with which different tenses allow this type of finite hypotaxis follows an implicational hierarchy:

[5] Hereafter, small caps will be used to refer to verb concepts, irrespective of their verbal morphology or morphosyntactic status (i.e. inflected vs. invariable V1).

[6] As will be explored below, in the Salentino (ESID) varieties of Apulia, STAY is often reduced to an invariable form (Manzini and Savoia 2005; Andriani 2016; Ledgeway 2016). Though technically below Apulia's Taranto-Ostuni isogloss separating USIDs from ESIDs, the dialect of Martina Franca (TA) patterns with (southeastern) Apulo-Barese (USID) varieties: it presents an inflected form of STAY, and in this particular variety, only in the 1SG and 3PL (cf. also fn. 18).

present indicative > preterite / > imperfect > counterfactual[7]
(Ledgeway 2021: 20; cf. Di Caro 2019a: 121)

In addition, in many varieties the use of this construction is not available in all grammatical persons, and distinct defective paradigms are recognized as productive patterns, which may vary according to tense (Cruschina 2013, 2022; Di Caro 2019a). Generalizing, Ledgeway (2021: 20) represents this variation with the following implicational hierarchy, which is exemplified below in Table 1:

2SG > 3SG > 1/2/3SG > 1/2/3SG + 1PL (N-Pattern[8]) > full paradigm

	(a) Gravina (BA) (Andriani 2016: 217)	(b) Rutigliano (BA) (Andriani 2016: 219)	(c) Marsala (Cardinaletti and Giusti 2003: 380)	(d) Cosenza
1SG	vóuchə a ssuné	vəŋg a ʃ'ʃɔ:uk	vaju a ppigghiu	vaiu pigliu
2SG	vè ssùnə	ve (a) ʃ'ʃu:k	vai a ppigghi	va pigli
3sg	vè ssòunə	ve (a) ʃ'ʃɔ:uk	va a ppigghia	va ppiglia
1pl	scəm'a ssuné	ʃəm a ʃə'kwe	emu a ppigghiari	jamu pigliamu
2pl	scəet'a ssuné	ʃət a ʃə'kwe	iti a ppigghiari	jati pigliati
3pl	vònn'a ssuné	vənn a ʃə'kwe	vannu a ppigghianu	vannu piglianu
	'go and/to play'	'go and/to play'	'go and/to take'	'go and/to take'

Table 1. SID pseudocoordination paradigms
(*Ibidem*, 21)

Depending on the variety, those tenses and grammatical persons which do not allow pseudocoordination instead employ embedded infinitives, or, in the case of many ESIDs, which notoriously avoid these, a complementizer and a finite form (Rohlfs 1969: §717; Ledgeway 1998; De Angelis 2013, *inter alia*).

Finally, particularly important here is the degree of grammaticalization of V1: whether it is inflected or uninflected,[9] invariable. In the latter case, which some have interpreted as a prefix,[10] V1 GO may be reduced to *va* / *uo* /*o* / *ʃɛ* / *(ʃ)ʃa* / *bba*, COME to *vinn*, and STAY to *sta* / *stæ*, commonly used regardless of the verb tense and grammatical person of V2. The linking element, if utilized, may no longer be visible, though its (erstwhile) presence can be observed through the retention of RF on V2 (Leone 1995: §46; Ledgeway 2016: 158).

(8) O ppigghjamu / O ppigghjai u pani
o fetch.1PL.PRS.IND o fetch.1SG.PST.IND il pane
'Let's go/I went to fetch the bread'
(Acireale [CT], Di Caro 2019a: 32)

[7] The conditional or imperfect subjunctive, which in many SIDs form a syncretic category (Rohlfs 1969: §744).
[8] On morphomes (cf. Aronoff 1994) and the so-called "N-Pattern" pervasive in Romance, see Maiden 2004, *et seq.*
[9] Despite their assuming the presence of a theme vowel, not postulated by Ledgeway (2016: 168, 2021: 18), Calabrese (2020: §2.3) and Cruschina and Calabrese (2021) consider these constructions to be 'uninflected', unlike Manzini, Lorusso, and Savoia (2017: 46), who accordingly prefer the term 'invariable'.
[10] Cruschina (2013, 2022); Di Caro (2019b); Calabrese (2020); Cruschina and Calabrese (2021).

(9) Vinn a ffìcimu / ffacìstivu / ffìciru a spisa
VINN A do.1PL.PST do.2PL.PST do.3PL.PST the groceries
'We/you/they went grocery shopping'
(Mazzarino [CL], Di Caro 2019a: 117)

(10) [lu sta f'fattsu]
it= STA go.1SG.PRS.IND
'I'm doing it'
(Mesagne [BR], Manzini and Savoia 2005: 691)

As described by Cruschina (2013: 270; cf. also Heine 1993; Hopper and Traugott 2003), depending on the variety, V1s, especially invariable ones, tend to show many if not all the hallmarks of grammaticalization, including (a) "desemantization of the original lexical value", i.e. with motion semantics giving way to an emphatic or aspectual/temporal value, a cross-linguistic tendency (Heine 1993: 30); (b) decategorization (or the "loss of its morphosyntactic status as a full verb", where the inflectional features of the clause are fully dependent on V2); (c) cliticization (or loss of status as an autonomous word); and (d) phonological erosion. Highly grammaticalized, invariable V1s transition from lexical verbs to functional, aspectual particles (Loporcaro 1997a: 347-348; Cardinaletti and Giusti 2003, 2019; Ledgeway 2016, 2021).

2. Invariable V1 Tonna

Not unlike GO and COME (as well as STAY), *tornare* (RETURN) is frequently grammaticalized across Italo-Romance, shifting from lexical motion verb to aspectual marker, and potentially to adverb (Giacalone Ramat 2001; Parry 2022; cf. also Bertinetto and Squartini 2016). According to Parry:

> One of the typical clines of development is that represented by full verbs with an infinitival complement that are reanalyzed as light verbs, then auxiliaries, and may eventually become invariable tense, aspect, or mood markers or reduced to variable affixes on the main verb, as in the case of the Romance future formed from the infinitive plus inflected forms of HABERE 'have' (2022: 146).

Grammaticalized *tornare* generally loses its motion semantics – as illustrated also by the fact that it can be used with states and inanimate subjects – and acquires a repetitive aspectual value which has scope over the whole proposition, shifting in meaning from 'come back/return' to 'again' (11).

(11) Torno a ripetere
return.1SG.PRS.IND to repeat.INF
'I say it again/I repeat'
(Standard Italian, Giacalone Ramat 2001: 127)

Parry addresses how this process is also evidenced in pseudocoordination constructions,[11] where it appears as a V1 thus far documented only in a handful of Sicilian varieties, though is likely more widespread (Spanò 2017; Di Caro 2019a: 122ff.). It has been attested as an inflected V1 in Catania and Delia (Caltanissetta province) (12), and as an invariable V1 in a few towns of Sicily's Messina province (Roccavaldina,[12] Sinagra, Raccuja, Eolian Islands, Castanea delle Furie, cf. also in an unspecified variety in Leone 1995: §46) (13). In the latter case, it surfaces as *torna*, *tonna*, or *tanna*, regardless of the tense/mood or grammatical person of V2, which presents RF.

(12)

a. Ti lu tornu a scrivu
to.you=it=return.1SG.PRS.IND A write.1SG.PRS.IND
'I'll write it for you again'

(Catania, Martoglio 1948: 153 cited in Di Caro and Giusti 2015: 403)

b. Tuirnu a ppigliu lu pani
return.1SG.PRS.IND A fetch.1SG.PRS.IND the bread
'I come back to fetch the bread'

(Delia [CL], Di Caro and Giusti 2015: 403)

As an invariable V1, where it presents many similarities with the Italo-Romance and English prefix *ri/re-,* it may even appear alongside lexical *tornare*[13,14] (13a), as well as with inanimate subjects (13b).

(13)

a. Dumani torna ttornu a scola
tomorrow TORNA return.1SG.PRS.IND to=the school
'I'm returning to school again tomorrow'

(Sinagra [ME], Di Caro 2019a: 123-4)

[11] The author, citing data from Faggin (1997: 198), also reports the use of RETURN in asyndetic structures – but only in the 2SG imperative, the most common type of pseudocoordination – in Friulian (*torne viôt!*, return.IMP.2SG see.IMP.2SG, 'Check again!').

[12] The example in question is from a 19th-century collection of popular songs (Lizio-Bruno 1986: 199); it is unknown whether V1 RETURN is still used here today.

[13] During a past presentation on this work, Michele Loporcaro justly observed that *tornare* is a northern lexical item – indeed it is productively used as an adverb and auxiliary in varieties such as Piedmontese and Ligurian (Parry 2022: 146-147 and references therein) – and is often absent in southern varieties, at least until recently. This is supported by data from REW (8794), which lists Romanian and Tuscan as the only Eastern Romance varieties to present a reflex of Latin TORNĀRE, from AIS' (1635) few Southern examples using *tornare* for 'return', as well as from Parry's (2022) sampling of infinitival periphrases, overwhelmingly from northern varieties, with few exceptions. This prompts an important question about the origin of both the lexical and functional use of *tornare* in the varieties under examination here.

[14] While this form may be homophonous with the 3SG present indicative and 2SG imperative of the corresponding lexical verb in some varieties that present *tonna* (or any of its allomorphs) as an invariable V1, in at least one of these, it exists in synchrony without a lexical, inflected counterpart, even outside of pseudocoordination structures. For example, in Eolian, the lexical meaning 'return' is expressed by (*ag*)*girare*, rather than **tornare*/*tonnare*.

b. L'erva tonna ccrisce
the=grass TONNA grow.3SG.PRS.IND
'The grass grows again'
(Eolian Islands [ME], Cardullo, in prep.)

The present discussion focuses precisely on this more-grammaticalized, invariable V1 *tonna* (RETURN), which has not been as extensively documented or studied as its counterparts *va*, *sta*, *o*, *vinn* (invariable V1s from GO, COME, STAY). This study uses data from the Italo-Romance variety of Eolian (spoken in Sicily's Eolian archipelago, cf. Fanciullo 1983), where previously unattested syntactic patterns relating to this construction have been observed.[15]

As is the case for many invariable V1s deriving from other predicates, *tonna* may be used with the imperative, present indicative, preterite, imperfect, and conditional, and in all six grammatical persons, with nothing intervening between *tonna* and V2:

	Present Indicative	Preterite	Imperfect	Conditional
1SG	Tonna mmanciu	Tonna mmanciavu	Tonna mmanciava	Tonna mmanciasse
2SG	Tonna mmance	Tonna mmanciaste	Tonna mmanciave	Tonna mmanciasse
3SG	Tonna mmancia	Tonna mmanciò	Tonna mmanciava	Tonna mmanciasse
1PL	Tonna mmanciamu	Tonna mmanciammu	Tonna mmanciàumu	Tonna mmanciàssemu
2PL	Tonna mmanciate	Tonna mmanciate	Tonna mmanciàuvu	Tonna mmanciàssevu
3PL	Tonna mmàncianu	Tonna mmanciaru	Tonna mmanciàunu	Tonna mmanciàsseru

Table 2. Invariable V1 *tonna* paradigm

This particle presents all the characteristics of V1 pseudocoordination syntax (cf. §1). What distinguishes *tonna*, as exemplified in this particular variety, is its use with non-finite forms, including infinitives and past participles[16] (though not gerunds). Crucially, it may be embedded under modal verbs such as WANT, CAN, MUST, and under causative MAKE, which must always precede *tonna*:

(14) U vole / pote / av'a tonna mmanciare
it= want / can / must.3SG.PRS.IND TONNA eat.INF
'S/he wants to/can/must eat it again'

(15) I jatarieddi i fazzu tonna mmanciare
the kittens they=make.1SG.PRS.IND TONNA eat.INF
'I'll let the kittens eat again'

[15] Hereafter, examples without sources are from my fieldwork, and refer to the variety of Eolian.

[16] The possibility of using an invariable V1 with past participles, to the right of auxiliaries, appears to have been documented only by Calabrese (2020) and Cruschina and Calabrese (2021: 193, fn. 28), in the dialect of Campi Salentina (LE) with V1 GO:

(i) l'addʒu ʃʃa kkattatu
it=have.PRS.1SG ʃA buy.PTCP
'I went to buy it'

It may also be used with past participles to form compound tenses. Since in Eolian the present perfect is limited to specific aspectual contexts such as the 'inclusive' and 'experiential' values (Cardullo, in prep.; cf. Bertinetto and Squartini 2016), this is more readily visible in the past perfect:

(16) Avia tonna mmanciatu
AUX TONNA eat.PTP
'I had eaten again'

Building on existing accounts of V1s in pseudocoordination, the present work aims to provide a formal account of *tonna*'s syntax, with particular attention to its previously unattested use with non-finite forms. This discussion necessarily considers the degree of grammaticalization of this particle: evidently no longer a lexical verb, has it now become a functional head, or is it an adverb?[17]

3. Existing approaches to pseudocoordination V1s

One view of the morphosyntactic status of V1s, adopted by Ledgeway (2016, 2021), Cruschina and Calabrese (2021), and Andriani (2016: §5, for USIDs), is that they lexicalize various aspectual or modal heads within the complex IP defined by Cinque (1999, 2006), for whom restructuring verbs are intrinsically functional heads (2004: 142ff.). They are thus said to be first-merged in the clausal spine, rather than re-merged, raised from the VP.

[$Mod_{Epistemic/Alethic}$ [TP [$Asp_{Habitual}$ [$Asp_{Predispositional}$ [$Asp_{Repetitive(I)}$ [$Mod_{Volition}$ [$Asp_{Terminative}$ [$Asp_{Continuative(I)}$ [$Asp_{Durative/Progressive}$ [$Mod_{Obligation/Ability}$ [$Asp_{Frustrative/Success}$ [$Mod_{Permission}$ [$Asp_{Conative}$ [Voice [Causative [$Asp_{Inceptive}$ [$Asp_{Continuative(II)}$ [$Asp_{Andative/Venitive}$ **GO/COME** [$Asp_{Completive}$ [$Asp_{Repetitive(II)}$ [VP V...

Calabrian inflected GO and COME (viz. *vaju* and *viegnu*) are situated by Ledgeway in the $Asp_{Andative/Venitive}$ projection (Cinque 1999: 106; 2006: 47, 70; Anderson 2017; Ledgeway 2016; 2021; Cruschina and Calabrese 2021). They are said to encode the aspectual deictic values of andative and venitive viewpoint, though they do not show all the hallmarks of grammaticalization, namely they retain their ability to inflect as well as their semantics of motion (Cruschina 2013, 2022). Indeed, Ledgeway does not consider inflected *vaju* and *viegnu* to be fully grammaticalized (but rather 'grammatical') like their invariable counterparts in other varieties.

That these inflected V1s lexicalize the $Asp_{Andative/Venitive}$ head is supported by evidence showing a rigid ordering between GO/COME and other functional predicates. Predictions are borne out that verbs lexicalizing the heads of projections above $Asp_{Andative/Venitive}$ may only precede (17a), and not follow (17b) GO/COME (both within and outside pseudocoordination structures), as can be seen with CAN ($Mod_{Epistemic/Alethic}$ or $Mod_{Obligation/Ability}$), WANT ($Mod_{Volition}$), TRY ($Asp_{Conative}$), CONTINUE ($Asp_{Continuative}$), and BEGIN ($Asp_{Inceptive}$).

(17) a. U pùazzu / vùagliu / prùavu a / cuntìnuu a / ncuminciu
it= can / want/ try.1SG.PRS.IND to / continue.1SG.PRS.IND to / start.1SG.PRS.IND
to (ggh)jì / vena a ppiglià.
a go.INF / come.INF to take.INF
'I can/want to/try to/continue to/start to go/come and/to fetch it.'

[17] These possibilities do not exclude the view that it is a prefix (i.e. as a head or specifier), cf. Cinque 1999: §3.5; 2006: 81. Cruschina and Calabrese (2021) propose this analysis using Distributed Morphology.

b. *Vaiu pùazzu / aia / sacciu / vùagliu studià
go.PRS.1SG can / must / know / want.PRS.1SG study.INF
'I'm going to be able/to have/know how/want to study.'

(Cosenza, Ledgeway 2021: 14, 26)

Though distinct from (and more grammaticalized than) the inflected *vaju* and *viegnu* due to their near invariable and mostly desemanticized nature, Salentino *va*/*fa*[18] and *sta* (V1s from GO and STAY) are similarly said to have evolved into aspectual markers. *Va* "quite transparently" lexicalizes $Asp_{Andative}$, though may be unambiguously employed as a marker of futurity. Similarly, imperfective *sta*, "now represent[ing] the unmarked means of expressing on-going activity simultaneous with the moment of speech" is used with continuous, habitual, or generic aspectual value and lexicalizes $Asp_{Progressive}$ (Ledgeway 2016: 165; cf. also Rohlfs 1969: 133; Fanciullo 1976: 59; Loporcaro 1997: 337; 2021: 186-187).

As predicted by this view, GO, COME, and STAY in all the aforementioned varieties can only embed verbs that lexicalize lower functional heads in the IP (like causatives, 18a), and not higher ones (like volitional modals, 18b).

(18)

a. La sta llassi durmire?
her= STAND let.2SG.PRS.IND sleep.INF
Are you letting her sleep?'

b. (*Sta/*va) uei ddurmisci ntorna
STAND/GO want.2SG.PRS.IND sleep.2SG.PRS.IND again
'You want to sleep again.'

(Lecce, Ledgeway 2016: 174-5)

In this account, applied to both inflected and invariable V1s, the loss of inflectional features along with their thematic properties contributes to a syntactic shift whereby the V1 is first-merged as a functional head in the IP rather than originating in the lexical/thematic domain of the VP. Cardinaletti and Giusti (2003) similarly suggest that V1s in Sicilian are generated in the inflectional domain (defined as a *t* head above T in their 2019 paper), though they propose that agreement is copied, either overtly or covertly (in the case of invariable V1s), from V2.

4. Formal approaches to Tonna

The following section explores this framework in application to invariable V1 *tonna*, and raises issues that emerge as a result of the unique syntactic configurations that have been documented with this particle in Eolian. The idea that it is a functional head, or even a specifier in the corresponding functional projection, is investigated.

[18] *Va* (< UAD-O/IS/IT/UNT) is used for all persons except the 1PL and 2PL, which instead employ a distinct stem *fa* (< IAMUS/ATIS). So it is V1 selection that displays the N-pattern (not the availability of the periphrasis itself), but only in the present indicative. In the preterite, *fa* is invariably used (Manzini and Savoia 2005: 691; Ledgeway 2016: §3.2).

4.1 Tonna *as a functional head*

This approach may be readily applied to *tonna* especially if we consider that at least one of the functional projections along the IP, a relatively high one, is specialized for iterative aspect: $Asp_{Repetitive(I)}$. In fact, Cinque's original (1999) formulation also included the existence of a lower $Asp_{Repetitive(II)}$, as supported by examples where there can be two *di nuovo* 'again'.[19]

(19) Gianni ha <u>di nuovo</u> battuto alla porta <u>di nuovo / ancora</u>
John AUX again knock.PTP to=the door again again
'John again knocked on the door again'

For Cinque, "the leftmost *di nuovo* quantifies over the event (of knocking on the door, perhaps many times), while the rightmost quantifies over the act itself [or "the state/process"] of knocking" (Cinque 1999: 92; cf. Cinque 2006: 83-5).

This would provide an explanation for the productive use of *tonna* (event reading) with the seemingly pleonastic adverb *nautra vota* 'again' (process reading): a straightforward interpretation could be that the former lexicalizes the higher $Asp_{Repetitive(I)}$ head, and the latter lexicalizes the specifier of the lower $Asp_{Repetitive(II)}$.

(20) [$Asp_{Repetitive(I)}$ tonna [V2 mmancia [$Asp_{Repetitive(II)}$ nautra vota [VP ~~mancia~~...]]]]
TONNA eat.3.SG.PRS.IND again
'(S)he goes and eats again'

This would also correctly predict that, in a marginally used construction, *tonna* can precede inflected V1 GO (*vaju*) and COME (*viegnu*), which are available in a separate type of pseudocoordination in Eolian (Cardullo, in prep.). The inverse order, as expected by the fact that $Asp_{Repetitive(I)}$ precedes $Asp_{Andative/Venitive}$, is ungrammatical.

(21) (*Vace) [$Asp_{Repetitive(I)}$ tonna [$Asp_{Andative/Venitive}$ vace [a [mmancia [VP ~~mancia~~...]]]]]
go.3.SG.PRS.IND TONNA go.3.SG.PRS.IND A eat.3.SG.PRS.IND
'(S)he goes to eat again'

This runs into problems, however, when we go back to consider examples (14) and (15), where modal verbs WANT, CAN, MUST and causative MAKE necessarily precede *tonna*. It does not square with the fact that the functional heads that host these predicates ($Mod_{Volition}$, $Mod_{Obligation/Ability}$, and Causative) actually follow $Asp_{Repetitive(I)}$:

(22) [(Vole) [$Asp_{Repetitive(I)}$ tonna [$Mod_{Volition}$ (*vole) [mmanciare
want.3SG.PRS.IND TONNA want.3SG.PRS.IND eat.INF
[VP ~~manciare~~...]]]]]
'(S)he wants to eat again'

[19] An anonymous reviewer rightfully points out that *tonna* could occupy different positions along the functional spine, or move from a lower to a higher projection. For reasons of space, the focus of this work remains on the (two) aspectual projections constituting the most evident loci for functional elements with repetitive value, as a starting point. Other projections are not excluded, but are left for future study.

The thesis that *tonna* is a functional head can still be potentially supported by sustaining that it is instead generated in the head of the lower $Asp_{Repetitive(II)}$, in the same projection which hosts *nautra vota* in its Spec. While this would initially incorrectly generate a surface structure where *tonna* follows the non-finite V2 *manciare* 'to eat' when the latter raises from the verbal to the inflectional domain (cf. Groothuis 2022), this can be resolved by positing left-adjunction of *tonna* to the lexical verb[20] (cf. Baker 1988).

(23) [$Mod_{Volition}$ Vole [tonna-mmanciare [$Asp_{Repetitive(II)}$ nautra $vota_{spec}$ ~~tonna~~$_{head}$ [VP ~~manciare~~...]]]]
want.3SG.PRS.IND TONNA+eat.INF again
'(S)he wants to eat again'

This account still suffers from a few issues. To begin with, while it could also be used to explain example (21) (repeated below as (24)) where *tonna* precedes *vace* + V2, it would present some inconsistencies. In particular, why can *tonna* left-adjoin to functional *vace* (GO), but not to *vole* (WANT) in (23), where it incorporates instead into the lexical infinitival verb?

(24) [$Asp_{Andative}$ Tonna-vace [a [mmancia [$Asp_{Repetitive(II)}$ ~~tonna~~$_{head}$ [VP ~~mancia~~...]]]]

One possible solution would be to maintain that this is an instance of yet further grammaticalization, where *tonna* begins to incorporate into functional predicates, beginning with aspectual ones (viz. $Asp_{Andative/Venitive}$), lower in the IP, but not yet higher modal predicates (viz. $Mod_{Volition}$).[21]

A deeper issue is that this account would necessarily presuppose a violation of the Head Movement Constraint, which dictates that raising heads must move through all intervening head positions to reach their landing site (cf. Travis 1984). If *tonna* incorporates into the lexical verb as it raises into the IP, we would expect the unattested order **vole manciare tonna*.[22] To adopt this view we would be thus forced to posit an exception to the HMC, whereby the lexical verb skips over, rather than transits through, the $Asp_{Repetitive(II)}$.

The solution that *tonna* lexicalizes a lower aspectual head ($Asp_{Repetitive(II)'}$) is perhaps more attractive given its potential to derive the order of the attested constructions in (23) and (24), than the initially proposed idea that *tonna* is generated in the higher aspectual head ($Asp_{Repetitive(I)}$), which instead rules out the attested order 'modal verb + *tonna* + INF' in (23). However, it still encounters substantial issues, including a violation of the HMC and an unexplained inconsistency regarding the ability of *tonna* to incorporate only into some functional verbs (i.e. GO but not WANT). Neither view fully accounts for the different structural patterns attested, and as such, prove to be unsatisfactory explanations.

[20] See Rivero (1992), Dobrovie-Sorin (1993: §2.2), Nicolae (2015: 79-81; 2019: 19) for accounts of adverbial left adjunction. With regards to Movement Verb Constructions including those under consideration here, a not too dissimilar view, consisting of the formation of complex heads through cyclic head movement, is proposed by Cruschina and Calabrese (2021).

[21] A potential solution worth exploring further is that *tonna* constitutes a syncretic category (e.g. both a functional head and an adverb, see below), as suggested by an anonymous reviewer. This could indeed be an effective way to reconcile the seemingly incompatible structures generated.

[22] Cf. van Gelderen (2004: 235) for a similar problem with modal particles in German and Dutch.

4.2 Tonna *as an Adverb*

We must now ask whether *tonna* has instead grammaticalized to the point of becoming an adverb, as has been documented in SIDs with other types of constructions (cf. Cruschina 2015). Instead of lexicalizing repetitive aspectual heads, could it feasibly have become a specifier of these respective projections (viz. Spec $Asp_{Repetitive(I)}$ or Spec $Asp_{Repetitive(II)}$)? Initial support for this view comes from dialects such as Cosentino, where *torna* can be used adverbially, here in post-verbal position:

(25) Vaju torna
go.1SG.PRS.IND again
'I'll go again'

(Cosenza, Adam Ledgeway, p.c.)

Tonna, plausibly following a stage as an $Asp_{Repetitive}$ head at some point along its grammaticalization pathway, could have been reanalyzed as a specifier. The higher $Asp_{Repetitive(I)}$ projection should be excluded as a potential landing site, as it encounters the same obstacles as a head in the same projection: since $Asp_{Repetitive(I)}$ precedes $Mod_{Volition}$, it would generate the unattested order of *tonna* + *vole* + non-finite V2.

(26) [Vole [$Asp_{Repetitive(I)}$ $tonna_{spec}$[$Mod_{Volition}$(*vole) [mmanciare
want.3SG.PRS.IND TONNA want.3SG.PRS.IND eat.INF
[$Asp_{Repetitive(II)}$ nautra vota$_{spec}$] [VP ~~manciare~~...]]]]
again
'(S)he wants to eat again'

As the specifier of the lower $Asp_{Repetitive(II)}$, on the other hand, it overcomes a key problem that it faced when analyzed as a head in the same projection: as a specifier, it wouldn't obstruct the lexical verb as it raises, and so wouldn't entail a violation of the HMC. The lexical V2 would successfully pass through all intervening heads between the VP and its landing site, after which adverbial *tonna* could incorporate into it.

(27) [Vole [$tonna_{spec}$ mmanciare [$Asp_{Repetitive(II)}$ ~~tonna~~$_{spec}$] [VP ~~manciare~~...]]]
want.3SG.PRS.IND TONNA eat.INF
'(S)he wants to eat again'

It thus appears that the view that *tonna* has (re)grammaticalized to become an adverb, lexicalizing the specifier of the lower $Asp_{Repetitive(II)}$, is the most convincing one thus far. However, some empirical perplexities remain. For example, the (perhaps) puzzling position of *tonna vis-à-vis* object clitics:

(28) U tonna mmancia
it= TONNA eat.3SG.PRS.IND
'(S)he eats it again'

It isn't puzzling, but rather expected, for SIDs that are characterized by low verb movement (with lexical predicates targeting functional heads in the lower adverb space, LAS) for LAS adverbs to interpolate between verbs and their proclitic arguments. This possibility exists in

several southern Italian varieties like Cosentino, Casertano among other Northern Campanian varieties, Salentino, as well as early varieties of Sicilian, Neapolitan, and Tuscan (Ledgeway and Lombardi 2005; cf. also Schifano 2018).

Cl – Adv – V

(29) Si (sempre) lava (sempre)
SELF= always wash.3SG.PRS.IND always
'He always washes himself'

(Cosenza, Ledgeway and Lombardi 2005: 78)

(30) Non lo mai rice
NEG it= never say.3SG.PRS.IND
'He never says it'

(Caserta, *ibidem*)

However, this is not the case in all southern varieties, and crucially, it is disallowed in the variety under study, Eolian, which implies that *tonna*'s position is indeed unexpected. It is particularly problematic for this account that even the synonymous adverb *nautra vota*, which would lexicalize the same specifier position as *tonna*, cannot intervene between the verb and the clitic.

(31)
a. N'u (*chiu) fazzu (cchiù)
NEG=it=more do.1SG.PRS.IND more
'I won't do it again'
b. U (*sempre / *nautra vota) mancia (sempre / nautra vota)
it= always / again eat.3SG.PRS.IND always again
'He always eats it'/'He eats it again'

Furthermore, in the variety under examination, *tonna* cannot be used postverbally (i.e. in the position of *nautra vota*), except with the noun *vota* 'time' (which does not display RF), in a distinct, crystallized form *tonna vota* 'again' (which conversely cannot replace *tonna* in V1 position, 32a). While *tonna vota* is synonymous with *nautra vota*, only the latter may be used pleonastically with *tonna* + V2.

(32)
a. (*Tonna vota) manciu tonna *(vota)
TONNA VOTA eat.1SG.PRS.IND TONNA VOTA

b. Tonna mmanciu (*tonna vota) / (n'autra vota)
TONNA eat.1SG.PRS.IND TONNA VOTA again
'I'll eat again'

The failure of these substitution tests points to the conclusion that *tonna* is not a canonical adverb in Eolian, and more generally that it behaves differently from other adverbs which are presumed to lexicalize the same functional projection. Indeed, unlike most adverbs, *tonna* cannot be focalized.

(33) *Che fa, TONNA mmanci?
what do.2SG.PRS.IND TONNA eat.2.SG.PRS.IND
'What, you're eating *again*?'

Though *tonna* does not align with canonical, 'strong' adverbs, we must observe that Cardinaletti and Starke (1999: §9) demonstrate that these syntactic properties *do* apply to a specific class of adverbs that are considered 'deficient', and which accordingly cannot be coordinated, modified, or focalized (cf. also Cardinaletti 2011; Cruschina 2015). In particular, *tonna*'s distribution *vis-à-vis* pronominal clitics closely mirrors[23] that of Romanian aspectual clitic adverb *mai* 'still, again', which besides "cluster[ing] around the inflected verb", follows auxiliaries when used in compound tenses, and cannot be used in isolation. Adjunction analyses for *mai* have similarly been proposed (Dobrovie-Sorin 1993: 62, cf. 26ff., §2.2; Nicolae 2015: 79-81, 2019: 19).

(34) (*Mai) îl mai examinez din cînd în cînd
MAI him=MAI examine from when in when
'I still examine him from time to time'
([Standard] Romanian, Dobrovie-Sorin 1993: 11)

Understanding whether *tonna* is better characterized as a 'weak' vs. a 'clitic' deficient adverb in the sense of Cardinaletti and Starke (1999) is an important question which cannot be explored here for reasons of space and which I leave open for future research. A crucial point which has important implications for this analysis is that clitic adverbs are explicitly considered to be heads (*ibidem*; Nicolae 2015, 2019), while 'weak' adverbs are considered (phrasal) specifiers (cf. also Cruschina 2015).

To conclude, while *tonna* can be argued to have become a specifier of $Asp_{Repetitive(II)}$ on a par with *nautra vota* – with pseudocoordination structures obtained through left-adjunction to the lexical verb –, it would constitute a novel, defective syntax with respect to the behavior of existing (specifically 'strong') adverbs in Eolian.

4.3 Structural Consequences

The reflections of the previous sections have brought us to exclude the conclusion that *tonna* lexicalizes either the head or the specifier position of the higher $Asp_{Repetitive(I)}$, since it cannot explain the structures where *tonna* is embedded under modal verbs with non-finite V2s.

Out of the two repetitive functional heads, this leaves $Asp_{Repetitive(II)}$ as the only viable projection for this particle, either as a head or as a specifier. As shown, interpreting *tonna* as a head leads to theoretical problems such as the violation of the HMC, since *tonna* would block the lexical verb, and incorporation would produce the wrong surface word order. By contrast, interpreting it as a specifier remains the most plausible solution, and is compatible with its deficient syntax with respect to strong adverbs.

[23] Though this similarity ends when considering that it must precede modal *a putea* 'can', one of the limited predicates that allows (optional) embedding of the infinitive in Romanian, which otherwise employs Balkan-style complementation (*ibidem*, 26):

(i) (Nu) (mai) poate (*mai) scrie
NEG MAI can.3SG.PRS.IND MAI write.INF
'(S)he can('t) write again'

The non-viability of the $Asp_{Repetitive(I)}$ projection for hosting *tonna*, or any adverb, emerges as an important observation. A potential structural outcome that is proposed here for Eolian is that the higher and lower heads ($Asp_{Repetitive(I/II)}$) should by analyzed as a syncretic head (Giorgi and Pianesi 1997), in which the two repetitive aspectual values (event repetition vs process/act repetition) are not formally distinguished (for another case of such syncretism in the Eolian C-domain, see Cardullo 2021). Indeed, in the above examples, *tonna* has an event reading, usually reserved for the higher $Asp_{Repetitive(I)}$.

(35) [Tonna mmancia [$Asp_{Repetitive(I)/(II)}$ ~~tonna~~$_{head/spec?}$ [VP ~~mancia~~...]]]
TONNA eat.3SG.PRS.IND
'(S)he eats again'

5. Conclusions

This work has examined the relatively uncommon use of RETURN as an invariable V1 in pseudocoordination structures in southern Italo-Romance varieties. It draws on novel data from the variety of Eolian, which employs the invariable particle *tonna*, and does not present paradigmatic restrictions with regard to the TMA and grammatical person of the verb. Alongside the canonical characteristics of clitic climbing, Wh- extraction, absence of interpolation/floating quantifiers, this particle presents as of yet undocumented structural patterns, whereby it can be embedded under modal and causative verbs (CAN, MUST, WANT, MAKE) and used with non-finite verbs such as infinitives and past participles. Building on existing approaches to both inflected (Cal. *vaju* and *viegnu*) and invariable (Sal. *sta*, *va*) V1s, which analyze them as functional heads in Cinque's universal hierarchy of functional projections, this work investigates the morphosyntactic status and level of grammaticalization of *tonna*. Given the existence of at least two projections where repetitive aspectual value is realized, along with the typological observation that RETURN frequently grammaticalizes as an adverbial, in total four structural possibilities are considered: that it is an (a) $Asp_{Repetitive(I)}$ head, (b) $Asp_{Repetitive(II)}$ head, (c) $Asp_{Repetitive(I)}$ Spec, or (d) $Asp_{Repetitive(II)}$ Spec.

In sum, options (a) and (c), which evaluate the $Asp_{Repetitive(I)}$ projection, do not adequately account for the novel data, since it incorrectly predicts that modal verbs should follow *tonna*. Option (b) and (d), which consider $Asp_{Repetitive(II)}$, both involve the left-adjunction of *tonna* to lexical verbs, and rarely, to aspectual verbs. As a head (option b) it would constitute a violation of the Head Movement Constraint, which is not the case for the view that it is an adverb (option d). While from a theoretical perspective, the latter is the strongest possibility of those considered, it still suffers empirical problems in its different syntax as compared to canonical, strong adverbs in this variety. In particular, its unique ability to interpolate between clitics and their verbal hosts along with its resistance to focalization may indicate that it is better analyzed as a deficient adverbial, though whether 'weak' or 'clitic', remains unclear at this stage. This first formal approach to *tonna* thus leaves us with open questions, which are clearly worth examining further. As a final point, the ready exclusion of $Asp_{Repetitive(I)}$ as a viable site, along with the otherwise unexpected event interpretation of *tonna*, leads us to propose that its features are instead realized syncretically in the lower repetitive projection, viz. $Asp_{Repetitive(II)} > Asp_{Repetitive(I/II)}$.

Tonna is a case study in the grammaticalization of RETURN, which has undergone several stages: from a lexical motion verb to a functional one, from an inflected functional verb to an invariable one, and from invariable functional verb to aspectual particle, and more specifically to (deficient) adverb.

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Quaderni di Linguistica e Studi Orientali- QULSO
Working papers in Linguistics and Oriental Studies

Firenze University Press
https://oajournals.fupress.net/index.php/bsfm-qulso

Citation: C. Chesi, V. Bressan, A. Belletti (2023) The Role of D-Linking and Lexical Restriction in Locality Violations. *Qulso* 9: pp. 29-43. doi: http://dx.doi.org/10.13128/QULSO-2421-7220-15162

Data Availability Statement: All relevant data are within the paper and its Supporting Information files.

Competing Interests: The Author(s) declare(s) no conflict of interest.

The Role of D-Linking and Lexical Restriction in Locality Violations

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Abstract:

The major contrast discussed in the literature to show an obviation of the wh-island effect often involves a bare wh- element in the role of the intervener (e.g. who) and a "complex" wh-phrase (e.g. which book) in the role of the moved item. This contrast is not minimal, since it is not sufficient to disentangle the role of D-linking (Pesetsky 1987) from that of the so-called "lexical restriction" (Friedmann, Belletti, and Rizzi 2009). In this work we try to fill this gap by contrasting, in an argumental wh- island configuration (e.g. "… [who read …]"), which NP vs. what NP both in English and in Italian (e.g. which/what book and quale/che libro). We argue that while both wh- phrases can be genuinely considered "lexically restricted", the first, and not the second, has properties that make it allegedly D-linked (i.e. a canonical partitive interpretation is available). Our acceptability studies show that (in both languages) no significant difference is revealed in the scores attributed to the two extracted wh-phrases and no significant variance (e.g. indicating a binomial distribution) is observed in the condition what NP. The first result indicates that the "D-linking" hypothesis as an independent source of amelioration is inadequate; the second result suggests that also the hypothesis that the condition what/che NP might be ambiguous between a D-linked and a non-D-linked reading is unlikely.

Keywords: *D-Linking, Featural Relativized Minimality, Intervention, Partitives, Wh-Islands*

Introduction

In locality theory, syntactic islands represent a prototypical case of constraint on the creation of A'-dependencies (Ross 1967; Cinque 1990; Rizzi 1990). A clear partition of this domain has been related to the strength of the extraction prohibition: the classical distinction is expressed by the contrast between strong islands (1), blocking any form of extraction from within their boundaries (but see Bianchi and Chesi 2014; Hofmeister and Sag 2010 a.o.), and weak islands, that seem, to some extent, to tolerate extraction, thus giving more nuanced levels of (un) acceptability, as in the .a vs. b. contrast in (2):

(1) **What* do you believe [the fact [that he bought __]]?
(2) a. **What* do you wonder [*who* bought __] ?
b. ?Which car do you wonder [*who* bought __]?

The reason for such variability is generally attributed to the peculiarities of the extracted *wh*-element with respect to the intervening one. A long tradition of studies (Pesetsky 1987; Comorovski 1989) interprets this extraction facilitation in terms of *D(iscourse)-linking*, i.e., the property that characterizes *wh*-phrases that refer to contextually salient individuals, denoted by the overt NP. This intuition has been formalized in various ways. In some cases, it has been rephrased as Referentiality (Cinque 1990; Rizzi 1990), i.e., an interpretive reflex of a binding-like dependency between the D-linked *wh-* item and its thematic position, rather than a full-fledged displacement as in other A'-dependencies. Other interpretations of this effect, instead, strongly rely on extralinguistic factors: working memory would be at issue in these configurations, and the strength of a "richer" (more specific and better specified, for instance by means of a restrictive relative clausal modification) memory trace associated to the *wh*-filler (Hofmeister and Sag 2010; Hofmeister 2011) would be able to "save" the dependency in the prototypical filler-gap configuration (Fodor, Bever, and Garrett 1974). A further possibility is offered by featural Relativized Minimality (fRM, Rizzi 1990; Starke 2001; Grillo 2008; Friedmann, Belletti and Rizzi 2009): Under this perspective, the higher acceptability of the D-linked phrase would be related to the presence of a "lexical-restriction" (an overt NP) that mitigates the intervention effect by making the extracted item "richer" than the intervener.

While robust crosslinguistic evidence for the contrast in (2) is available in the literature, the majority of studies focused on the contrast between bare (e.g. *what*) and complex *wh*-phrases (e.g. *which NP*), and only a few studies have tried to disentangle the role of D-linking from that of lexical restriction. This paper is intended to fill this gap.

First of all, we will set the stage by summarizing the fundamental theories addressing the notion of D-linking (§ 1.1) and the relevance of the presence of a "lexical restriction" (§ 1.2) in a coherent and testable way also briefly presenting the processing perspective (§1.3). We will then present a significant contrast in Italian and English, *which NP* vs. *what NP*, for which we provide some morphosyntactic evidence supporting the intuition that the first, but not the second, is allegedly D-linked (§ 1.4). This contrast will be then ideal to compare those theories that attribute the role of the amelioration to the presence of D-linking or to the lexical restriction; § 1.5 summarized the predictions in this sense. We will then present in § 2 the novel data gathered from two acceptability judgments in Italian and English. We will conclude (§ 3) that no evidence is found in this study supporting the facilitatory role of D-linking: the presence of a lexical restriction seems then sufficient to induce comparable amelioration in the extracted *wh*-phrases across an argumental *wh*-island.

1. Theoretical background

1.1 D-linking as a composite notion

The notion of D-linking was introduced by Pesetsky (1987) as the property that characterizes *wh*-phrases referring to salient individuals in the discourse, known by both the addresser and the addressee of the question. This interpretation naturally surfaces with *which NP* phrases,

but, as (Pesetsky 2000: 16) notices, it may in principle be triggered by any *wh*-item that can be substituted in context by the overt partitive form "which of the NP". The syntactic effects of D-linking consist in a general ability to circumvent syntactic restrictions like Superiority Constraints (Chomsky 1973), i.e., the requirement for multiple *wh*-questions to have the most prominent *wh*- precede the least prominent one, as exemplified in (3):

(3) a. I wonder *who* saw *what*.
b. *I wonder *what who* saw.
c. I wonder *which man* saw *which movie*.
d. I wonder *which movie which man* saw.

Both (3b) and (3d) violate Superiority in that the object dependency crosses over the subject *wh*-; however, only the object in (3d) conforms to the salient characterization outlined above, and successfully escapes the syntactic rule. Furthermore, and crucially for this work, D-linked *wh*-phrases with strong contextual anchoring are allowed (to some extent) to escape weak island boundaries, as shown by the sentences in (2). Some analyses have tried to capture this freer conduct by assuming that salient (or referential) *wh*-phrases may adopt non-local strategies to bind their surface positions with the gaps they moved from, and assumed the existence of referential indices (Rizzi 1990) or null pronominals (Cinque 1990; Hirose 2003) licensing non-local binding. However, the fact that D-linking can in principle be attributed to any *wh*-phrase in its optimal context has suggested that it may not be an inherent structural property of specific *wh*-items, but rather the manifestation of an interpretive fact expressed in presuppositional terms (a.o.: Comorovski 1989): D-linked phrases make it possible to verify the existential presupposition on the referent of the *wh*-constituent under discussion, thus making the *wh*-question felicitous and answerable (i.e., accessible in the Common Ground, Krifka 2008).

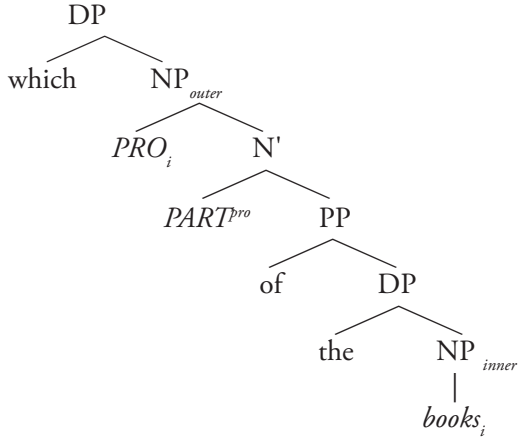
In this spirit, D-linking has been subsumed or associated with the notion of definiteness (Diesing 1992), and in general to the observation that it identifies the DPs referring to objects that have already been introduced in the discourse context, or whose relation to already introduced objects is easily recoverable (Enç 1991), as opposed to new discourse referents. One attempt to provide a semantic characterization of this otherwise rather vague notion of referentiality is offered by Szabolcsi and Zwarts (1997), who define D-linking as the property of *wh*-phrases that range over individuals or discrete entities that can be collected into unordered sets. On the contrary, *wh*-items that naturally range over properties or non-individual entities are not expected to induce D-linking, and in turn to resist extraction from weak island. Based on the naturalness of their "individual" reading, Szabolcsi and Zwarts also suggest an ordering for *wh*- types, *which* being the most natural individual-denoting item and aggressively non-D-linked, *wh-the-hell* expressions, occupying the opposite end of the ordering. A similar referential hierarchy has been proposed for Greek by Anagnostopoulou (1994), as an attempt to account for the observed extractability scale (">" means "more extractable than"):

(4) bare *wh*-phrases (who, what) > what NP (what book) > which NP (which book) > overt partitive *wh*-phrases (which of your books)

All in all, two distinct components seem to be associated with the notion of D-linking: a purely contextual notion and a partitive interpretative counterpart. The first suggests a presupposition of existence of a given, familiar, set of individuals, while the second requires a proper partition which is operated by a partitive (implicit) *of* construction (e.g., "which (of these) books").

From a structural perspective, the analysis we will adopt for proper partitive constructions (*canonical*, in the sense of Falco and Zamparelli, 2019) refines the classic "two NPs" analysis (Jackendoff 1968; Selkirk 1977) consisting essentially of an "outer" (empty) and an "inner" (full) NP ([which [NP_e [of the *NP*]]]). According to Falco and Zamparelli (2019), the outer (pronominal) NP is the projection of a partitive head (*PART*) hosting an empty N (*PRO*) in its specifier, and this latter PRO enters into a matching relation with the inner NP (the "restriction") within the selected partitive PP, as simplified in (5):

(5)



The semantic analysis of the PART phrase allows one to include only proper partitions of the relevant set of individuals, excluding the maximal set (the *supremum*) (e.g., *two of my eyes). It is important to consider a minimal difference with respect to an apparently similar partitive configuration in which the preposition used is not *of* but *among* (e.g., "two (books) among (all) the books"): these constructions are considered semi-partitives (Hoeksema 1984) and present morphosyntactic peculiarities, such as (i) the inner NP is marked by the ablative case instead of genitive in Turkish (von Heusinger and Kornfilt 2017) and (ii) mass partitives are incompatible with *among*, as in "half of/*among the people". According to Cardinaletti and Giusti (2017), the *among* partitives are in fact adjunct and not selected PPs. We will come back to this minimal contrast in the discussion in § 4 and § 3.

1.2 The role of the lexical restriction

An alternative way to analyse the mitigation of *wh*-island effects has been explored by proponents of an intervention-based approach, shifting the focus from discourse salience to the morphosyntactic properties of the *wh*-constituents at issue. Following featural Relativized Minimality (fRM, Starke 2001; Rizzi 2004; 1990), the creation of a dependency between two positions X and Y may be disturbed by an element Z whenever it (i) structurally intervenes between X and Y and (ii) shares some relevant features with X, i.e., features that play a crucial role in triggering and determining the trajectory of the dependency ("criterial" features in the sense of Rizzi, 1997; 2004). Further refinements drawing from acquisition studies (Friedmann, Belletti, Rizzi 2009; Grillo 2008 for supporting data from aphasic populations) have shown that the number and the type of features shared by the target of the derivation X and

the intervener Z are directly proportional to the strength of intervention effects. Following this analysis, the ungrammaticality of (2a) is explained by the fact that the object *wh-* in the embedded clause (Y) is raised up to the CP of the matrix clause (X), and raising is triggered by the relevant feature [+Q] that characterizes both the *wh*-item and its surface position. The same feature, however, is also carried by the intervening *who* (Z), so identity of features gives rise to a strong violation of locality:

(2) a. **What* do you wonder *who* bought _ ?
[+Q] [+Q]
X Y Z

As for (2b), the mitigation of intervention is attributed to the presence of a lexical noun phrase specifying the *wh*-constituent, the so-called lexical restriction, which contributes in featural terms by adding a [+NP] to the featural make-up of the extracted *wh-*. Consequently, the features of the intervener represent a subset of the features that trigger the derivation, and this inclusion configuration results in a weaker violation of locality and higher acceptability:

(2) b. ?*Which car* do you wonder *who* bought __?
[+Q, +NP] [+Q]
X Y Z

It is worth noticing that [+NP] *per se* is not able to trigger movement (it is not "at the edge" of the DP phrase), and in principle it should be excluded from the set of relevant features that have a role in the calculus of intervention (+NP is not "criterial" since it is inaccessible at the DP edge). However, proponents of the intervention-based approach provide evidence that lexical restriction has a crucial role in *wh*-movement by looking at Northern Italian dialects (Munaro 1999), where lexically restricted *wh*-items are pronounced in clause-initial positions, while bare *wh*-items surface in clause-final position. This difference is interpreted as the reflex of different landing sites for the two types of *wh-*, and in turn of the relevance of [+NP] to determine *wh*-movement. Hence, the lexical restriction feature should be included in the set of features that enter the calculus of intervention, and in turn responsible for the weaker deviance of (2).b. An idea (Rizzi p.c.) to make the status of the lexical restriction "criterial" is to consider the selectional features associated with the D head: from this perspective, *which* selects a NP, while *who* does not. In this sense a [+NP] feature will be associated to *which* phrases, but not to bare *wh-* like *who*.

1.3 The processing perspective

From the perspective of processing, different degrees of referentiality have been associated with differences in the persistence of the D-linked DP filler in working memory. This approach has often been considered as highly transparent with respect to a gradual prediction in terms of acceptability, then able to "explain" the scale presented in (4).

On the one hand, more referentially accessible DPs (based on a referentiality hierarchy, Ariel 1991) facilitate the filler-gap dependency, since the filler, being "more accessible", can be more easily retrieved in the gap position (Warren and Gibson 2005; 2002; Gibson 1998). On the other, more details (a prepositional restriction and/or a restrictive relative clause) reinforce the memory trace of the filler, again facilitating retrieval (Hofmeister and Sag 2010; Hofmeister 2011).

In both senses (2).b obtains higher acceptability than (2).a because of the stronger referentiality of *which car* as opposed to *what*. Hence D-linking, or its effect on dependency processing, is ultimately held responsible for the observed mitigation of locality violation.

Previous experimental studies systematically tested the well-known paradigm presented in (2), often comparing bare *what* and complex *which NP* from a crosslinguistic perspective confirming the idealized contrast (Sprouse *et al.* 2016; Atkinson *et al.* 2016). Very few studies, however, tried to single out the notions of D-linking/referentiality and lexical restriction to assess which of the two determines a variation in acceptability. Among them, a study by Goodall (2015) tested the predictions of the two competing theories by contrasting the extraction of complex vs. bare *wh-* from different types of structures (a *that*-clause a *wh*-island and a complex noun phrase island). The purpose was to assess whether D-linking is a grammar-internal property with ameliorating effects limited to syntactically deviant structures (as predicted by grammar-driven theories), or an extra-grammatical fact that ameliorates any filler-gap dependency, hence supporting working memory-driven approaches. The results, compatible with an extra-grammatical explanation of D-linking, show that complex *wh*-phrases ameliorate any filler-gap dependency. Crucially the overt partitive structure *which of the NP* was opposed to bare *what*, in the end contrasting a non-strictly minimal pair of determiners.

In a later study, Villata, Rizzi and Franck (2016) tackled the same issue by extracting French bare and complex *wh*-phrases from *wh*-islands and manipulating a further condition, i.e., presence of a short context to trigger a D-linked reading (an identical design consisting of the Italian translation of these paradigms obtained the very same contrasts between conditions, Villata Canal and Franck (2015). No mitigation effect of context was detected (on the contrary, the context was related to a slight degradation of acceptability), thus contrasting Goodall's findings. However, Villata and colleagues tested the traditional opposition between bare *what* and complex *which NP*, which does not seem to be a minimal pair, either, as the two *wh-* should not only be distinguished in terms of D-linking, but they also differ with respect to lexical restriction, that is only found on *which*:

(6) a. Which *problem* do you wonder *who* solved?
[D-linked, +Q, +NP]
b. *What* do you wonder *who* solved?
[+Q]

1.4 What NP *vs* Which NP*: a more minimal D-linking contrast*

We concluded that the two types of *wh-* that are generally compared do not represent an optimal minimal pair, as they differ not only in the presence of a lexical restriction, but also in terms of D-linking, which is naturally induced by *which*, and not by bare interrogatives (Pesetsky 1987). Hence, comparing the extraction of these two constituents does not seem to be a sufficiently fine-grained strategy to isolate the well-known effects on acceptability. Here we considered a more minimal pair of *wh*-phrases: *which NP* and *what NP*. In both DPs, the lexical restriction is kept constant, and the only variation is related to the *wh*-determiner. Here we provide arguments suggesting that the two DPs are structurally different. We will then tentatively assume that only the first is allegedly D-linked, both in Italian and in English. Five arguments indicating a clear structural asymmetry between *which NP* and *what NP* constructions are summarized below.

First, a significant contrast[1] is observed in the perception of appropriateness between *which NP* and *what NP* in asking a question on a specific set of entities, once a precise context introducing the salient reference set is presented, as in (7):

(7) *Context*: Alfred is a math student, and he is struggling to solve one of Hilbert's problems. Berth knows he is spending night and day on Hilbert's problems, and she asks him about the precise problem he is facing now:

#*Che* / *Quale* problema	vuoi risolvere
What / *Which* problem	do you want to solve?

Second, the canonical partitive paraphrases are only available with *which NP*, (8a), and not with *what NP*, (8b):

(8)	a.	Quale	*di questi problemi*	vuoi risolvere?
		Which	*of these problems* do you	want to solve?
	b.	*Che	*di questi problemi*	vuoi risolvere?
		*What	*of these problems* do you	want to solve?

A semi-partitive interpretation (in the sense discussed in § 1.1) can be associated with *what NP*, with a relevant difference in Italian as opposed to English:

(9) Che *(problema) *tra* questi (problemi)…
What (problem) *among* these (problems)…

In both cases, the *among* partitive construction is available. In Italian, however, the "outer" NP must be present, possibly indicating the inability of *che* to license a (pronominal) NP gap restricted by the *among* adjunct.

Third, as suggested by an anonymous reviewer, *which* and *what* seem to occupy different structural positions, as shown by the availability of numerals only with the former *wh-* type, but not with the latter:

(10) Quali *due* problemi (tra questi) devi risolvere?
Which two problems (among these) do you have to solve?
(11) Che **due* problemi (tra questi) devi risolvere?
What *two problems (among these) do you have to solve?

Fourth, a mild agreement preference indicates that (at least in Italian) a straightforward preference for a "kind of" interpretation is favored in the *what NP* condition (12) ((12a) interpreted as "what kind of problems"), while a partitive interpretation is preferred with *which NP* (13) (13b seems mildly more accessible than (13).a, though both readings are available):

(12)	a.	Che problemi	pensi	sia	più facile	(*da) risolvere?
		What problems	do you think	is	easier.sg	(to) solve?
	b.	??Che problemi	pensi	siano	più facili	*(da) risolvere?
		What problems	do you think	are	easier.pl	to solve?

[1] These preliminary data are gathered through an informal inquiry of a number (< 10) of native speakers.

(13)	a.	(?)Quali problemi	pensi	sia	più facile	(*da) risolvere?
		Which.PL problems	do you think	is	easier.sg	(to) solve?
	b.	Quali problemi	pensia	siano	più facili	*(da risolvere?)
		Which.PL problems	do you think	are	easier.pl	to solve?

Last, but not least, cross-linguistic evidence supports this contrast: in a language like Romanian where Maximal Free Relatives (14) and Existential Free Relatives (15) are available, the equivalent of *quale* (*which*), namely *care* leads to ungrammaticality, as opposed to the equivalent of *che* (*what*), namely *ce* (Caponigro and Fălăuş 2021):

(14)	Ana a luat	[**care/ce* [carte/mâncare] a luat-o	şi Maria].
	Ana has taken	*which/what [book/food] has taken-cl.acc.3sg also	Maria

(15)	Maria nu are	[*care / ce [carte/cărţi/mâncare] să (o/le) ia].
	Maria not has	*which/what [book/books/food] SBJV [CL.3SG/CL.3PL] take.3SG

The semantic conflict expressed by the selection of the supremum set of individuals denoted by the relative restriction, in (14), or the absence of any available individual, in (15), is coherent with the analysis proposed by Falco and Zamparelli (2019) and presented in §1.1.

In the acceptability studies introduced in §4, we tested this contrast both in Italian and English, where these *wh*-phrases also differ for agreement morphology: absent on both English *which* and *what*; overt for number in Italian *quale*, but not on *che*. We assessed whether this property may be responsible for some form of variation in the acceptability between the two languages.

An actual minimal pair can be created by keeping one of the two properties constant across the two DPs while manipulating the other. In fact, while both *which* and *what* can take an NP as their complement and thus be lexically restricted, *which* is the only one of the two that also takes a default D-linked interpretation regardless of the conversational context, in virtue of its discourse anaphoricity (Caponigro and Fălăuş 2021).

Hence, a genuine minimal pair to test two competing theories, the first attributing a relevant role to D-linking (§1.1), the second to the presence of a lexical restriction (§1.2), should rather be the following:

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

To the best of our knowledge, this contrast has been neglected in the literature, except for Alexopoulou and Keller (2013)'s acceptability judgment test on Greek and English. Based on Anagnostopoulou (1994)'s hierarchy for interrogative DPs, they tested the extraction of *what*, *what NP*, *which NP,* and *which of the NP* from within a *whether* island, but the only significant difference they observed was between *which NP* and bare *what*, while *what NP*, a referentially intermediate condition, was judged neither significantly better than *what*, nor significantly worse than *which NP*.

1.5 Predictions

The contrast in (16) was used to try to disentangle the putative role of D-linking (at least as far as the contrasts discussed in §1.4 are concerned) and lexical restriction in the amelioration of acceptability in ungrammatical extractions from *wh*-islands.

By exploiting the minimal pair with two complex (i.e., lexically restricted) determiners, it is possible to formulate precise predictions with respect to the possible outcomes: if D-linking is the manifestation of specificity, i.e., of a strong referentiality that characterizes highly accessible DPs, then we expect higher acceptability judgments on the D-linked condition than the non-D-linked ones because the latter should occupy a lower position in the same hierarchy. On the other hand, if lexical restriction and the featural Relativized Minimality model are on the right track, we do not expect a significant difference in the acceptability rates attributed to the two determiner types, since both are lexically restricted, i.e., carry the relevant [+NP] feature. More precisely, we first expect to find a main effect of D-linking independently of the intervention condition. Second, if the features distinguishing *which NP* and *what NP* are actually "criterial" in the sense of §1.2, an interaction between the D-linking factor and the extraction condition should be obtained, with much higher acceptability contrasts obtained in the extraction condition for D-linked DPs vs. non-D-liked, as opposed to the much milder contrast obtained in a non-extraction condition.

As far as reading times are concerned, we assume that a perceived difficulty (complexity) would slow down processing: in this sense, if D-linking is a facilitatory factor, we expect a main effect indicating shorter reading times only for this condition. Again, an interaction with the extraction condition would be expected, if and only if D-linking-related features are criterial: higher discrepancy in reading time, favoring D-linked items, is expected in the extraction condition, as opposed to the non-extraction condition.

2. Materials and method

2.1 Stimuli

For both languages, we manipulated two variables (with two levels each) in a 2x2 design: i) intervention (*intervention* level, i.e., long-distance extraction over the bare *wh- who* vs. *no intervention* level, long-distance extraction over a *that*-clause), and ii) the type of determiner introducing the main question (*non-D-linked wh*-item vs. *D-linked wh*-item). Depending on the intervention level, a different bridge predicate was chosen to have the selectional requirements fulfilled: in the *intervention* condition, *wh*-clauses were introduced by *chiedersi* in Italian and by its counterpart *wonder* in English; in the *no intervention* condition we chose Italian *pensare* and English *think* as main verbs. Overall, all extracted objects were singular, inanimate, and, for the Italian stimuli, masculine. An example of the four conditions for English and Italian is reported below:

17) Stimuli:

English	*Intervention*	*Wh- type*
a) What picture do you think that he drew?	no intervention	non-D-linked *wh-*
b) Which picture do you think that he drew?	no intervention	D-linked *wh-*

c) What picture do you wonder who drew?	intervention	non-D-linked *wh-*
d) Which picture do you wonder who drew?	intervention	D-linked *wh-*
Italian		
a) Che disegno pensi che abbia colorato?	no intervention	non-D-linked *wh-*
b) Quale disegno pensi che abbia colorato?	no intervention	D-linked *wh-*
c) Che disegno ti chiedi chi abbia colorato?	intervention	non-D-linked *wh-*
d) Quale disegno ti chiedi chi abbia colorato?	intervention	D-linked *wh-*

For each language, 24 lexically matched paradigms were created, for a total number of 96 stimuli for Italian and 96 stimuli for English. When possible, the Italian and English paradigms were each other's translation; in general, however, the lexical material was chosen based on word frequency in the two languages and keeping word length as homogeneous as possible across paradigms. Additionally, 48 fillers spanning the complete range of values in the acceptability scale were designed. Strongly acceptable fillers included well-formed *wh*-questions and polar questions; strongly unacceptable fillers included strong island violation structures; intermediate fillers, instead, included questions with multiple embeddings or in non-standard varieties of the two languages. Items were collected into four counterbalanced lists, each including 24 experimental stimuli (six per condition) and 48 fillers, for a total number of 72 stimuli for each participant: this way, each participant was exposed to only one stimulus from each lexical paradigm.

Fillers on the two ends of the acceptability scale were also used as inclusion criteria: average performance below 80% in fitting with the predicted range, both for clearly acceptable sentences (from 4 to 7) and for clearly unacceptable ones (from 1 to 3), lead to the experimental subject exclusion.

2.2 Procedure

The stimuli were presented in a web-based acceptability judgment experiment (JsPsych libraries were adopted, De Leeuw 2015). This experimental modality was chosen to encourage and facilitate participation, as the subjects could access the test remotely, just by clicking on a link from a device of their own choice (smartphone, tablet, laptop, or desktop). Participants were asked to judge the acceptability of the stimuli on a 7-point Likert scale, with 1 corresponding to totally unacceptable and 7 to perfectly acceptable, by selecting one of the seven slots corresponding to the values. Each experimental sentence was shown in isolation, screen-centered, one at a time, and on a single line.

Before judging the actual experimental sentences, subjects were presented with instructions on how to carry out the task, and with three sentences that served as examples: these included a perfectly acceptable sentence, a totally unacceptable sentence, and a nearly acceptable one. For each of these sentences, participants were first asked to assign them a value, then, after they scored the item, they were shown the expected acceptability range. This preliminary step was introduced to better explain the task and to encourage full use of the scale.

As for the actual trials, no time constraint on responses was set, and two pauses were planned during the task. One complete session lasted about 20 minutes. Informed consent was collected from all participants. The experiment has been approved by the Ethical Committee of the Department of Psychology at the University of Pavia (protocol 110/22).

2.3 Participants

43 native speakers of Italian (age range=21-59, M=29.77, SD=8.65) and 46 native speakers of English (age range=20-70, M=36.5, SD=14.36) voluntarily took part in the test. All subjects were asked to indicate their language variety (northern (31), central (4), or southern (8) for Italian; American (29), British (17), or Australian (0) for English).

2.4 Data analysis

Four English subjects were excluded from the analysis as they did not meet our inclusion criteria. Answers faster than 500 ms and slower than 60 seconds were excluded (<0.05 datapoints). Data were analyzed by fitting linear mixed-effects models of increasing complexity under the R environment (version 4.2.3) using lme4 library (version 1.1-32) (Bates, Mächler, *et al.* 2015), then comparing the models (ANOVA). Estimated marginal contrasts have been evaluated using the emmeans package (version 1.8.5) (Lenth 2022). A parsimonious random effect approach has been adopted (Bates, Kliegl, *et al.* 2015), in the end always including a random intercept adjustment by subject and by item. We both used as dependent variables acceptability (1-7) and reading time (*rt*, expressed in log-transformed milliseconds). Raw acceptability has also been transformed into z-scores to correct possible scale bias, but since each model equally converged with both dependent variables and the contrasts obtained were identical, here we only present models including raw acceptability as dependent variable, which we believe is intuitively more transparent with respect to judgment intuitions of native speakers.

2.5 Results

A strong main effect of intervention was observed: acceptability rates were significantly higher in the non-intervention condition than in the intervention condition, as expected ($\chi^2(2)=1828.8$, $p<0.0001$). On the contrary, differences in determiner type did not determine any main effect ($\chi^2(1)=1.9109$, $p=0.1669$). Crucially, the use of *che NP* and *quale NP* in the intervention condition did not lead to any significant difference in acceptability (Figure 1.Ita). However, an interaction emerges between determiner type and intervention, driven by the non-intervention condition: whenever the structure to be evaluated consisted of a *wh-* extraction from a complement clause, the lexically-restricted, non-D-linked *wh*-item *che NP* was attributed slightly worse values than the D-linked *quale NP* ($\chi^2(2)=16.346$, $p=0.0003$; non-D-linked - D-linked: *estimate*=-0.3417, *SE*=0.0873, *t*=-3.913, p=0.0006). The interaction between the main factors and reading times did not give rise to any significant effect. We did not observe any effect of language variety spoken ($\chi^2(2)=2.4705$, $p=0.2908$).

The analysis of English data gave very similar results: we observed a strong main effect of intervention ($\chi^2(2)=830.6$, $p<0.0001$). Moreover, no main effect ascribable to the determiner type emerged from the data analysis ($\chi^2(1)=0.994$, $p=0.3188$), that is, the presence of *what NP* or *which NP* in intervention structure did not have significant impacts on the acceptability judgments (Figure 1.Eng). Despite a numerical tendency (favoring *which* over *what*, as in Italian), no interaction emerges in English between determiner type and intervention ($\chi^2(1)=2.3606$, $p=0.1244$). Also in this experiment, no effect of language variety was detected ($\chi^2(2)=0.3748$, $p=0.8291$).

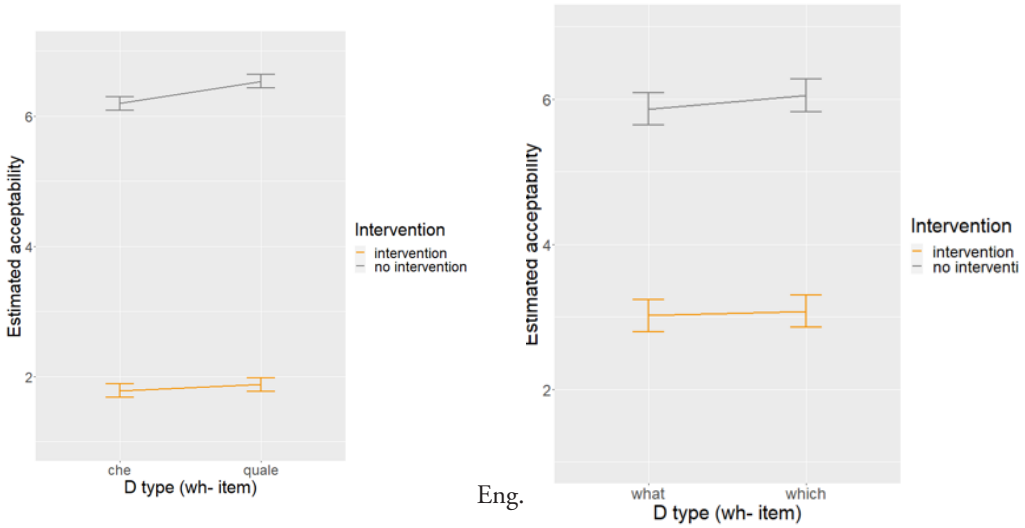


*Figure 1. Predicted acceptability based on the D type (*which/quale NP *vs.* what/che NP*) x intervention type (long distance extraction over a complement clause vs. a* wh- *argument model interaction. Italian data are to the left, English to the right. Error bars indicate Standard Errors.*

In both languages, an extremely low variance both by item and by subject was observed (significantly higher in English than in Italian, as graphically clear from the error bars in Figure 1). No binomial distribution was observed in any condition.

A significant intervention effect is detected looking at reading times ($\chi^2(1)=6.0070$, $p=0.01425$): the intervention condition induces a significant slowdown (of about 7500ms) in reading times (*intervention - no intervention*: *estimate*=755, *SE*=308, *t*=2.454, *p*=0.0143).

3. Discussion

The results obtained do not support the "referentiality" hypothesis while they are compatible with the fRM theory based on the relevance of a lexical restriction (Friedmann, Belletti, Rizzi, 2009): D-linking alone (or, more generally, the features distinguishing *which NP* from *what NP*, as discussed in §1.4) does not ameliorate locality violations (pace Hofmeister and Sag 2010; Hofmeister 2011). Moreover, from the low variance and the absence of any binomial distribution in acceptability, as well as totally comparable variance between the *wh-* type conditions, we should exclude an ambiguous interpretation of the *what/che NP* level between a D-linking and a non-D-linking interpretation, thus confirming that the lexical restriction hypothesis better explains the data collected in this study.

Our experiments cannot address any further the processing perspective (which remains to be tested since the prediction it makes is by and largely compatible with the results here obtained) but clearly indicate some relevant follow-up for this study. As mentioned in §1.1, canonical partitives ("quali di questi libri" / "which of these books") and pseudo-partitives ("quali tra questi libri" / "which among these books") might be another interesting minimal pair, since the former (*of*-PP), but not the latter (*among*-PP) include a partitive PP that should be selected by the preceding NP (Cardinaletti and Giusti 2017; Falco and Zamparelli 2019). According to the selection-based idea (§1.2), which elevates the "lexical restriction" to the status of "criterial feature", only the first item,

and not the second, should induce the relevant facilitation. This contrast cannot be predicted under any plausible interpretation of the processing perspective. Another relevant minimal modification of this contrast, which would erase the "structural" prediction, would be to include a full (outer) NP instead of a null (pronominal) one: "quali libri tra/di questi" / "which books among/of these".

Another critical factor in this experimental design was related to the "colloquial" nature of *che* (*what*) *NP* in Italian, that somehow justifies the significance of the interaction between factor in the Italian experiment: while this has probably nothing to do with D-linking, all the relevant contrasts discussed in §1.4 remain valid. Since we observed neither a main effect of D-linking, nor an interaction between the D-linking factor and the extraction condition that could be interpreted as an amelioration driven by this interpretive property, we conclude that all the structural features discriminating between *which NP* and *what NP* constructions (i.e. specificity, canonical partitivity, functional layer occupied by the *wh*-, reading preference between partitive vs. kind-of interpretation) should not have criterial status.

As suggested by Zamparelli (p.c.), and noticed by an anonymous reviewer, another minimal contrast to test, keeping the partitive construction fixed, would be related to the presupposition of existence: *quali* (*which*) *NP*, but not *quanti* (*how many*) *NP* should allegedly induce a presupposition of existence. Hence, if presuppositionality has a facilitatory effect in terms of extractability, a minimal contrast like "*quali*/*quanti* di questi problemi ti domandi chi abbia risolto?" ("*which*/ *how many* of these problems do you wonder who solved?") should be able to highlight it, resulting in higher acceptability rates for the extraction of *which* DPs, as opposed to extraction of *how many* DPs. These contrasts remain to be explored.

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Quaderni di Linguistica e Studi Orientali- QULSO
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Firenze University Press
https://oajournals.fupress.net/index.php/bsfm-qulso

Citation: L. Concetti, V. Moscati (2023) The Unexpected Lightness of the Main Verb: An Eye-Tracking Study on Relative Clauses and Trace Reactivation. *Qulso* 9: pp. 45-58. doi: http://dx.doi.org/10.13128/QULSO-2421-7220-15148

Data Availability Statement: All relevant data are within the paper and its Supporting Information files.

Competing Interests: The Author(s) declare(s) no conflict of interest.

The Unexpected Lightness of the Main Verb: An Eye-Tracking Study on Relative Clauses and Trace Reactivation

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Abstract:

A few studies on relative-clause processing report an unexpected facilitatory effect on the matrix verb that follows an Object Relative (ORC) clause (e.g. Staub, Dillon and Clifton jr. 2017). In this study we present the results of a novel eye-tracking experiment that replicated this effect on Italian. The advantage of ORCs is discussed under the hypothesis that subject-verb agreement in the matrix benefits from a general trace-reactivation mechanisms, subsumed from activation-based retrieval models (Lewis and Vasishth 2005).

Keywords: *Eye-tracking, Intervention effects, Relative clauses, Trace reactivation, Working memory*

1. Introduction

One of the most recognized findings about relative clauses is the different complexity elicited by Subject Relative Clauses (SRC) and Object Relative Clauses (ORC), also referred to as the subject-object processing asymmetry. To illustrate, consider the pair in (1):

(1) a. The student that criticizes the professors paints a landscape. (Subject Relative)
b. The student that the professors criticize paints a landscape. (Object Relative)

Although being composed of the same lexical material and roughly the same number of characters, ORCs are generally reported as being harder to process than SRCs. This has been documented in English (Ford 1983; Grodzinsky 1989; King and

Just 1991; Gibson 1998, 2000; Gordon, Hendrick and Johnson 2001, 2004; Traxler, Morris and Seely 2002; Grodner and Gibson 2005; Staub 2010; Staub, Dillon and Clifton jr. 2017; among others) and in many other languages, including Italian (Adani 2008; Grillo 2008; Di Domenico and Di Matteo 2009; Friedmann, Belletti and Rizzi 2009; Belletti *et al.* 2012; Guasti, Vernice and Franck 2018; Villata and Lorusso 2020; Biondo *et al.* 2022).

Within this rich literature, however, there is at least one important aspect that has been overlooked in previous studies: this is the relation between the filler-gap dependency generated by relativization, and the agreement between the head of the relative (i.e., *the student*) and the main verb (i.e., *paints*) in cases where the head of the relative is the matrix subject. Once the different positions of the gap/trace left behind within the relative is considered, the investigation of the processing time of both the main verb (where agreement is realized) and the embedded verb (where the trace is integrated) could provide us important insights about the elaboration of long-distance relations and the mechanisms that regulate the storage of linguistic material in working memory. The present study moves in this direction and presents new data in support of a larger facilitatory effect of ORCs on the matrix main verb, compatible with an activation-based approach on trace reactivation.

2. Structural constraints and working memory principles: a meeting point

2.1 Featural Relativized Minimality

One of the most successful frameworks in explaining the asymmetries found across types of relative clauses is the featural Relativized Minimality approach (Rizzi 1990, 2004; further analysed by Grillo 2008; Belletti and Contemori 2009; Friedmann, Belletti and Rizzi 2009; Belletti *et al.* 2012; Biondo *et al.* 2022). This approach is rooted in the Locality Principle, which states that syntactic relations must take place in the smallest possible structural domain, giving rise to a framework which has the explanatory power needed to account for a number of attested phenomena, restating them as intervention effects.

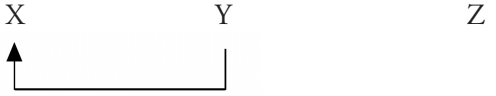
In the case of relative clauses, the filler-gap relation yields an increased processing cost (and fails in the case of young children) when the elements in the dependency are separated by an intervener which can potentially be a suitable candidate for the relation e.g., the subject position of the relative clause. Let us take a look at the configuration in (2):

(2) X … Z … Y

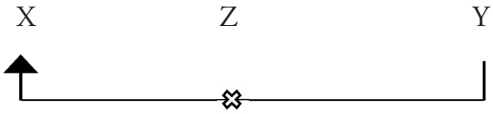
Given this configuration, X is the target of the relation, Z is the intervener, and Y is the origin of the dependency. According to the Relativized Minimality principle, the relation between X and Y fails if an element Z intervenes which is structurally similar to the elements in the relation, i.e., if Z shares the same relevant morphosyntactic features as X and Y.

A graphical representation of the principle is provided in (3):

(3) a. The teacher [that <the teacher> helped the student.] (Subject Relative)



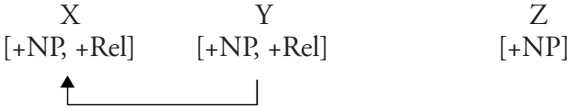
b. The teacher [that the student helped <the teacher>.] (Object Relative)



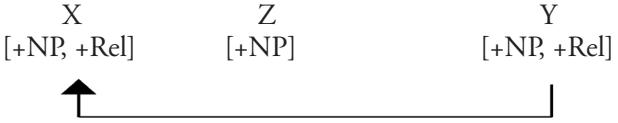
In the case of a SRC (3a), the relation only involves two positions, the *origin* Y (i.e., the relativization site/trace) and the *target* X (the head of the relative); Z does not intervene, therefore the computation does not give rise to high processing costs. In the case of an ORC (3b), the configuration involves all three positions, with Z intervening between the *origin* Y and the *target* X.

The reason why this structure is still licit (at least for adults), is that the intervener Z does not carry the exact same relevant morphosyntactic features as X and Y. In the case of (3b), here represented again as (4b) the displaced element and the intervener only share the [+NP] feature, which makes the structure harder to process but still valid:

(4) a. The teacher [that <the teacher> helped the student.] (Subject Relative)



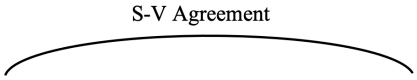
b. The teacher [that the student helped <the teacher>.] (Object Relative)



The notion of structural similarity, rooted in the featural properties of the elements involved in the relation, has been further discussed in Friedmann, Belletti and Rizzi (2009) and Belletti *et al.*, (2012). The two studies, the first of which has been conducted on Hebrew speaking children (age 3;7 – 5;0), and the second one on both Hebrew and Italian speaking children of similar age, observed that only syntactically active features (i.e., capable of triggering movement) are relevant to define the structural composition of an element. In this sense, the gender feature affects the configuration in Hebrew, but does not in Italian. The authors conclude that this is because in Hebrew gender is a movement attracting feature, while the same is not true for Italian. For the same reason, the number feature is syntactically relevant in Italian, thus having the effect of overcoming (or decreasing) the complexity of an intervention configuration (e.g., a number mismatch between the target and the intervener in an Italian ORC can decrease the complexity of the dependency).

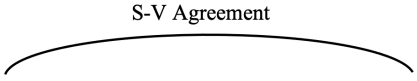
The subject-object asymmetry, and the role played by different kinds of grammatical features in modulating such asymmetry, has been experimentally replicated also for adults in a recent study by Biondo *et al.* (2022). Two self-paced reading experiments on Italian, testing the role of feature match/mismatch in both centre-embedded and final relative clauses, consistently found higher reading times for ORCs when compared to SRCs. Moreover, the facilitatory effect was larger in the number mismatch condition than in the gender mismatch condition. The fRM framework offers a clear picture regarding the processing asymmetry of Relative Clauses and the role of morpho-syntactic features in modulating the processing cost of the different structures.

This approach, however, does not make any explicit prediction on the elaboration of the matrix verb. For this reason, less attention has been devoted to relations holding in the matrix clause, that may span across the relative and that can be influenced by the trace position therein. To illustrate, consider again the pair in (1a-b) repeated below in (5), where the position of the trace and the subject-verb agreement relation are indicated:



(5) a. The student [that __ criticizes the professors] paints a landscape.

(Centre-Embedded SRC)



b. The student [that the professors criticize __] paints a landscape.

(Centre-Embedded ORC)

On matrix subject-verb agreement across a relative, only sparse and inconclusive data exist. While some eye-tracking studies reported a significant increase in processing cost on the ORC matrix verb region (Traxler, Morris and Seely, 2002, Experiments 1 and 3; Traxler *et al.*, 2005, Experiments 1 and 3; Gordon *et al.*, 2006, Experiment 1) others only found a descriptive trend (Traxler, Morris and Seely, 2002, Experiment 2; Traxler *et al.*, 2005, Experiment 2). A comparably unclear picture emerges from self-paced reading experiments, where only a handful of studies reported clause-type effects on the matrix verb (King and Just 1991; Gordon, Hendrick and Johnson 2001; Gennari and MacDonald 2008; 2009).

Other experimental work renders instead an interesting and unexpected pattern. Grodner and Gibson (2005) did not find any greater difficulty in processing the matrix verb after an ORC than a SRC. Even more indicative is the fact that Staub, Dillon and Clifton jr. (2017) reported an advantage for matrix verb following the ORC. Our study explicitly focuses on this alleged facilitatory effect, trying to replicate it in Italian using the same eye-tracking procedure as in Staub, Dillon and Clifton jr. (2017). We will consider the results also in light of previous proposals on memory effects on trace-reactivation, that we illustrate next.

2.2 The unexpected data and a possible explanation

Grodner and Gibson (2005) investigated the role of integration cost in long-distance dependencies by means of two self-paced reading tasks, directly comparing the predictions of resource-based and experience-based approaches to sentence processing complexity.[1] The most

[1] The authors argue in favour of a resource-based integration cost theory, according to which complexity increases as a function of the distance between the two elements in a dependency, with distance measured as the number of discourse referents that are introduced between the endpoints of an integration. Experience-based accounts, also referred to as surprisal theories, assumes that processing complexity results from encountering rare constructions, such as object relatives.

interesting result for the purpose of the present study, however, is that while participants spent more time at the embedded verb of ORCs than they did on SRCs, this difference was not detected on the matrix verb. Reading Times (RTs) are reported to be decreasing in the transition between the embedded verb and the matrix verb in the ORC condition, but increasing in the same transition in the SRC condition. This result was not predicted by the authors and, in our view, it may be connected to more recent studies in which *spill-over* (Biondo *et al.* 2022) or *retrieval bottleneck* (Staub, Dillon and Clifton jr. 2017) effects have been reported for the region immediately following the embedded verb.[2] The fact that RTs at the matrix verb in the ORC condition were not inflated, as it should be in light of documented spill-over or bottleneck effects, could be accounted for by assuming the presence of an opposite (facilitatory) effect.

A study conducted by Staub (2010) investigated a similar matter by means of an eye-tracking reading experiment. The results point towards the same pattern outlined above: although the experimental materials did not directly control for spill-over effects, no slow-down was detected on the matrix verb of ORCs.

The issue regarding the potential spill-over confound is directly targeted in a follow-up study by Staub, Dillon and Clifton jr. (2017), which specifically focused on the processing of the matrix verb in relative clauses with an eye-tracking while reading paradigm. The authors added a factor to the experimental design: in addition to *type of clause* (SRC vs ORC) they also included *length of clause*: short-RC with no PP attachment and long-RC with a PP that linearly distanced the Matrix Verb from the RC Verb. The PP insertion had the precise purpose of avoiding the complexity from the relative clause region to carry over to the matrix verb region, so to uncover potential clause-type effects on the matrix verb processing. The authors found an expected slow-down on the matrix verb for the short conditions but, interestingly, this difficulty is completely eliminated in the long condition: lengthening the ORC reduced reading times on the matrix verb region, while lengthening the SR actually increased reading times on the same region.

The pattern emerging from these studies points towards the presence of a facilitatory effect on the ORC matrix verb, which cannot be explained on the basis of either the structural constraints acting on the relative clause (i.e., locality, as in Friedman, Belletti and Rizzi, 2009), nor by resource-based explanations (Grodner and Gibson 2005).

It can however be accounted for by taking into consideration the Activation-based Retrieval Model of sentence comprehension (proposed by Lewis and Vasishth 2005; further developed by Lewis, Vasishth and Van Dyke 2006; Vasishth *et al.* 2008; Yadav, Smith and Vasishth 2021; among others). According to the model, one of the working memory constraints on sentence processing is represented by the fluctuation in the activation levels of the encoded (linguistic) items: once a constituent is encountered and encoded in working memory, it naturally starts to decay as a function of time elapsed from its encoding. The activation level can however be boosted by syntactically reactivating the encoded item, e.g., when its trace is encountered (Lewis, Vasishth and Van Dyke 2006). This is illustrated in the following contrast between SRCs and ORCs:

[2] Spill-over refers to the complexity in the processing of a constituent carrying over to the following region. The slightly different formulation of retrieval bottleneck assumes this effect to arise because of the need to retrieve two different constituents one immediately after the other, leading to a processing bottleneck which results in inflated reading times on the second verb.

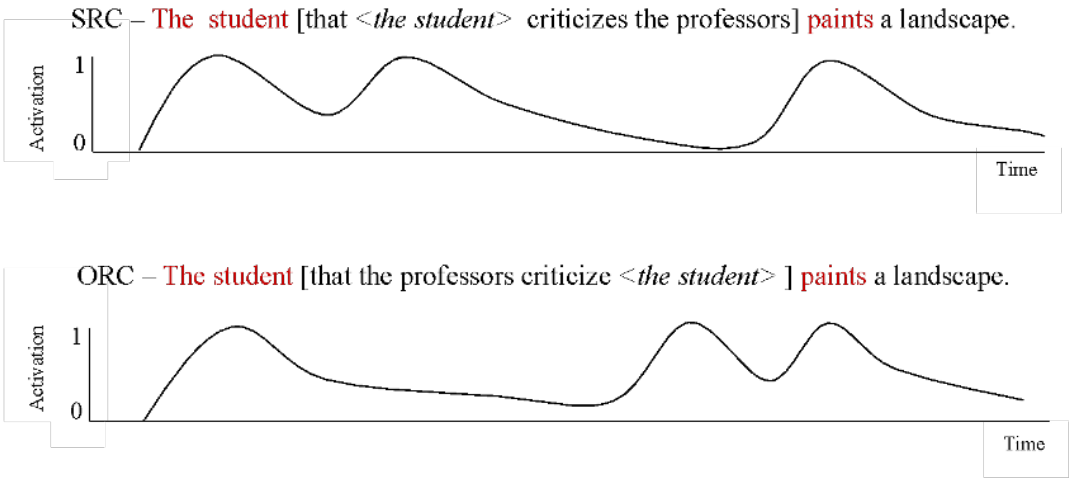


Figure 1. Hypothetical activation profiles of items encoded in working memory, following a series of boosts at retrieval points

As we can see in Fig.1, the matrix subject "The student" is encoded in working memory upon its first encounter, and its activation is at peak. From this moment on, it starts to decay until it is re-activated either by processing its trace, or by establishing the agreement relation with the main verb "paints". The crucial difference between SRCs and ORCs lies in the position where the trace is situated: in SRCs the trace is in the subject position of the relative clause, while in ORCs it is in the object position of the relative clause. This means that when the matrix subject has to be retrieved from working memory in order for agreement to take place, the constituent is more readily available to the parser in ORCs, leading to a faster integration into the structure.

We thus hypothesize that the facilitatory effect found on the matrix verb might be due to the closer position of the trace in ORCs. If empirically supported, this hypothesis would lead to a better understanding of the complex mechanisms involved in the specialized task of sentence comprehension, departing from views that explain the complexity of syntactic structures solely on the basis of structural or resource-based constraints, but rather recognizing the role of both (potentially independent) components. In order to directly test this hypothesis and add results of a different language to the ones already available for English (i.e., Staub, Dillon and Clifton jr. 2017) we designed an eye-tracking reading experiment on Italian.

3. Methods and materials

The experiment consists of a two conditions within-participant design in which we only manipulated Clause Type, that was made of two levels: Subject Relative and Object Relative. In both conditions, a temporal PP was added before the matrix verb, so to add linear distance that would avoid spill-over effects from the relative. The reason behind the choice of a temporal PPs is to be found in the different possibilities of attachment of temporal vs locative PPs: locative prepositional phrases have an ambiguous attachment site (i.e., they can either be attached to the relative clause VP or NP) which could potentially constitute a confounding factor. Temporal PPs, on the other hand, are unambiguously attached to the relative clause VP.

In order to single out and highlight the trace-reactivation effect on the matrix verb, we minimized possible intervention effects that could hamper the trace integration within the relative. We did this by introducing a number mismatch in both conditions. As observed by Friedmann, Belletti and Rizzi (2009), Belletti *et al.* (2012) and Biondo *et al.* (2022), this featural mismatch significantly reduces the processing cost of the relative clause itself. In addition, all the NPs involved in the relative clause configuration are lexical and animate, in order to avoid potential animacy effects reported in the literature (e.g., Traxler, Morris and Seely 2002).

An example of the two conditions, with the sentences segmented into interest areas, is provided in (6):

(6) a. L'allievo | che | critica | i pittori | durante l'esame | dipinge | un paesaggio. (SRC)
'The student | that | criticizes | the painters | during the exam | paints | a landscape.'

b. L'allievo | che | i pittori | criticano | durante l'esame | dipinge | un paesaggio. (ORC)
'The student | that | the painters | criticize | during the exam | paints | a landscape.'

Sixty pairs of sentences as in (6) were divided into two lists, so that every participant was exposed to each of the two conditions 30 times, but never to the same lexical content twice. Each participant was either assigned to list 1 or 2, and items were pseudo-randomized so as to never have more stimuli of the same condition appearing in sequence. Experimental items were also intermixed with 40 filler sentences (40 fillers per list).

Sentences appeared on the screen as a whole. Half of the stimuli were followed by a comprehension question, in order to ensure that participants were actively reading for comprehension. Once the sentence was completed, participants moved to the next stimulus (or the comprehension question) by pressing the spacebar.

Participants were 20 undergraduate students at the University of Siena, of age between 20 and 30. All of them were Italian native speakers, with no reported history of reading or language disorders, and normal or corrected-to-normal vision. No participant was excluded on the basis of accuracy scores or extensive track loss. One participant was excluded from the analysis because of the impossibility to complete the task due to the calibration process repeatedly failing during the experimental session. No participant had expertise in the field of linguistics and none of them reported having understood the manipulation of the materials, thus assuring a natural reading setting, with no specific strategy emerging for the processing of the structures under investigation.

Eye-movements were recorded using an Eye Link Portable Duo (SR Research Ltd., ON, Canada), interfaced with a Display PC (a 17-inch screen laptop in a fixed position, with the eye-tracker mounted on it) in which the stimuli are presented, and a Host PC, from which the experimenter controls the procedure. The sampling rate was set to 1000Hz, only the right eye was tracked, and the calibration was set to 13-point.

4. Results

Eye-movement data were visualized and cleaned through the Data Viewer software (SR Research Ltd., ON, Canada). Fixations with a duration lower than 80ms and in the immediate proximity of the previous or following fixation were merged together.

The analysis was conducted on two regions: the RC verb and the Matrix Verb. The matrix verb is the main focus of the study: under our working hypothesis, we expected lower reading time measures for the ORC condition with respect to the SRC condition. On the embedded verb, instead, the inverse pattern is predicted in line with much previous literature that consistently report a greater processing load with ORCs than SRCs.

As for the dependent variables, we collected *First Fixation* duration, *First Pass* duration, *Regression Path* duration (also referred to as '*go-past time*'), *Total Time* (also referred to as '*dwell time*' or '*gaze duration*').

Let us inspect first the reading times on the RC-verb. In figure 2, we report the four reading measures in the SRC and ORC condition. Here, a general processing advantage is visible for SRCs, since all our measure show longer reading times for ORCs: *First Fixation* has a mean value of 224ms in the SR condition, and 258ms for the OR condition, *First Pass* means are 275ms for the SR condition, and 356ms in the OR condition, *Regression Path* means are 374ms for the SR condition, and 480ms for the OR condition, *Total Time* has a mean value of 548ms in the SR condition, and 659 in the OR condition.

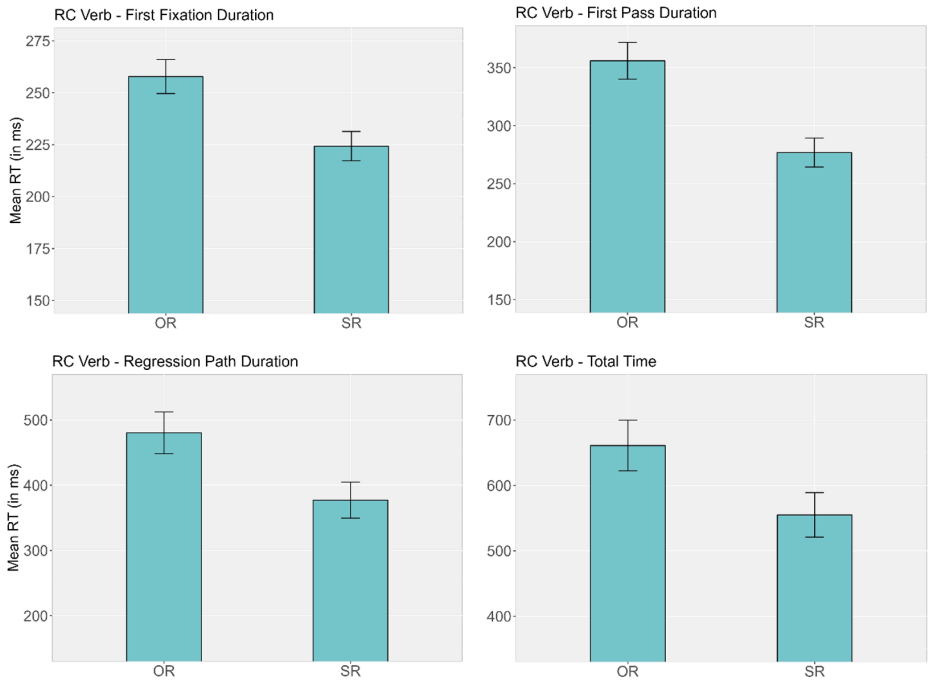


Figure 2. Mean Reading Time measures for the RC verb region in SRCs and ORCs. Error bars represent 2 times S.E.

The pattern is partially reversed on the matrix verb region, at least in the *Regression Path* duration and *Total Time*, as shown in Figure 3: on those "late measures", processing of the matrix verb elicited higher reading times in the SR condition than in the OR condition. *First Fixation* has a mean value of 255ms in the SR condition, and 253ms for the OR condition, *First Pass* means are 305ms for the SR condition, and 302ms in the OR condition, *Regression Path* means are 689ms for the SR condition, and 574ms for the OR condition, *Total Time* has a mean value of 503ms in the SR condition, and 462 in the OR condition.

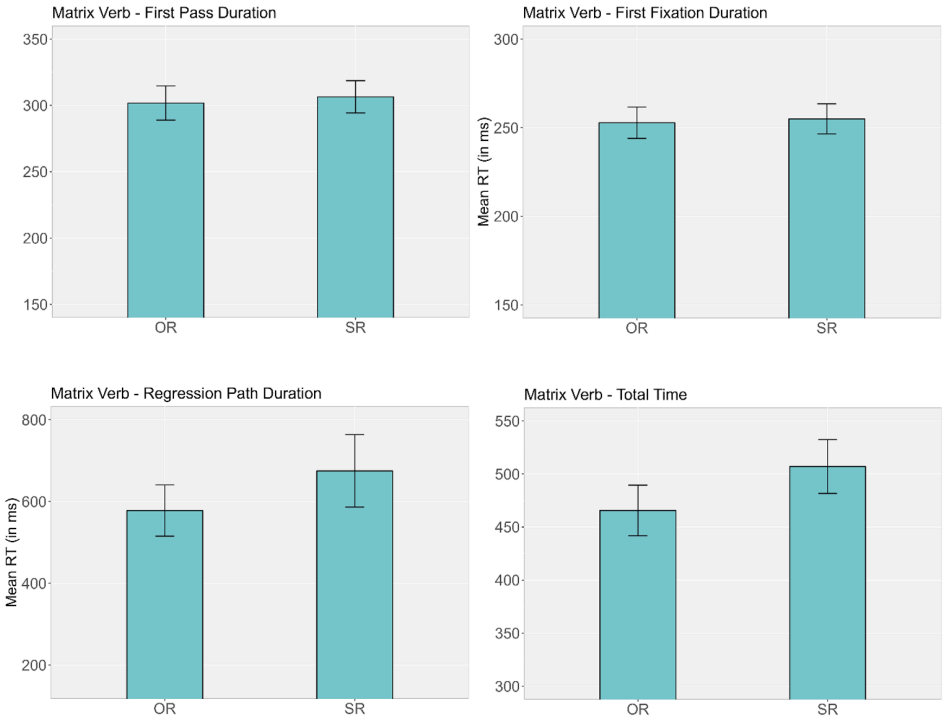


Figure 3. Mean Reading Time measures for the matrix verb region in SRCs and ORCs. Error bars represent 2 times S.E.

Data were analysed with linear mixed-effect regression models for every reading time measure at the two regions of interest: the RC verb and the Matrix Verb. A summary of the results from the analysis of the two regions of interest is shown in table 1:

Relative Clause Verb				
	β	S.E.	t-value	p-value
First Fixation	-34	5,22	-6,44	< 0,001 ***
First Pass	-81	9,55	-8,52	< 0,001 ***
Regression Path	-106	20,57	-5,15	< 0,001 ***
Total Time	-111	22,11	-5,014	< 0,001 ***
Matrix Verb				
	β	S.E.	t-value	p-value
First Fixation	2	5,84	0,31	0,754
First Pass	3	8,43	0,4	0,688
Regression Path	115	48,35	2,38	0,0176 *
Total Time	41	15,8	2,61	0,0092 **

Table 1. Linear mixed-effect model estimates of effect of RC type on each measure. A positive estimate of β reflects an increase in RT (in ms) in the SR condition compared to the OR condition, while a negative value reflects a decrease in RT in the SR condition compared to the OR condition.

The analysis carried out on the RC verb confirmed the SR-OR asymmetry, with ORs eliciting significantly higher reading times than SRs at all measures. On the matrix verb, no (significant) clause-type effect emerged on "early" measures such as first fixation duration and first pass duration, but a statistically significant effect emerged in later measures, namely regression path duration and total time: processing of the matrix verb elicited higher reading times in the SR condition than in the OR condition.

5. Discussion

The results obtained by the analysis of the matrix verb data are consistent with the predictions outlined in the introduction: all else being equal, the agreement operation between the subject and the verb of the main clause is harder to process in the case of (embedded) SRCs when compared to ORCs. This facilitatory effect is accounted for by considering the activation levels of the matrix subject, which has to be maintained in working memory until it agrees with the main verb: the activation boost, closer to the matrix verb in ORCs than in SRCs, facilitates the following agreement operation.

An interesting question arises regarding the nature of the different eye-movement measures included in the analysis: why is facilitation detected in measures such as regression-path and total time, but not in first pass measures? If we assume first pass measures to be reflecting the early stages of processing, namely when linguistic information is extracted from the fixated word and encoded into working memory, a significant difference is not predicted under any approach taken into consideration: neither the Relativized Minimality framework nor the resource-based approaches. The same can be said in general for the working memory mechanisms investigated

here: the position of the main subject's trace has negligible impact on the encoding of the matrix verb, but a significant one on the agreement relation between the verb just encoded and the subject which needs to be retrieved. Under this view it is indeed expected that if a difference in the processing of this operation should arise, it would be more easily detected by eye-movement measures reflecting later stages of processing, such as regressive eye-movements and total time spent on the region of interest.

As to the question of why it is the case that no conclusive evidence of this effect emerged in the last decades of research on relative clauses, there is more than one plausible explanation.

One aspect to consider in this respect is the type of task employed: grammaticality/acceptability judgements, accuracy rates on comprehension questions and related off-line methodologies can be very informative, but fail in pinpointing the exact location where complexity arises. On-line methodologies such as self-paced reading, although more informative in this sense, are still not sensible to the different mechanisms arising in the real-time processing of sub-parts of sentences (e.g., no consistent data on regressive eye-movements). Eye-tracking, on the other hand, offers a fine-grained picture of how comprehension unfolds in real time, thus allowing for inferences to be drawn at the single constituent level, with precision expressed on the millisecond scale.

Another reason has to do with the materials employed in the past studies on relative clauses: apart from very few exceptions (i.e., Staub, Dillon and Clifton jr., 2017), no study controlled for spill-over/retrieval bottleneck effects. The fact that in all these cases the stimuli were composed of sentences in which the matrix verb immediately followed the embedded verb means that the high cognitive load associated with the processing of the relative clause (especially in the case of an ORC) carried over to the matrix verb, counterbalancing the facilitatory effect due to the different position of the trace.

6. Conclusion and future directions

The present study replicated classical results concerning the subject-object relative clauses' asymmetry, but also the less-known observation that centre-embedded object relative clauses lead to a facilitatory effect on the following matrix verb, once subject-verb agreement is computed. Complexity in long-distance dependencies is seen here as being due to a series of distinct factors, both specific to language (locality principles) and to more general cognitive constraints (e.g. Chomsky and Miller 1963; Miller and Chomsky 1963) such as those of working memory. In order to correctly parse syntactic structures, some elements must be held in memory until they can be correctly interpreted. This approach has been explored in detail in more recent years by Lewis and Vasishth (2005) and subsequent work, with the underlying theoretical assumption that language processing, although being a specialized task acting on specialized representations, cannot exist in a vacuum where other cognitive domains are excluded.

This prolific line of inquiry has not fully explored the relationship between syntactic parsing and working memory, including encoding and retrieval mechanisms. Multiple questions arise from the present study: what exactly are the atomic elements that need to be encoded in working memory in order for parsing to successfully unfold, and how are they represented in the mind/brain? There is not, at least to our knowledge, conclusive evidence regarding the nature of these representations.

One interesting possibility is the one outlined in the already mentioned activation-based retrieval model of sentence comprehension (Lewis and Vasishth 2005), which builds on the independent cognitive architecture ACT-R (Adaptive Control of Thought-Rational, Anderson

et al. 1998; and much related work). According to these models, linguistic items are encoded in working memory as bundles of features, which are then used as cues for a fast, associative retrieval of items that feeds the parsing of syntactic structures.

This raises a series of questions regarding the nature of both the terminal representations and the features encoded. Are the terminal representations wholly encoded as encountered with no possibility of real-time update, or are they incrementally updated as novel information comes into play (e.g., with coordinate structures, where two items carrying the *singular* number feature can be seen as functionally constituting a single component carrying the *plural* number feature)? Are the features encoded just the ones that carry morpho-syntactic information useful for the parse, or are all kinds of different features (semantic, pragmatic-contextual, phonological, etc.) encoded as well? Are all features encoded with the same strength or are they weighted differently?

All these questions need to be answered if we are to come closer to understanding the complex relationship between distinct but intertwined areas of cognition, which are central to many human abilities. We leave these investigations to future research.

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Quaderni di Linguistica e Studi Orientali- QULSO
Working papers in Linguistics and Oriental Studies

Firenze University Press
https://oajournals.fupress.net/index.php/bsfm-qulso

Citation: A.-L. Demonie, P. Goryczka (2023) Complex Possessive Pronouns in West Flemish and German. *Qulso* 9: pp. 59-79. doi: http://dx.doi.org/10.13128/QUL-SO-2421-7220-15159

Data Availability Statement: All relevant data are within the paper and its Supporting Information files.

Competing Interests: The Author(s) declare(s) no conflict of interest.

Complex Possessive Pronouns in West Flemish and German*

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Abstract:

In this article we discuss a contrastive, morphological agreement pattern exhibited by singular possessive pronouns in West Flemish and German. While West Flemish *zen* ('his') and *eur* ('her') require a suffix *-en* to mark masculine agreement, they are unmarked for feminine agreement. Conversely, German *sein* ('his') and *ihr* ('her') require a suffix *-e* to mark feminine agreement, but they are unmarked for masculine agreement. Put differently, in both languages only one gender is marked for agreement, and West Flemish marks a different gender than German. To account for this intra- and cross-linguistic variation, we argue for a fine-grained analysis, couched in Nanosyntax (Starke 2009 et seq.), of the possessive pronouns and their agreement markers.

Keywords: *Agreement, Gender, Germanic, Nanosyntax, Possessive Pronouns*

1. Introduction

In this article, we investigate third person singular possessive constructions in West Flemish and German. More specifically, we focus on the contrastive, morphological agreement marking exhibited by the possessive pronouns, as illustrated in (1) for West Flemish and in (2) for German.

(1) a. zen-**en** hoed
his-masc.sg hat.masc.sg
'his hat'

b. zen-**ø** veste
his-ø jacket.fem.sg
'his jacket'

c. eur-**en** hoed
her-masc.sg hat.masc.sg
'her hat'

* We would like to thank the participants of IGG 2023 for their questions and comments. We are also indebted to Pavel Caha for his invaluable feedback on previous drafts, and to two anonymous reviewers for their helpful comments and suggestions. Both authors contributed equally to this article.

d. eur-**ø** veste
her-ø jacket.fem.sg
'her jacket'

West Flemish (Haegeman 2013)

(2) a. sein-**ø** Hund
his-ø dog.masc.sg
'his dog'

b. sein-**e** Schwester
his-fem.sg sister.fem.sg
'his sister'

c. ihr-**ø** Hund
her-ø dog.masc.sg
'her dog'

d. ihr-**e** Schwester
her-fem.sg sister.fem.sg
'her sister'

German (Georgi and Salzmann 2011)

In (1) and (2), we see that every pronoun agrees with the possessum (i.e. the person/object that is possessed) in number and gender, but this is morphologically realised in opposite ways. In both languages only one gender is marked by an agreement suffix, the other is unmarked (indicated by ø), and the gender which is marked is different for each language. In other words, the pronouns in West Flemish require a suffix to agree with singular masculine possessums, but not with feminine ones, and the pronouns in German require a suffix to agree with singular feminine possessums, but not with masculine ones. This way, the data in (1) and (2) present us with a cross-linguistic contrast in number/gender agreement, and the question arises if/how we can account for this variation.[1]

[1] With regards to the West Flemish and German data, we leave out two elements. The first element is neuter pronouns, (i) and (ii). In both languages, the pronouns (ia-b) and (iia-b) pattern with the masculine pronouns, (1-2). However, the agreement in West Flemish follows the feminine pattern, (ic), and in German the masculine one, (iic). This does not mean that we imply that masculine/feminine and neuter gender consist of the same features, but the distinction between them is currently uninformative to our discussion.

(i) a. (het kind) zen-**en** hoed
(the child).neut.sg its-masc.sg hat.masc.sg
'(the child)'s hat'

b. (het kind) zen-**ø** veste
(the child).neut.sg its-ø jacket.fem.sg
'(the child)'s jacket'

c. (de man) zen-**ø** kleed
(the man) his-ø dress.neut.sg
'(the man)'s child'

West Flemish (Haegeman 2013)

(ii) a. (dem Kind) sein-**ø** Hund
(the child).neut.sg its-ø dog.masc.sg
'(the child)'s dog'

b. (dem Kind) sein-**e** Schwester
(the child).neut.sg its-fem.sg sister.fem.sg
'(the child)'s sister'

c. (dem Mann) sein-**ø** Kind
(the man) his-ø child.neut.sg
'(the man)'s child'

German (Georgi and Salzmann 2011)

The second element is case. Since West Flemish seems to have no (overt) morphological case marking anywhere else except for personal pronouns (cf. Haegeman 2013), and since our discussion wants to primarily shed light on the number/gender marking between the two languages, we opted to not obscure the picture unnecessarily. In addition, there are also some theoretical arguments to assume that the exclusion of case will not significantly alter the analysis we propose (cf. section 2.3, and Caha 2021).

To date, the markings in (1) and (2) have, as far as we know, not received much attention. In the existing literature, discussions of West Flemish and German possessive pronouns are often embedded in larger discussions of the so-called 'Possessive Doubling Construction' (PDC) (see for instance Haegeman 2004, 2013; Weiß 2008; Georgi and Salzmann 2011 and Buelens 2014 amongst others). The PDC is a mere extension of the constructions in (1) and (2), as it explicitly contains the prenominal possessor, (3).

(3) a. **Peter/Marie** zen-en/eur-en hoed
Peter/Mary his-masc.sg/her-masc.sg hat
'Peter's/Mary's hat'

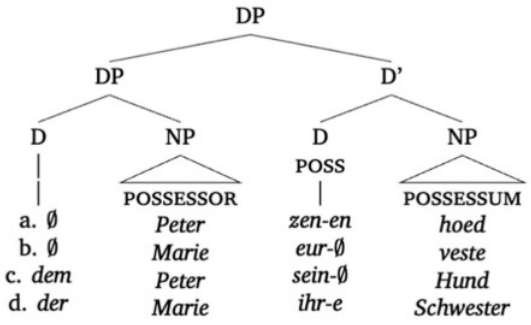
West Flemish

b. **Peter/Marie** sein-e/ihr-e Schwester
Peter/Marie his-fem.sg/her-fem.sg sister
'Peter's/Mary's sister'

German

For the constructions in (3), the focus has mostly been on the derivation of the DP in its entirety. That is, previous studies, for instance, examined word order, case assignment and the relation between the possessor and the possessum. The composite morphology of the pronoun has not been investigated in detail yet. With respect to its function, though, there is a consensus that the pronoun occupies a single functional head within the DP. Type-wise, this head has been argued to be a determiner head, D (see Heck and Müller 2007; Weiß 2008; Georgi and Salzmann 2011), an inflectional head, I (Haegeman 2004, 2013), or a possessive head, POSS (Buelens 2014). The structures that have been proposed are all variations on the basic DP structure in (4a-b) for West Flemish and (4c-d) for German.

(4)



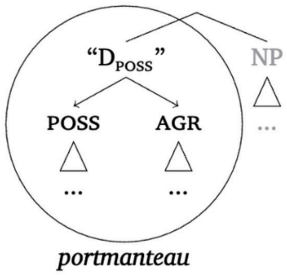
Now, it is not our aim to counter the findings in the literature. We entirely concur with the structure in (4) but we will add to it by zooming in on the possessive pronouns. The goal is to provide a fine-grained and principled account of the intra- and cross-linguistic distribution of suffixed and zero agreement in West Flemish and German. Taking a more cartographic 'one morpheme – one head' approach to the data (cf. Cinque and Rizzi 2008), we essentially propose that the possessive is made up of two parts, the pronoun proper and the agreement. This way, we show that the possessive does not lexicalise one functional head as in (4), but rather a sequence of them. Our analysis will be couched in Nanosyntax (Starke 2009 et seq.).

The article is structured as follows. In section 2, we introduce the prerequisites for our analysis. The main proposal is then further described in section 3. Section 4 provides a brief conclusion and touches upon potential future work in this area of research.

2. Ingredients of the analysis

As was mentioned in the Introduction, West Flemish *eur*-(*en*) and German *ihr*-(*e*) traditionally lexicalise a single, functional head in the DP-structure. However, the main argument that we develop in this section is that this head is actually decomposable into multiple layers, and that some of these layers are lexicalised by the pronoun, and some by the agreement marker. The core of our argument is visualised in (5). Following the morphology on the possessives, the D-head is split up into two constituents, POSS and AGR, which are themselves internally complex. In some cases (cf. (1b,d) and (2a,c)), these two constituents are spelled out as a portmanteau, (5a), in other cases (cf. (1a,c) and (2b,d)), they are spelled out separately, (5b).[2]

(5) a.



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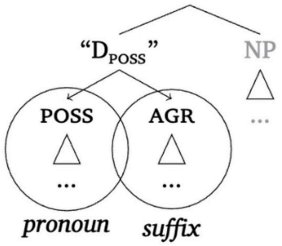


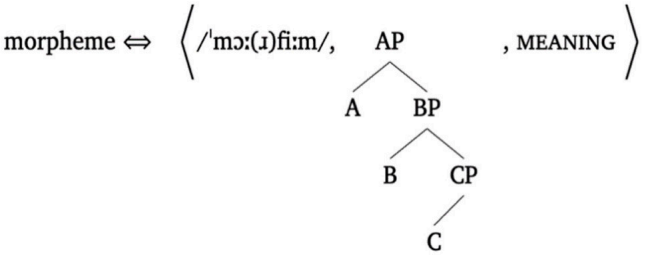
To explain the picture in (5), we will start by introducing the concepts of 'phrasal spellout' and 'root size' in section 2.1. This will help clarify how we can account for both the lexicalisation of portmanteaus and separate morphemes. After that, in section 2.2 and section 2.3, we examine the internal structures of POSS and AGR individually and provide an explanation for the differences between West Flemish and German agreement.

2.1 Phrasal spellout and root sizes

Before delving into the decomposition of the possessive pronouns, we must introduce two concepts within the nanosyntactic framework that will allow us to explain why the possessives sometimes require suffixation to agree with the possessum and sometimes do not. These concepts are phrasal spellout (Baunaz and Lander 2018; Caha 2009, 2019; Starke 2009, 2018 to name only a few) and root sizes (Starke 2014; Caha *et al.* 2019).

Let us start from the basics. Nanosyntax (Starke 2009 et seq.) is a Late-Insertion theory of morphology, where syntactic structures are merged first and then lexicalised afterwards by means of lexical items. Under this view, lexical items consist of several parts: a phonology and/or concept and a syntactic representation. This is illustrated by the abstract lexical item in (6).

(6)

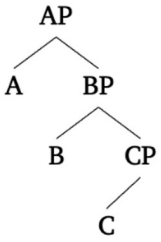


[2] We will not go into the specifics of how the possessive pronoun eventually gets merged with the NP (which is why the NP is in light grey), as we put the focus specifically on the possessive pronoun in this article. We refer the reader, for instance, to Ross (2021) for an implementation of this in Nanosyntax.

The relationship between the syntax and the lexicon in Nanosyntax is considered to be one of 'matching'. That is, whenever syntax builds a structure, e.g. (7a), it will search the lexicon for a suitable lexical item that is either a perfect equivalent of the structure or that contains a subpart of it.

Concretely, the lexical item in (6) forms a match with the structure in (7a), because it is identical to it. It can thus be inserted at the top node AP and lexicalise not only this phrase, but also the other features contained within it. We indicate successful lexicalisation with a circle, (7b). A situation like this, where a single morpheme is able to lexicalise multiple syntactic terminals, is referred to as 'phrasal spellout'.

(7) a.



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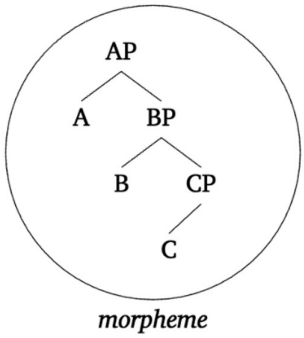
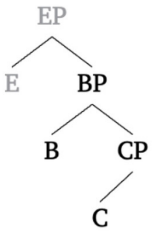


There are, however, instances where a lexical item only matches a subpart of the syntactic structure. An example of such an instance would be when the top node of the structure in (7a) is not AP, but a different feature E, as in (8a). Another example would be when one of the features is left out, as in (8b). The features which are not part of the lexical item in (6) are indicated in light grey.

(8) a.



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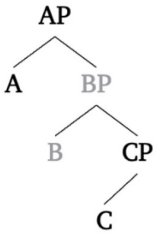
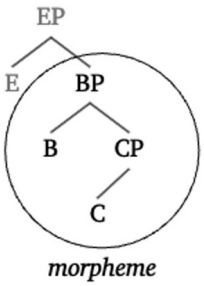


In situations like (8), the lexical item cannot lexicalise the full structure, because it either does not contain the new feature, or because it is missing a feature. However, in both circumstances, it can still lexicalise a subpart of the structure due to the so-called Superset Principle. This principle is formulated in (9).

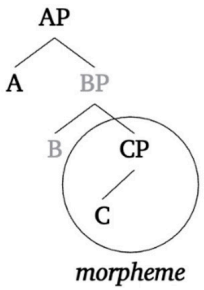
(9) Superset Principle (Starke 2009)
A lexically stored tree L matches a syntactic node S iff L contains the syntactic tree dominated by S as a subtree.

Put informally, the principle states that a lexical item can lexicalise any node of a syntactic tree as long as all the features below that node are contained within it. Taking the examples we have been using thus far, the lexical item in (6) can be inserted at the BP node and lexicalise all the features it encompasses, (10a). It can also be inserted even lower at the CP node and lexicalise just a single feature, (10b).

(10) a.

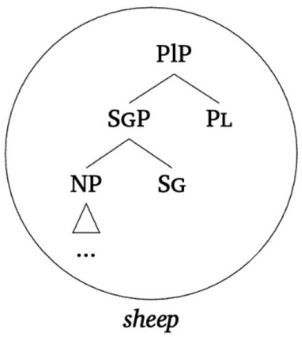


b.



In the examples above, the lexical item in (6) matched a subpart due to some kind of disruption in the syntactic structure. However, it can also be the case that the lexical item itself simply has a different 'root size'. Caha (2021) illustrates this by means of a comparison between the plural forms of the English nouns *sheep* and *father*. Whereas the former can be both singular and plural, the latter can only be singular and will require a suffix to pluralise. This suggests that the lexical structures for *sheep* and *father* are not the same. That is, *sheep* must have a bigger size, because it incorporates both number features, whereas *father* only incorporates one of them. This is depicted in (11).[3] Already note the resemblance between these structures and the ones we drew in (5): *sheep* can spell out the structure as a portmanteau, *father* must resort to two morphemes.

(11) a.



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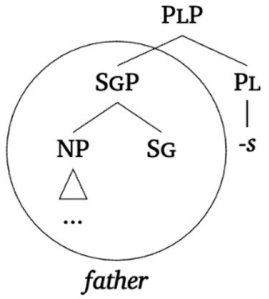


In sum, we have learned in this section that phrasal spellout in combination with the Superset Principle allows morphemes to spell out more or less structure, depending on the context, and that lexical items come in various sizes. In the next two sections, we will use both

[3] One could wonder why the lexical item *sheep* does not lexicalise both structures in (11), as it is a perfect match for both. As proposed by Caha *et al.* (2019), the reason for this essentially has to do with the retention of concepts. They argue that, when a certain lexical item is chosen at the start of the derivation, the rest of the derivation must remain faithful to that choice so as not to illogically replace the concept *father* with *sheep* in the course of lexicalisation.

concepts to account for the fact that some West Flemish and German possessive pronouns can spell out POSS and AGR (cf. (5)) by means of a portmanteau, but others must resort to a second morpheme to do so. We will show that the lexical items of both POSS and AGR spell out a sequence of features and that in each language these sequences differ in size, creating the need for additional agreement suffixation as in (11b).

2.2 The internal structure of POSS

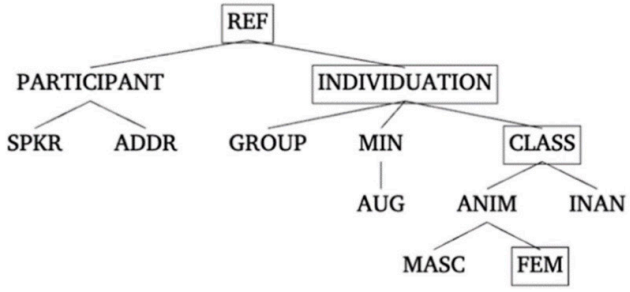
As was mentioned before (cf. (5)), we divide the D-head into two elements: POSS and AGR. In this section, we start with the POSS and determine its underlying structures. As a reminder, POSS is the part that corresponds to the pronominal parts of the possessives in both West Flemish and German. These are marked in bold in (12).

(12)

	MASC AGR	FEM AGR
WEST FLEMISH	***zen/eur-****en*	***zen/eur-****ø*
GERMAN	***sein/ihr-****ø*	***sein/ihr-****e*

Since we are dealing with a type of pronoun, we will adopt the same features for the underlying structures that were proposed in Harley and Ritter's (2002) cross-linguistic study on personal pronouns. In their study, they found that pronouns can be formally distinguished by means of a limited set of morphological features that are hierarchically organised, as in (13).

(13)



The tree in (13) can be read as follows: The first node at the top of the tree is REF. This feature is part of every pronoun because it indicates that they are referential expressions. Below this node, we find all the features that are privative, i.e., they are either present or absent, there are no negative feature values. These features are then divided over two branches. On the left, there are person features. Speaker (SPKR) and Addressee (ADDR) are used to distinguish between first and second person and are absent in the case of third person. On the right, there are number, class and gender features. Minimal (MIN) and Group (GROUP) distinguish between singular and plural. MIN and GROUP combined, or Augmented (AUG) on its own, are used for other number systems like dual and paucal. Under the CLASS node, the remaining class and

gender features are used to distinguish between Animate (ANIM) and Inanimate (INAN), as well as Masculine (MASC) and Feminine (FEM).

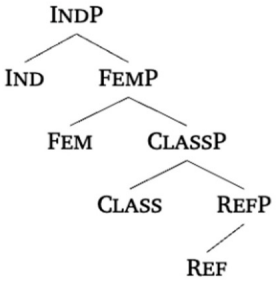
However, since we are only interested in possessive pronouns that are [3, SG, FEM/MASC], we will not use all the features in (13) to model their structures. We will only take the subset of features that is marked by a rectangle. Note that taking such a subset is permitted due to the privative nature of these features, e.g. if the pronoun is singular, the other number features are gone by default. The features we are left with are summarised in (14).

(14) REF > IND > CLASS > FEMM

For the selection in (14), we slightly reinterpret the meaning of some of the features. For number, we take IND to be the singular feature instead of MIN. This way the features of singular and dual number are more conveniently disambiguated. For class and gender, we dispose of class since neither German nor West Flemish make a formal distinction between animate or inanimate possessives. Instead, we redefine CLASS as a default feature for all genders except feminine. As suggested by Baggio (2022), feminine remains distinct from the other genders and projects its own dedicated FEM feature.

In addition to these adjustments, we also restructure the features following Caha (2021). The ordering we opt for is shown in (15). As the root node, REF is placed at the bottom in a similar fashion as nouns are in NPs. Gender and number features follow REF.[4]

(15)

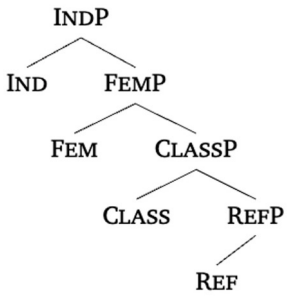


Since we assume that single morphemes can lexicalise multiple syntactic terminals through phrasal spellout, we take the structure in (15), repeated in (16a), to be the underlying structure of the feminine possessive pronouns *eur* and *ihr*. What underlies the masculine pronouns *zen* and *sein* is similar, but lacks the dedicated feminine feature, (16b).[5]

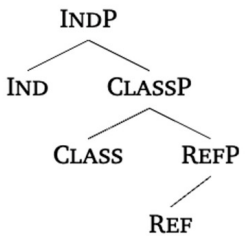
[4] For discussion of the particular ordering NUMBER > GENDER we refer the reader to Picallo (1991) and Kramer (2015). For the sake of clarity, we present the structures in (15) and (16) with a unary branching foot, but the pronouns could be expected to be built from a root, as in Compton (2022).

[5] In their current forms, the structures of possessive pronouns are indistinguishable from those of personal pronouns. It is therefore possible that we might need a feature that is characteristic of possessives, like a dedicated POSS feature or a genitive case feature, as proposed by Van Baal and Don (2018). However, since this paper is focused on the realisation of the gender agreement marking rather than the pronominal features, we leave it undecided for now what such a possessive feature would be, whether there would be one or more, or where it should sit in the structure.

(16) a. feminine:



b. masculine:



With the base structures of the POSS of masculine and feminine possessive pronouns in place (but see the next section for an update), we will now shift our attention to AGR in the next section.

2.3 Morphological concord

As we already know, West Flemish possessive pronouns mark agreement with the suffix *-en* when they are combined with masculine singular possessums, and German possessive pronouns mark agreement with the suffix *-e* when they are combined with feminine singular possessums, (17). In other words, the data suggest that AGR is made up of gender and number features.

(17) a. zen-**en** hoed
his-masc.sg hat.masc.sg
'his hat'
West Flemish

b. eur-**en** hoed
her-masc.sg hat.masc.sg
'her hat'
West Flemish

c. sein-**e** Schwester
his-fem.sg sister.fem.sg
'his sister'
German

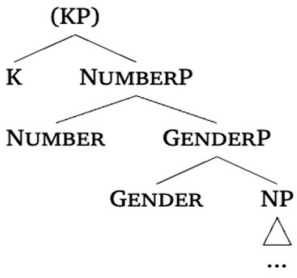
d. ihr-**e** Schwester
her-fem.sg sister.fem.sg
'her sister'
German

If this is correct, then it would seem that AGR consists of similar features as POSS, because, as we concluded in section 2.2, the pronominal features also consist of gender and number. While such feature doubling may seem redundant and curious, various studies on morphological agreement in both the nominal as well as the verbal domain have also observed this phenomenon (see for instance Taraldsen 2010, Ross 2021, Starke 2020, Blix 2021, and Caha 2019, 2023).

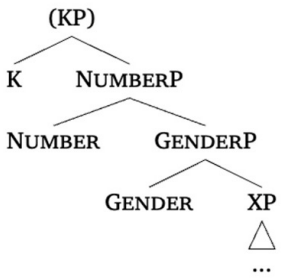
Particularly interesting to us in this regard, is the proposal made by Caha (2023). He argues that whenever concord morphology is present, all agreeing categories, i.e., adjectives, numerals

or demonstratives, project the same hierarchy of φ-features (and case features) as (pro)nominals, on top of their own categorical features. This is depicted in (18) for full concord, i.e., a situation in which the morphology of the nominal (18a) and the agreeing category (18b) would overlap for gender, number and case.

(18) a.



b.



Caha finds evidence for the proposal in (18) in languages which have identical markings on their (pro)nominals and modifiers. Take for instance Spanish, (19) (taken from Caha 2023: 5). Here, the gender and number agreement between the predicate adjectives and the pronouns is clearly marked each time by the same morphemes (in bold).

(19) a. Nosotr-**o**-**s** estamos list-**o**-**s**
we-masc-pl be.1pl ready-masc-pl
b. Nosotr-**a**-**s** estamos list-**a**-**s**
we-fem-pl be.1pl ready-fem-pl

Another language in Caha (2023: 3) is Finnish, (19). Here, morphological concord is also found between the noun and the adjective, but this time for number and case (again in bold).

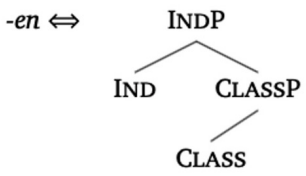
(20) a. iso auto
big car
'a/the big car'
b. iso-**ssa** auto-**ssa**
big-in car-in
'in a/the big car'
c. iso-**i**-**ssa** auto-**i**-**ssa**
big-PL-in car-PL-in
'in (the) big cars'

Since the possessive pronouns we are investigating also show concord morphology, i.e., there is suffixal marking for one gender in each language (and case in German, but see footnote 2), it is not a big stretch to argue that we can put them in the same category as the other agreeing categories identified in Caha (2023). Concretely, this means that the suffixes *-en* and *-e* lexicalise a series of concord features for number and gender following the pronominal features. This is in accordance with the data.

The features which each suffix contains are shown in (21). Given that we redefined CLASS as the default masculine feature, and FEM as the marked feminine feature in section 2.2, and

given the empirical information, it follows that West Flemish masculine *-en* spells out CLASS and IND to agree in number and masculine gender, (21a), and German feminine *-e* FEM and IND to agree in number and feminine gender, (21b).

(21) a.



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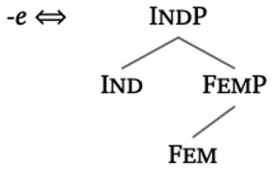
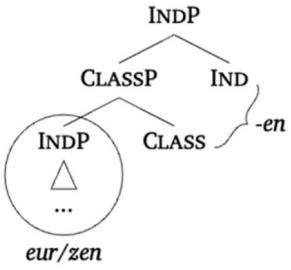


The complete structure for West Flemish *eur-en*/*zen-en* is accordingly as in (22a), and the structure for German *ihr-e*/*sein-e* as in (22b). If we recall the structure in (5b), the structures in (22) show what happens for lexicalisation with two morphemes. Note that due to the specific features of AGR in each language, POSS will turn out to be a different size.

(22) a.



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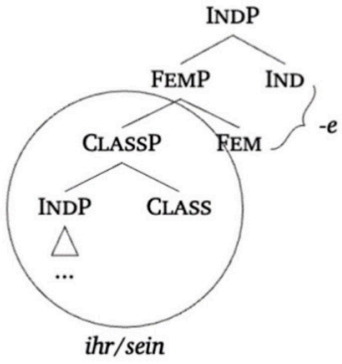


There are still two issues that must be addressed. The first issue is that, unlike in Spanish and Finnish, West Flemish and German do not show agreement morphology on the head noun but only on the possessive. How do we thus ascertain that we are dealing with a similar kind of morphological concord? Turning again to Caha (2023), we find that he is faced with similar data. There are languages in his sample for which the modifiers have more morphology than the nouns they agree with. Consider the data from Dime for instance in (23), (Caha 2023: 26).

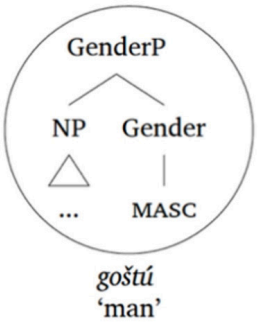
(23) a. gúdúm-**ub** goštú
tall-**MASC** man
'a tall man'

b. gúdúm-**ind** ʔámzi
tall-**FEM** woman
'a tall woman'

Similarly as in West Flemish and German, the modifiers in (23) have a suffix indicating gender, whereas the nouns are just 'bare'. Caha captures this contrast by combining the ideas of phrasal spellout and root size. He argues that while the nouns have a bigger lexical structure that includes nominal as well as gender features, the adjectives are smaller and need additional

support from gender suffixes to agree with the noun. The trees for the masculine example in (23a) are given in (24).

(24) a.



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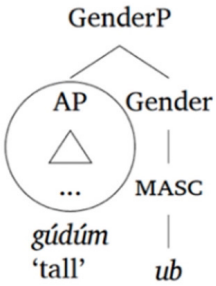
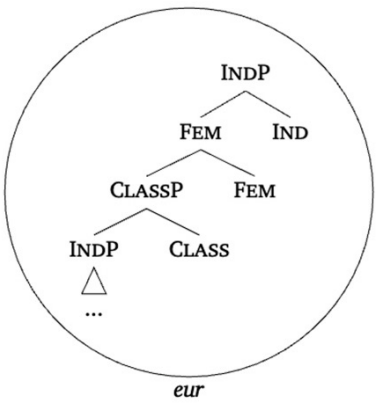


As in (24), we will argue that it is not necessary for the West Flemish and German nouns to have the same morphological marking as the possessive pronouns, if they are simply considered to embrace a bigger structure than the possessive pronouns. Just like the nouns in Dime, they can lexicalise the NP as well as the relevant φ-features.

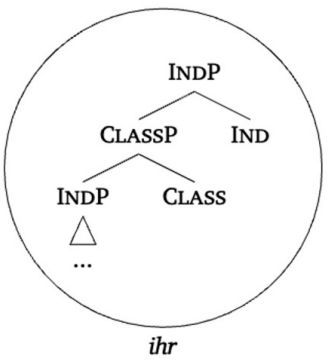
The second issue, then, is the question what happens for the other gender in each language. That is, as we could see in (22), *eur-en* will correctly copy the masculine concord features of the nominal it is paired up with, and *ihr-e* will do the same for the feminine concord features. However, when they agree with a nominal of the opposite gender, the pronouns in both languages do not have any overt agreement marking.

As far as we can see there are three possible scenarios that could explain this. The first scenario is to assume that the West Flemish pronouns simply do not agree with feminine nouns, and that the German pronouns do the same for masculine nouns. However, since both languages show overt agreement for the other genders, and also for plural, there is no valid reason to believe that this is the case. The second scenario is to assume that both languages have an available morpheme to mark one gender, and a zero suffix to mark the other gender. This scenario cannot be definitively excluded as a plausible explanation, but we will not pursue it, since it is not customary to opt for zero morphemes in Nanosyntax (see Pantcheva 2011; Starke 2014 for arguments against it). They are only introduced when there seems to be no other option, and in our case, we do have a third option. In the third scenario, which we go for, the lexical structures of the unsuffixed forms that we proposed earlier need an update. Instead of merely lexicalising pronominal features, we argue that they also lexicalise concord features. Given the patterns we see, *eur* also consists of feminine concord features, (25a), and *ihr* also consists of masculine concord features (25b).

(25) a.



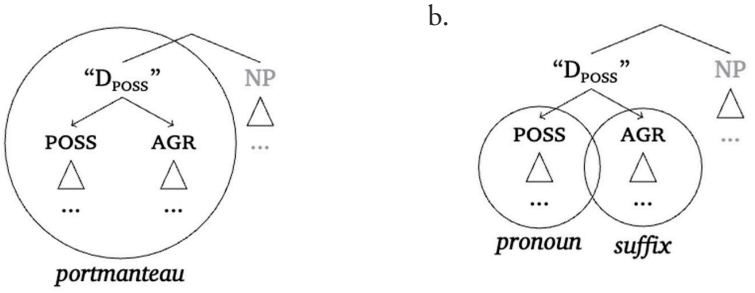
b.



At this point, we have gathered all the ingredients to provide an analysis of the possessive pronouns in West Flemish and German. Before that, however, let us give a brief interim summary.

What we have argued for, so far, is that the possessive is made up of two separate parts, POSS and AGR, which are either lexicalised by a portmanteau morpheme or by separate morphemes. This was shown in (5), and is repeated in (26).

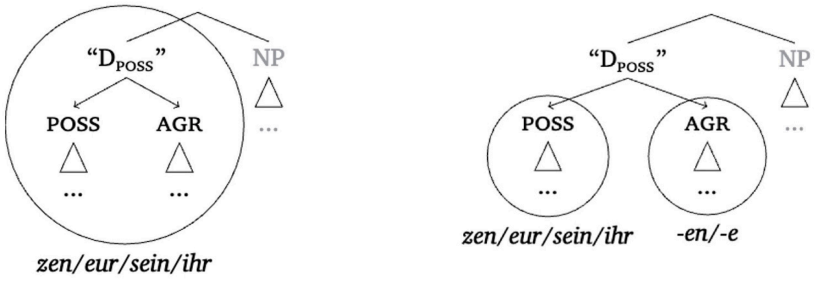
(26) a. b.



We showed that when West Flemish and German possessive pronouns do not show overt agreement morphology, the situation in (26a) applies. The lexical items of West Flemish *zen/eur* and German *sein/ihr* are big portmanteau morphemes that are able to spell out both the pronominal as well as the concord features. However, we saw in (25) that the West Flemish lexical items contain a feminine concord feature, and that this feature is lacking from the German lexical items. Thus, when West Flemish pronouns agree with a masculine possessum, and German ones with a feminine possessum, their lexical items will not match the syntactic structure anymore. What will happen is similar to (8a) and (8b) from section 2.1: either a feature will be added that is not part of the lexical item, or a feature will be gapped. The pronoun will only spell out a subpart of the structure and another lexical item, the suffix, will spell out the agreement features, as in (26b).

The analysis *grosso modo* thus looks like (27), but we elaborate on this in the next section with a worked-through derivation.

(27) a. b.



3. Analysis

Having gathered all the separate ingredients of the analysis, we will now proceed to a worked-through derivation of the feminine possessive pronouns and their agreement markers. We will not provide a full analysis of the masculine possessives, because the mere difference

between the two genders is the absence of a FEM feature at the height of the pronominal features. Through this analysis, we will be able to illustrate more clearly that the contrastive, morphological pattern between West Flemish and German possessives arises due to the differences in their underlying structural make-up. More concretely, it is the absence of specific concord features, used to match agreement with the nominal, that gives rise to the observed pattern.

Before we move to the derivations, it is important to note that we will adopt the Lexicalisation Algorithm as it was presented in Starke (2018). The algorithm is a step-by-step guideline for derivation that is standardly used in Nanosyntax. The steps that are relevant to us are formalised as in (28).

(28) *Lexicalisation Algorithm*
Merge-F and
a. spell out FP.
b. If (a) fails, move the spec of the complement of F, and retry (a).
c. If (b) fails, undo spec movement, move the complement of F, and retry (a).
d. If (c) also fails, attempt backtracking to the previous cycle and try the next option for that cycle.

In section 3.1, we begin with the derivation of the structure in (27a), where both POSS and AGR are spelled out by a portmanteau morpheme. After that, in section 3.2, we go through the derivation of the structure in (27b), where the morphemes can no longer spell out the whole structure and need a suffix to lexicalise AGR.

3.1 Possessives without suffixal markers

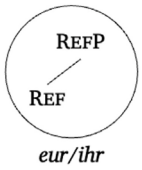
The pattern we want to capture in this section is summarised in the so-called lexicalisation table in (29). Apart from trees, this is a synoptic way in Nanosyntax to depict the result of a derivation. What can be seen in (29) are the lexical items *eur* and *ihr* and the features they can each spell out. We added AGR to the concord features to avoid confusion. The row for the West Flemish pronoun is completely light grey, because it contains all the present features. The row for the German pronoun is interrupted by a black square, because it does not contain a dedicated feminine feature.

(29)

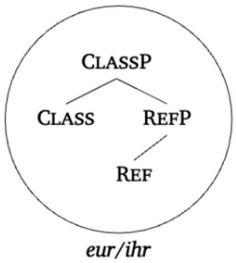
	REF	CLASS	FEM	IND	CLASS (AGR)	FEM (AGR)	IND (AGR)
eur (WF)							
ihr (Ger)						■	

To derive the possessive pronoun, syntax will begin with the merge of the first pronominal feature, which we assume is REF. In both languages, there is a lexical item available that can lexicalise this structure due to the Superset Principle, i.e., both *eur* and *ihr* have a REF feature and this feature is a subpart of their total lexical structure, (30a). Lexicalisation is successful and syntax merges the subsequent feature, CLASS. Again, we find a candidate for the resulting structure, (30b).

(30) a.

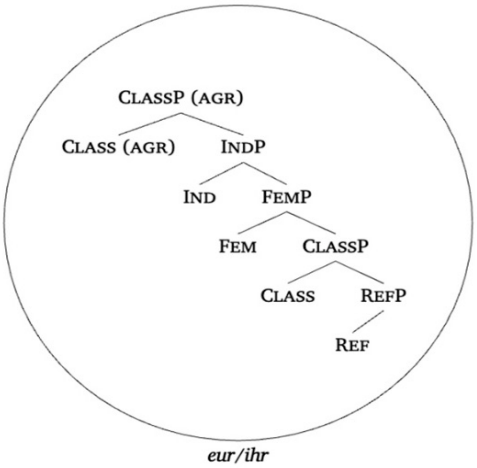


b.



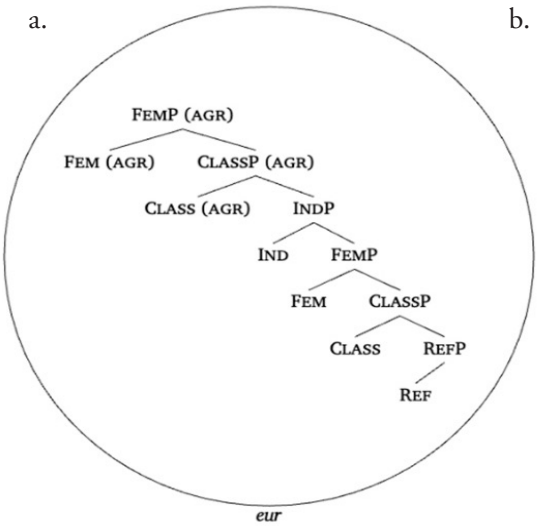
The derivation will proceed to loop through step 1 and 2 of the algorithm (cf. (28)) with no interruptions until it reaches CLASS (AGR) because at every step of the sequence REF > CLASS (AGR) syntax finds a matching lexical item in both languages, (31).

(31)

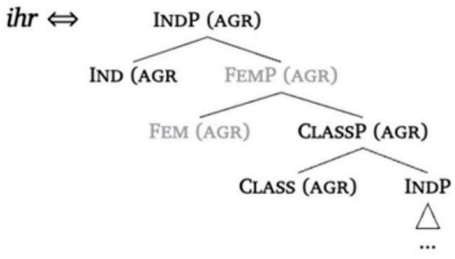


At this point, there will be a split between West Flemish and German. When syntax merges the subsequent feature, FEM (AGR), to agree with a feminine possessum, *eur* can still lexicalise the structure, (32a). However, this feature is missing from the structure of *ihr* (indicated by light grey), (32b). As we know, when a feature is intervening that is not part of the lexical item, the lexical item can no longer spell out the structure, and another lexical item is required.

(32) a.

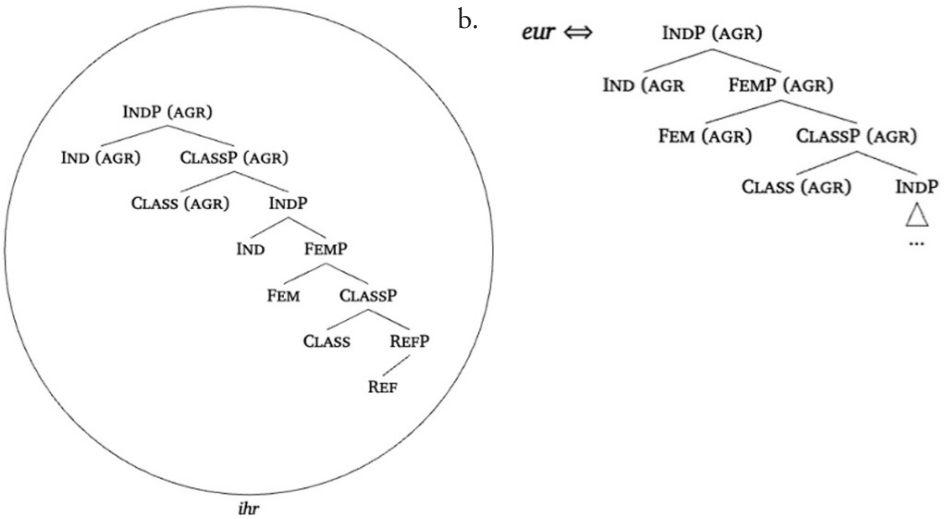


b.



In the case of a masculine possessum, syntax builds IND (AGR) on top of CLASS (AGR), skipping FEM (AGR), and the opposite happens: *ihr* remains a suitable candidate for lexicalisation, (33a), but for *eur* to lexicalise the structure the FEM feature must be present (33b). As we also know, when a feature is gapped that is part of a lexical item, the lexical item also fails to spell out the structure, and another lexical item is required.[6]

(33) a. b.



To sum up: we showed that West Flemish *eur* is able to lexicalise all the pronominal and concord features when FEM (AGR) is present, and that German *ihr* can do the same thing when FEM (AGR) is absent. In the opposite situation, both languages will require a suffix. This is the first difference through which the contrastive, morphological pattern arises.

3.2 Possessives with suffixal markers

The second pattern we want to capture is summarised in the table in (34). As became clear in the previous section, West Flemish needs a suffix that is able to jump in for agreement with masculine possessums, and German for agreement with feminine possessums. This is indicated in the darker grey areas: the suffix *-en* contains the features CLASS (AGR), and IND (AGR) but lacks FEM (AGR) (indicated by the black box), and conversely, the suffix *-e* does contain FEM (AGR) and IND (AGR).

[6] As an anonymous reviewer pointed out correctly, the inability of the lexical item in (33b) to lexicalise the structure in (33a) heavily depends on the choice of Superset Principle. The formalisation that we adopt (as given in Starke 2009, 2018; Caha 2009; Baunaz and Lander 2018; De Clercq 2020 amongst many others), states that the syntactic structure must be a subpart of the lexical one. As we saw in (8) and (10), intervening features or gapped features in the syntactic structure will thus prevent a certain lexical item from lexicalising. However, the Revised Superset Principle (RSP), proposed by Vanden Wyngaerd (2018), is not so restricted, as it leaves out the subpart condition. As long as the feature set of a lexical tree is bigger than the one of the syntactic tree, there will be a match. For instance, a lexical item with the features {A,B,C} *will* be able to lexicalise a syntactic structure that is gapped in the middle but consists of {A,C}. In other words, under the RSP, the lexical structure of *eur* would perfectly be able to shrink to lexicalise the structure in (33a). While we acknowledge that the RSP would complicate our analysis, we will not follow it, as doing so would create the necessity to revisit all previous results achieved with the more traditional Superset Principle, and it would also mean adopting a piece of technology which is less restrictive.

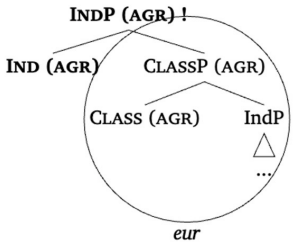
(34)

	REF	CLASS	FEM	IND	CLASS (AGR)	FEM (AGR)	IND (AGR)
eur (WF)							
ihr (Ger)							
eur-en (WF)							
ihr-e (Ger)							

Just like in the previous section, syntax will start merging features and lexicalising them according to the availability of lexical items. As we have seen, this process is uninterrupted until after the lexicalisation of CLASS (AGR).

Starting with West Flemish, when syntax does not merge FEM (AGR) and merges IND (AGR) instead, in order to establish agreement with a masculine singular possessum, the derivation crashes, (35). The lexical item that has been lexicalising the structure thus far, *eur*, absolutely requires FEM (AGR) to be merged to keep lexicalising (cf. footnote 7).

(35) a.



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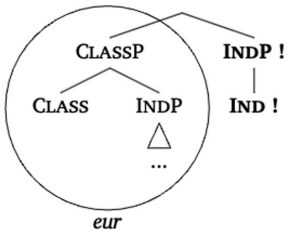
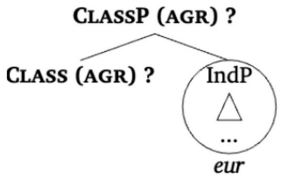


At this stage, the algorithm orders syntax to try spec movement, but since there is no specifier, this fails. As the next step, syntax must try to move the complement of IND (AGR), leaving IND (AGR) stranded as a residual constituent. However, since there is no lexical item that spells out *only* IND (AGR) or has IND (AGR) contained within its structure as a subpart, this fails as well, (35b). The last operation syntax can perform is undo what it did before and try another move. This means, the derivation is backtracked to the merge of CLASS (AGR), (36a). Instead of lexicalising it by *eur*, syntax tries to move the complement. The suffix *-en* is now a candidate for lexicalisation, as it contains the constituent [CLASSP[CLASS]] in its structure, (36b).

(36) a.



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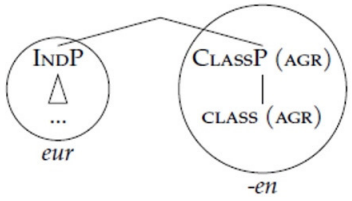
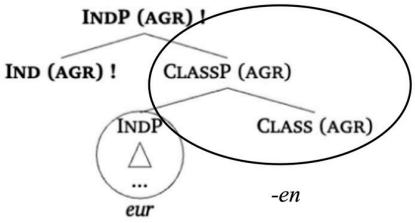


IND (AGR) is merged again, but there is no lexical item that can spell out the resulting structure. Syntax can execute spec movement this time, because now there is a spec [INDP[…]], (37a). When IND (AGR) forms a constituent with CLASS (AGR), the suffix *-en* corresponds completely to it and it gets lexicalised, (37b).

(37) a.



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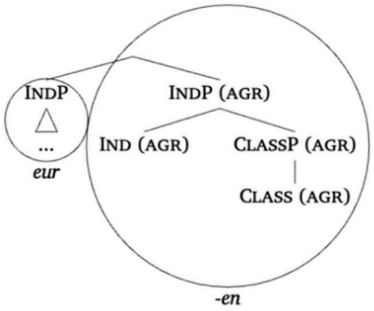
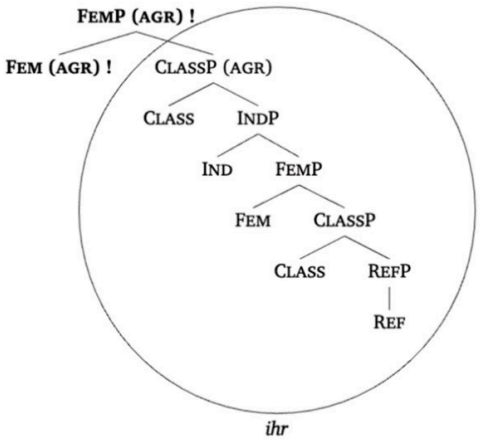


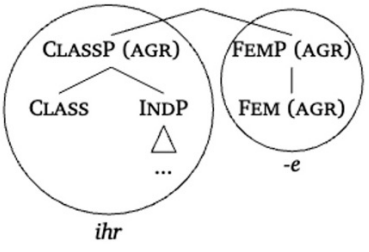
With respect to German, the story is somewhat simpler. When syntax merges FEM (AGR) to agree with a feminine possessum, the derivation gets stuck as well, because the lexical item *ihr* is no fit for the structure anymore, (38).

(38)



However, there is no need for a backtracking operation in this case, because when syntax moves the complement, it immediately finds a lexical item that contains FEM (AGR), *-e*, (39a). IND (AGR) then follows, and just as in West Flemish, it can be spelled out by the suffix after spec movement, (39b).

(39) a.



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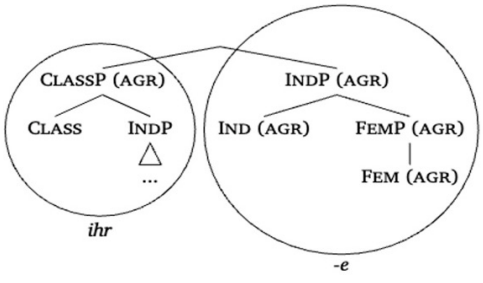

To sum up: we showed that West Flemish *eur* is no longer able to lexicalise all the concord features when FEM (AGR) is gapped in syntax, and that German *ihr* can no longer lexicalise either when FEM (AGR) is present. In both languages, a suffix rescues the derivation. Here lies the second difference: to match masculine singular agreement, West Flemish forces the derivation to backtrack before the suffix is able to spell out the concord features; such an operation is not necessary in German.

With this, we have derived all the structures with and without suffixal marking in West Flemish and German.

4. Conclusion & Outlook

In this article, we pointed out a contrastive pattern in the morphological markings of possessive pronouns between West Flemish and German. There were essentially two questions surrounding these data: (i) how can we explain that both languages only mark one gender, and (ii) how can we explain that both languages mark the opposite gender of each other. In the course of this article, we have provided an answer to both questions by digging into the underlying structures of the possessive pronouns and the agreement markers. The answer to both questions basically boils down to root sizes. Because both languages have possessive pronouns with big lexical structures that reach as far as the concord features, they only need additional suffixation for the gender that is not captured by these possessive pronouns. Since we argued that in West Flemish the possessive pronoun consists of a feminine concord feature, but in German it does not, it thus follows that both languages will add suffixation for the opposite gender.

While the analysis proposed here neatly accounts for the distinctive morphological agreement pattern we find in West Flemish and German possessives, there is still some work to be done. With regards to West Flemish and German, for instance, we have not yet touched upon the structural make-up of the plural forms. West Flemish *zen*/*eur* do not need an additional suffix marker to establish agreement with plural nouns (e.g., *zen*/*eur hoeden* 'his/her hats'), while German *sein*/*ihr* do (e.g., MASC PL *sein-e*/*ihr-e Hunde* 'his/her dogs', FEM PL *sein-e*/*ihr-e Katze* 'his/her cats'). A formal analysis based on the one presented in this article will thus have to explain the presence or absence of certain gender features in the singular and their absence or presence in the plural, respectively. Exploring the structure of the plural in more detail will thus give even more insights into the interplay between gender and number. Another avenue for further research is the derivation of the full PDC. Especially from a theory-internal perspective, the complexity of the phenomenon may be an ideal testing ground to further explore and optimise the mechanisms used in the framework of Nanosyntax (e.g., Lexicalisation Algorithm). Finally, in our analysis, we confronted two West Germanic languages. Future studies focusing on a broader sample of languages, including North Germanic varieties, could provide a more detailed typology of the agreement patterns found in Germanic languages.

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Quaderni di Linguistica e Studi Orientali- QULSO
Working papers in Linguistics and Oriental Studies

Firenze University Press
https://oajournals.fupress.net/index.php/bsfm-qulso

Citation: E. Di Domenico, C. Contemori (2023) Disentangling Parsing and Grammar in Subject Pronouns Interpretation in Italian. *Qulso* 9: pp. 81-95. doi: http://dx.doi.org/10.13128/QULSO-2421-7220-15163

Data Availability Statement: All relevant data are within the paper and its Supporting Information files.

Competing Interests: The Author(s) declare(s) no conflict of interest.

Disentangling Parsing and Grammar in Subject Pronouns Interpretation in Italian

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Abstract:

In the present study, we investigate if and how null and overt subject pronouns interpretation preferences in Italian can be influenced by two factors: (i) the presence of c-commanding antecedents (Rizzi 2018) and (ii) the 'impatient parser' (Sorace and Filiaci 2006; Fedele and Kaiser 2014). To disentangle the effects of c-commanding antecedents and of the 'impatient parser', we compare experimental conditions differing for only one of the two factors. The comparison demonstrates that c-commanding antecedents influence the interpretation of null pronouns but not the interpretation of overt pronouns, while no effect of the impatient parser is found for either null or overt pronouns. In addition, we found that external referent interpretation preferences are modulated by Principle C effects for null and overt pronouns, albeit to different degrees. External referent choices also increase when an overt pronoun is used as an emphatic pronoun.

Keywords: *C-command, Impatient Parser, Italian, Null Subject Pronouns, Overt Subject Pronouns*

1. Introduction

Null and overt subject pronouns in Italian have different antecedent biases. As proposed by Calabrese (1986), in a complex sentence like (1) the null pronoun (*pro*) in the main clause is interpreted as co-referent with the subject (*Carlo*) of the preceding temporal clause, while the overt pronoun (*lui*) is interpreted as co-referent with the object (*Antonio*) of the preceding temporal clause.

(1) Quando Carlo ha picchiato Antonio, *pro*/lui era ubriaco
'When Carlo hit Antonio, he was drunk'

Based on the results of a series of online and offline comprehension experiments, Carminati (2002) proposed that in Italian, a null pronoun is associated with an antecedent in a prominent syntactic position (Spec, IP), while an overt pronoun is interpreted in coreference to a lower and less prominent position (an hypothesis also known as the Position of Antecedent Hypothesis).[1]

In one experiment, Carminati (2002) created a sentence comprehension task including sentences like (2). After reading the sentence, participants had to choose one of two possible interpretations for the null/overt pronouns, as indicated in (3). The experimental sentences included a potentially ambiguous null/overt pronoun and consisted of a main clause where a subject (Marta) and an object antecedent (Piera) shared similar gender, followed by a temporal clause introduced by *quando* ('when').

(2) a. Marta scriveva frequentemente a Piera quando *pro* era negli Stati Uniti
b. Marta scriveva frequentemente a Piera quando lei era negli Stati Uniti
'Marta wrote to Piera often when *pro*/she was in the United States'

(3) a. Quando Marta era negli Stati Uniti
b. Quando Piera era negli Stati Uniti
'When Marta/Piera was in the United States'

The results of the sentence comprehension task showed an asymmetry between the interpretations of null and overt subject pronouns by Italian speakers, with a preference for selecting a subject antecedent in reference to a null pronoun (80.72%) and a preference for selecting an object antecedent in reference to an overt pronoun (83.33%). Carminati (2002) was the first study to show experimental evidence on the asymmetry in the interpretation of null and overt pronouns in Italian. Later studies have investigated this phenomenon, using different tasks and sentence materials.

For example, Sorace and Filiaci (2006) designed a Picture Verification Task to test the interpretation of anaphoric (4a, 4b) and cataphoric pronouns (4c, 4d). While anaphoric pronouns appear after the antecedents have been introduced, cataphoric pronouns precede the subject and object referents. In the task, participants could choose one of three pictures corresponding to different interpretations for the null/overt pronoun: the subject (*la mamma*), the object (*la figlia*) and an external referent (someone else not mentioned in the context).

		Subj	Obj	Ext
(4)	a. La mamma dà un bacio alla figlia mentre *pro* si mette il cappotto	0.51	0.44	0.05
	b. La mamma dà un bacio alla figlia mentre lei si mette il cappotto	0.08	0.82	0.11
	c. Mentre *pro* si mette il cappotto, la madre dà un bacio alla figlia	0.85	0.11	0.04
	d. Mentre lei si mette il cappotto, la madre dà un bacio alla figlia	0.12	0.24	0.64

'The mother kisses the daughter while *pro*/ she is wearing her coat'

Sorace and Filiaci (2006) found a clear subject bias for *pro* for sentences like (4c), where the null pronoun is cataphoric. However, differently from Carminati (2002), Sorace and Filiaci found a chance-level subject bias for *pro* in the anaphoric null pronoun condition in (4a).

[1] Differently from Carminati (2002), Calabrese (1986) proposed that the antecedent of *pro* is not simply a subject, but a 'subject of primary predication' or 'thema'.

It is not clear why in Sorace and Filiaci's study participants chose the subject interpretation more often for the cataphoric null pronoun (4c) than for the anaphoric null pronoun (4a). One possibility is that the different interpretations could be explained in terms of c-command. According to Rizzi (2018), the preference for interpreting a null pronoun as co-referent with a subject of predication antecedent (also called by Rizzi the "Calabrese effect") does not emerge if the null pronoun is c-commanded by the antecedents. For example, in (5), where *pro* is in a complement clause following the antecedents in the main embedding clause, the null pronoun is c-commanded by the antecedents. In this case, the Calabrese effect should not emerge, and *pro* can equally co-refer to a preceding subject or object DP (*Francesca* or *Maria*).

(5) Francesca ha fatto notare a Maria che *pro* era molto stanca
Francesca made Maria realize that *pro* was very tired

According to Rizzi (2018), in the absence of c-command, the 'Calabrese effect' should emerge, and pro is interpreted as co-referent with the subject antecedent, as illustrated in (1). In Sorace and Filiaci (2006), the antecedents in the main clause c-command the pronoun in the condition where the subject interpretation of pro is at chance (4a).[2] In contrast, in (4c), where the subject preference of the null pronoun is strong, the antecedents in the adjunct clause do not c-command the pronoun. Thus, the presence/absence of c-commanding antecedents could explain why Italian speakers have a strong preference for the subject when they interpret the null pronoun in (4c) compared to (4a).

Besides c-command, an additional factor that could play a role in Italian comprehenders' preferences is the linear position of the pronoun with respect to the antecedent (anaphora vs. cataphora). For example, Sorace and Filiaci (2006) suggested that, in the case of cataphora, the parser actively tries to complete the pronoun- antecedent dependency as soon as possible (as suggested for English by Cowart and Cairns 1987 and van Gompel and Liversedge 2003). Fedele and Kaiser (2014) proposed a similar argument based on the results of two comprehension experiments. In Experiment 1, Fedele and Kaiser presented a null/overt pronoun in an adjunct clause that could either precede (6a and 6c) or follow (6b and 6d) the main clause.

(6) a. Mentre *pro* parla del viaggio a Londra, Marta abbraccia Rita
b. Marta abbraccia Rita mentre *pro* parla del viaggio a Londra
c. Mentre lei parla del viaggio a Londra, Marta abbraccia Rita
d. Marta abbraccia Rita mentre lei parla del viaggio a Londra
'Marta hugs Rita while *pro*/she talks about the trip to London'

After reading a sentence, participants answered a comprehension question where they were required to interpret a potentially ambiguous pronoun, choosing between a subject antecedent, an object antecedent, an external referent and an 'either' option. Fedele and Kaiser's results revealed that the null pronoun was associated significantly more often with

[2] As observed by Pesetsky, an object placed in a main clause can bind inside a post-posed adjunct adverbial, as shown in (i), adapted from Pesetsky (1995: 161):

(i) Sue spoke to these people$_i$ about each other$_i$'s friends

The solution proposed by Pesetsky is a 'Cascade' structure.

an object antecedent in anaphora (6b) compared to cataphora (6a), while the subject choices for the null anaphoric and cataphoric pronoun were comparable. For the overt pronoun, Fedele and Kaiser found a significantly higher choice of object antecedent in the anaphoric pronoun condition (6d) and a higher choice of subject antecedent in the cataphoric pronoun condition (6c). The authors proposed that in the cataphoric pronoun condition, the 'impatient' parser strives to resolve the pronoun as soon as possible, associating the pronoun to the first antecedent that is encountered, i.e., the subject of the main clause. However, notice that, similarly to the experimental sentences in Sorace and Filiaci (2006), the a/c and the b/d conditions in (6) differ in terms of anaphora vs. cataphora, but also in terms of presence/absence of c-commanding antecedents.

In a second experiment, Fedele and Kaiser (2014) looked at the interpretation of null and overt pronouns in sentences like (7).

(7) a. Mentre Maria abbraccia Rita *pro* parla del viaggio a Londra.
b. Mentre Maria abbraccia Rita lei parla del viaggio a Londra.
c. *pro* parla del viaggio a Londra, mentre Maria abbraccia Rita.
d. Lei parla del viaggio a Londra, mentre Maria abbraccia Rita.

In (7c) and (7d), a cataphoric pronoun c-commands the antecedents, giving rise to higher external referent interpretations for both null and overt pronouns. Fedele and Kaiser concluded that in this case, Principle C effects override the impatient parser effect. Similarly to Fedele and Kaiser's Experiment 1 (and Sorace and Filiaci's), we note that (7a) - (7b) and (7c) - (7d) differ on: (i) the linear order of pronoun and antecedents and (ii) c-command (in this case c-command of the pronoun towards the antecedents).

In the present study, we propose that the existing experimental evidence confounded two separate factors: the 'impatient parser' and the presence/absence of c-commanding antecedents. We look at these two factors from the perspective of null and overt pronoun interpretation in Italian. In addition, in order to disentangle c-command of the pronoun and anaphora/cataphora, we created a sentence comprehension task where we manipulated bi-clausal sentences, obtaining eight conditions differing only for one of the above-mentioned factors (c-command; anaphora/cataphora; null/overt pronoun), as shown in Table 1.[3]

Condition	Example	Features
1	Giorgio ha visto Luigi quando *pro* stava andando al bar *Giorgio saw Luigi when (he) was going to the coffee shop*	+cc (A); an; null
2	Giorgio ha visto Luigi quando lui stava andando al bar	+cc (A); an; overt
3	Quando *pro* stava andando al bar, Giorgio ha visto Luigi	-cc; cat; null
4	Quando lui stava andando al bar, Giorgio ha visto Luigi	-cc; cat; overt
5	*pro* stava andando al bar, quando Giorgio ha visto Luigi	+cc (P); cat; null
6	Lui stava andando al bar, quando Giorgio ha visto Luigi	+cc (P); cat; overt

[3] The factors manipulated in the experimental design and included in the statistical analyses are: Type of pronoun (Null vs. Overt), Position of the antecedents (in main clause vs. in adjunct clause) and Pronoun position (anaphora vs. cataphora).

7	Quando Giorgio ha visto Luigi, *pro* stava andando al bar	-cc; an; null
8	Quando Giorgio ha visto Luigi, lui stava andando al bar	-cc; an; overt

Table 1. Examples of the eight experimental conditions

As illustrated in Table 1, in Condition 1 and 2, the antecedents c-command the pronoun ('+cc (A)') and they linearly precede it (anaphora, 'an'). In Condition 1, the pronoun is null, while in Condition 2 the pronoun is overt.

In Condition 3 and 4, the antecedents linearly follow the pronoun (cataphora, 'cat'). In these conditions, the antecedents do not c-command the pronoun, and the pronoun does not c-command the antecedents because it is located in the adjunct temporal clause ('-cc'). In Condition 3, the pronoun is null, while in Condition 4 the pronoun is overt.

In Condition 5 and 6, the antecedents linearly follow the pronoun (cataphora, 'cat') and they do not c-command the pronoun. However, the pronoun c-commands the antecedents ('+cc (P)') because it is located in the main clause. When a pronoun c-commands the antecedents, conference should be prevented by Principle C of the Binding Theory (Chomsky 1981). In Condition 5, the pronoun is null, while in Condition 6 the pronoun is overt.

In Condition 7 and Condition 8 the antecedents linearly precede the pronoun (anaphora, 'an') but they do not c-command the pronoun ('-cc') because they are located in the adjunct temporal clause. In Condition 7, the pronoun is null, while in Condition 8 the pronoun is overt.

Condition 1 and 7 (similarly to Condition 2 and 8) differ only on the presence/absence of c-commanding antecedents.

Condition 3 and 7 (similarly to Condition 4 and 8) differ only in terms of anaphora/cataphora. Condition 3 and 5 (similarly to Condition 4 and 6) include cataphoric pronouns. However, while in Condition 3 and 4 the pronoun does not c-command the antecedents, the pronoun c-commands the antecedents in Condition 5 and 6.

Using the set of sentences exemplified in Table 1, we investigate the role of the 'impatient parser' and of the presence/absence of c-commanding antecedents in the interpretation of subject pronouns in Italian addressing the following research questions:

RQ1: Is there an effect of c-commanding antecedents in the interpretation of subject pronouns in Italian? Is this effect the same for null and overt pronouns?

RQ2: Is there an 'impatient parser' effect in the interpretation of subject pronouns in Italian? Is this effect the same for null and overt pronouns?

RQ3: What drives external referent interpretations for null and overt pronouns?

2. The present study

2.1 Predictions

We predict that if the presence of c-commanding antecedents influences antecedent choices for the null pronoun, a preference for the subject antecedent (i.e. the 'Calabrese effect') should emerge more clearly in Condition 7 (where the antecedents do not c-command the pronoun)

than in Condition 1 (where the antecedents c-command the pronoun). The two conditions differ only on presence/absence of c-commanding antecedents: in both conditions, the antecedents linearly precede the pronoun (anaphora) and the pronoun is null. Similarly, when comparing the conditions including an overt pronoun and differing only for the presence/absence of c-commanding antecedents, we expect that a preference for the object antecedent should emerge more clearly in the absence of c-command (Condition 8 vs. Condition 2).

If the 'impatient parser' plays a role on antecedent choices in Italian, a preference for the subject antecedent (i.e., the first encountered antecedent) should be higher for both null and overt pronouns when the pronoun linearly precedes the antecedents (cataphora), compared to the cases where the pronoun follows the antecedents (anaphora). Thus, we expect that subject choices should increase in Condition 3 compared to 7, and in Condition 4 compared to 8. Notice that Condition 3 and 7 (similarly to Condition 4 and 8) differ only on the linear order of pronoun and antecedent (anaphora/cataphora), because the antecedents do not c-command the pronoun.

If Principle C effects contribute to increase participants' external referent preferences, we expect an increased number of external referent choices in (i) Condition 5 vs. 3, and (ii) Condition 6 vs. 4. This result is expected because contrary to Condition 3 and 4, in Condition 5 and 6 the pronoun precedes and c-commands the antecedents.

Finally, if null and overt pronouns have distinct and complementary antecedent biases, we should find a higher subject preference for the null pronoun and a higher object preference for the overt pronoun. If presence of c-commanding antecedents and 'impatient parser' effects influence comprehenders' interpretation, pronoun biases should be more clear-cut in anaphoric contexts and in the absence of c-commanding antecedents, i.e., in Condition 7 for the null pronoun and in Condition 8 for the overt pronoun.

2.2 Method

Sixty-two native speakers of Italian (age: 24.5; SD: 3; females: 42; males: 20) who were undergraduate and graduate students at the Università per Stranieri of Perugia, in Central Italy, volunteered to participate in the study.

We designed a comprehension task where participants read sentences and answered comprehension questions. The task consisted of thirty-two semantically neutral complex sentences, including a main clause and a temporal adjunct clause introduced by *when*. The experimental sentences included a subject (Giorgio) and an object antecedent (Luigi) that shared similar gender. In Italian, overt pronouns in the third person singular include gender information (*lui*=masculine; *lei*=feminine). Thus, gender similarity of the subject and object antecedent ensured ambiguity of the pronoun. Half of the experimental sentences contained proper names that are stereotypically masculine, and the other half contained proper names that are stereotypically feminine (e.g., Maria and Francesca).

Each sentence was manipulated to create eight conditions, as illustrated in Table 1. In half of the sentences, the main clause preceded the adjunct temporal clause (Condition 1, 2, 5, 6), and in the other half the main clause followed the adjunct temporal clause (Condition 3, 4, 7, 8). Half of the conditions included a null pronoun (Condition 1, 3, 5 and 7) and half included an explicit pronoun (Condition 2, 4, 6, 8). The pronoun either followed (Condition 1, 2, 5, 6) or preceded the antecedents (Condition 3, 4, 7, 8), creating four conditions with anaphora and four conditions with cataphora.

Participants were instructed to read each sentence and answer a three-choice comprehension question that tapped into the interpretation of the ambiguous pronoun. In the comprehension question, one answer corresponded to the subject referent (*Giorgio*), one to the object referent (*Luigi*) and one to an external referent not mentioned in the sentence (*Qualcun altro*), as shown in (8). The position of the subject, object and external referent in the three-choice comprehension question was counterbalanced across-items.

(8) Chi stava andando al bar?
Giorgio
Luigi
Qualcun altro
'Who was going to the coffee shop? a) Giorgio b) Luigi c) Someone else'

Participants were presented with instructions and two practice trials before starting the experiment. The experimental items were divided into eight lists and, using a Latin square design, each list contained four sentences per each condition.

Sixty-four filler sentences that did not include a null or overt subject pronoun were created. Conjunctions different from *when* were included in the filler sentences. Filler sentences contained either two, three or four characters of different gender. An example of a filler sentence and of the corresponding comprehension question are shown in (9) and (10).

(9) Renato e Giulia insegnavano alle superiori. Renato voleva lasciare il lavoro e trasferirsi all'estero.
'Renato and Giulia were High School teachers. Renato wanted to leave his job and move abroad'

(10) Chi voleva trasferirsi all'estero?
Renato
Giulia
Qualcun altro
'Who wanted to move abroad? a) Renato b) Giulia c) Someone else'

Participants completed the task either as an online survey or as a pen and paper survey. Participants who did not score 85% accuracy on filler sentences were discarded (three participants not included in the participants' group).

3. Results

In Table 2 and Figure 1, we report the results of the subject, object and external referent interpretations in the eight experimental conditions.

		SUBJECT	OBJECT	EXTERNAL
1	Giorgio ha visto Luigi quando *pro* stava andando al bar [+cc (A); an; null]	0.76	0.19	0.04
2	Giorgio ha visto Luigi quando lui stava andando al bar [+cc (A); an; overt]	0.19	0.79	0.02

3	Quando *pro* stava andando al bar, Giorgio ha visto Luigi [-cc; cat; null]	0.87	0.07	0.06
4	Quando lui stava andando al bar, Giorgio ha visto Luigi [-cc; cat; overt]	0.41	0.37	0.21
5	*pro* stava andando al bar, quando Giorgio ha visto Luigi [+cc (P); cat; null]	0.44	0.10	0.47
6	Lui stava andando al bar, quando Giorgio ha visto Luigi [+cc (P); cat; overt]	0.15	0.23	0.62
7	Quando Giorgio ha visto Luigi, *pro* stava andando al bar [-cc; an; null]	0.85	0.11	0.03
8	Quando Giorgio ha visto Luigi, lui stava andando al bar [-cc; an; overt]	0.22	0.72	0.06

Table 2. Subject, object and external referent interpretations in the experimental conditions

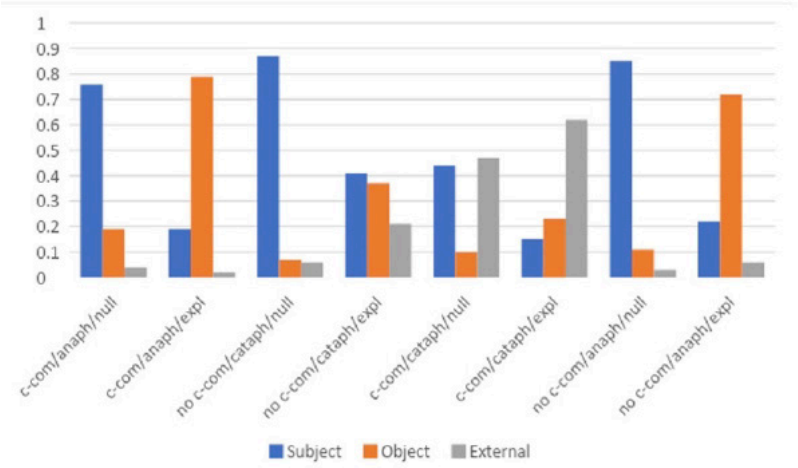

Figure 1. Subject, object and external referent interpretations in the different experimental conditions.

We used Logistic Mixed-effects Regression Modeling (LMER; Jaeger 2008) to analyze the number of subject, object and external referent interpretations (coded as 1 and 0) in three separate analyses, using the *glmer* function. The three models included the following factors: Type of pronoun (Null vs. Overt), Position of the antecedents (in main clause vs. in adjunct clause) and Pronoun position (anaphora vs. cataphora). All interactions were allowed. The model included the maximal converging random-effects structure allowed by the design (Barr *et al.* 2013). The full models are reported in the Appendix.

Each model revealed a significant Type of pronoun*Position of the antecedents*Pronoun position three-way interaction. We conducted planned comparisons to follow up on the three-way interaction using the Bonferroni correction. We only report the results relevant to our research questions.

Concerning the question about the presence/absence of c-commanding antecedents, a marginally significant difference (p=.07) emerged in the analysis of the subject interpretations for null pronouns in Condition 7 vs. 1. The effect suggests that participants chose a subject interpretation in Condition 7 (where the antecedents do not c-command the pronoun) more often than in Condition 1 (where the antecedents c-command the pronoun).

In the analysis of the object antecedent interpretations, no significant difference emerged for the comparison between Condition 1 and 7. However, we note a numerical trend indicating a higher number of object antecedent interpretations in the condition where the antecedents c-command the pronoun.

			Subj	Obj	Ext
(11)	1. Giorgio ha visto Luigi quando *pro* stava andando al bar	[+cc;an;null]	0.76	0.19	0.04
	7. Quando Giorgio ha visto Luigi, *pro* stava andando al bar	[-cc;an;null]	0.85	0.11	0.03
	(0.76/0.85, p=.07; 0.19/0.11, n.s.; 0.04/0.03, n.s.)				

For the overt pronoun, we found that the presence/absence of c-commanding antecedents does not significantly influence antecedent choices. The result emerged in the analysis of subject and object antecedent choices. Note that for the overt pronoun, we had predicted a difference in the opposite direction, i.e., higher object preferences in Condition 8 compared to 1.

			Subj	Obj	Ext
(12)	2. Giorgio ha visto Luigi quando lui stava andando al bar	[+cc;an;ov]	0.19	0.79	0.02
	8. Quando Giorgio ha visto Luigi lui stava andando al bar	[-cc;an;ov]	0.22	0.72	0.06
	(0.19/0.22, n.s.; 0.79/0.72, n.s.)				

Concerning the role of the 'impatient parser', we focus on the comparisons between conditions differing on the linear order of pronoun and antecedents, in the absence of c-command. While the model did not allow a statistical comparison, subject and object antecedent interpretations are numerically comparable for null and overt cataphoric and anaphoric pronouns. The numerical comparability suggests that the 'impatient parser' may not influence antecedent choices for the null pronoun, as shown in (13).

			Subj	Obj	Ext
(13)	3. Quando *pro* stava andando al bar, Giorgio ha visto Luigi	[-cc;cat;null]	0.87	0.07	0.06
	7. Quando Giorgio ha visto Luigi, *pro* stava andando al bar	[-cc;an;null]	0.85	0.11	0.03

For the overt pronoun, a numeric trend indicated a decrease in object antecedent interpretations for cataphoric pronouns (14). The decrease is associated with an increase in subject preferences and with an increase in external referent choices.

			Subj	Obj	Ext
(14)	4. Quando lui stava andando al bar, Giorgio ha visto Luigi	[-cc;cat;ov]	0.41	0.37	0.21
	8. Quando Giorgio ha visto Luigi, lui stava andando al bar	[-cc;an;ov]	0.22	0.72	0.06

If Principle C influences antecedent choices, external referent choices should increase in the conditions where the pronoun c-commands the antecedents (Condition 5 and 6) in comparison to the conditions differing only on this factor (Condition 3 and 4). This prediction is confirmed by the results found for null pronouns and overt pronouns, as shown in (15) and (16). The increase in external referent interpretations is associated with a decrease in subject interpretations for both null and overt pronouns.

		Subj	Obj	Ext
(15)	3. Quando *pro* stava andando al bar, Giorgio ha visto Luigi [-cc;cat;null]	0.87	0.07	0.06
	5. *pro* stava andando al bar, quando Giorgio ha visto Luigi [+cc;cat;null]	0.44	0.10	0.47
	(0.87/0.44, p<.0009; 0.07/0.10, n.s.; 0.06/0.47, p<.0001)			

		Subj	Obj	Ext
(16)	4. Quando lui stava andando al bar, Giorgio ha visto Luigi [-cc;cat;ov]	0.41	0.37	0.21
	6. Lui stava andando al bar, quando Giorgio ha visto Luigi [+cc;cat;ov]	0.15	0.23	0.62
	(0.41/0.15, p<.0001; 0.37/0.23, n.s.; 0.21/0.62, p<.0001)			

We now focus on the interpretation of null vs. overt pronouns. In Condition 7 and 8, the antecedents precede the pronoun and do not c-command it (17). In Condition 1 and 2, the antecedents precede and c-command the pronoun (18). The analyses demonstrated a significant difference in subject and object interpretations for anaphoric null vs. overt pronouns in both comparisons.

		Subj	Obj	Ext
(17)	7. Quando Giorgio ha visto Luigi, *pro* stava andando al bar [-cc;an;null]	0.85	0.11	0.03
	8. Quando Giorgio ha visto Luigi, lui stava andando al bar [-cc;an; ov]	0.22	0.72	0.06
	(0.85/0.22, p<.001; 0.11/0.72 p<.0001; 0.03/0.06, n. s.)			

		Subj	Obj	Ext
(18)	1. Giorgio ha visto Luigi quando *pro* stava andando al bar [+cc;an;null]	0.76	0.19	0.04
	2. Giorgio ha visto Luigi quando lui stava andando al bar [+cc;an;ov]	0.19	0.79	0.02
	(0.76/0.19, p<.001; 0.19/0.79, p<.001; 0.04/0.02, n. s.)			

In the conditions where the antecedents follow the pronoun (cataphora), a significant difference emerged in subject and object antecedent choices for null and overt pronouns, when the pronoun does not c-command the antecedents (Condition 3 and 4), and when the pronoun c-commands the antecedents (Condition 5 and 6).

		Subj	Obj	Ext
(19)	3. Quando *pro* stava andando al bar, Giorgio ha visto Luigi [-cc;cat;null]	0.87	0.07	0.06
	4. Quando lui stava andando al bar, Giorgio ha visto Luigi [-cc;cat;ov]	0.41	0.37	0.21

(0.87/0.41, p<.001; 0.07/0.37, p<.001; 0.06/0.21, p<.0001)

		Subj	Obj	Ext
(20)	5. *pro* stava andando al bar, quando Giorgio ha visto Luigi [+cc;cat;null]	0.44	0.10	0.47
	6. Lui stava andando al bar, quando Giorgio ha visto Luigi [+cc;cat;ov]	0.15	0.23	0.62

(0.44/0.15, p<.0001; 0.10/0.23, p<.0001; 0.47/0.62, p<.0001)

In addition, in the cataphoric contexts a significant increase in external referent preferences was found for null and overt pronouns when the pronoun c-commands the antecedents (20). The increase in external referent choices is significantly higher for overt pronouns than for null pronouns. For the overt pronoun, a significant increase in external referent preferences is found when the pronoun does not c-command the antecedents (19).

4. Discussion

In the present study, we conducted an offline sentence comprehension task where we tested the interpretation of null and explicit pronouns in Italian. We manipulated bi-clausal sentences to obtain eight conditions that differed in terms of (i) c-command (ii) anaphora/cataphora and (iii) null and overt pronouns.

The results confirmed that null and overt subject pronouns have clear antecedent biases in Italian. More specifically, comprehenders preferred to interpret null pronouns towards a subject antecedent and overt pronouns towards an object antecedent, as proposed by Calabrese (1986) and in line with previous experimental studies (e.g., Carminati 2002). In addition, our results show that these preferences can be influenced by several factors, but to a different degree for null and overt pronouns.

Concerning the role of c-command on the interpretation of null pronouns, our results showed that the subject preference for null pronouns is attenuated by the presence of c-commanding antecedents, as predicted by Rizzi (2018). The analysis demonstrated that comprehenders chose the subject antecedent interpretation for *pro* more often when the antecedents do not c-command the pronoun (Condition 7: 85%), compared to the condition where the antecedents c-command the pronoun (Condition 1: 76%). However, the difference is only marginally significant, suggesting that the effect of c-commanding antecedents is somewhat weak. A possibility is that Cascades, i.e., the kind of structure postulated by Pesetsky (1995) to explain binding of an object inside an adjunct clause, are not obligatory (but see Pesetsky 1995: 176-177).[4] In this case, c-command of both antecedents in Condition 1 and 2 may or may not occur. However, a strong subject bias of *pro* is observed beyond Condition 1. As indicated by the 44% subject choices in Condition 5 (Table 2), the subject bias of *pro* resists to a certain extent Principle C effects. Similarly, it could resist the effects of c-commanding antecedents in Condition 1.

Concerning Condition 1, we also note that the subject preference for *pro* is higher in our study than in Sorace and Filiaci (2006), where a similar context was tested and 51% of subject preferences were found (see Belletti *et al.* 2007 for similar results). The different result in our study may be due to the experimental techniques employed. While in our study

[4] We thank Marcel den Dikken for this suggestion. Future research should explore the effect of c-commanding antecedents in complex sentences containing an embedded clause instead of an adjunct clause. See Frascarelli (2018) for different results in main/embedded vs. main/adjunct syntactic contexts.

participants had to choose among written alternatives, in Sorace and Filiaci (2006), participants had to choose among different pictures. We hypothesize that a picture verification task may have prompted a deictic, rather than an anaphoric interpretation of pronouns, and we leave the issue open for future research. The results observed for Condition 1 are in line with Carminati (2002) and Fedele and Kaiser (2014), where a similar comprehension task was used as in the present study.

Concerning the role of the 'impatient parser', an 'impatient parser' effect did not emerge in our results for the interpretation of null pronouns. In the analyses, the subject antecedent interpretation for *pro* did not increase in cataphoric contexts, as predicted by the 'impatient parser' hypothesis (e.g., Fedele and Kaiser 2014). Relatedly, object antecedent choices did not decrease significantly when null pronouns were interpreted in cataphoric vs. anaphoric contexts (Condition 3 vs. 7, in (13) above).

Part of our research questions focus on the comparison between null and overt pronouns, to understand if similar processes influence the interpretation of both pronouns. Our results demonstrated that, for overt pronouns, the presence of c-commanding antecedents did not affect comprehenders' interpretation preferences, as shown by the lack of a significant effect in the comparison between Condition 2 and 8. Rizzi (2018) did not make predictions concerning the effect of c-command on overt pronouns, and our results suggest that the overt pronoun is interpreted preferably in conference with a non-subject antecedent regardless of the presence/absence of c-commanding antecedents.

We also found that the object preference for overt pronouns significantly decreased in Condition 4 compared to Condition 8. The two conditions differ only for the linear order of pronoun and antecedents (cataphora in 4, anaphora in 8). Nonetheless, we exclude an effect of 'impatient parser' for this comparison. On one hand, the decrease in object preferences is associated with an increase in subject interpretations as predicted by the 'impatient parser'. However, an increase in external referent interpretations is also observed, which is not predicted by the 'impatient parser'.

We propose that this result can be explained by assuming that the overt pronoun in Condition 4 is 'emphatic', i.e. it is used to introduce contrast or emphasis. As suggested by Calabrese (1986; see also Prentza and Tsimpli 2013), an emphatic pronoun is exempt from pronoun biases, so it can be interpreted towards a subject or an external referent.[5] In addition, the 'impatient parser' strategy was proposed to explain the processing of English overt pronouns, when comparing sentences including either a pronoun or a lexical DP, and not anaphoric vs. cataphoric pronouns (Cowart and Cairns 1987). [6] As such, it is possible that the 'impatient

[5] For example, in (i.a) there is no object antecedent, and the overt pronoun can have either a subject or an external referent interpretation:

a. Laura ha detto che lei non ha fame
b. Laura ha detto che *pro* non ha fame
'Laura said that (she) is not hungry'

The contrast/emphasis (Laura, differently from other people e.g. us, Giorgio…) is not entailed in (i.b) where the subject is a null pronoun. Emphatic uses of the overt pronoun, i.e. constructions like Condition 4, are often found in discourse sequences (e.g. Di Domenico and Matteini 2021).

[6] Cowart and Cairns (1987) used examples like (i):

a. While the boxes usually come with several internal partitions, packing cases …
b. While they usually come with several internal partitions, packing cases …

The ambiguous 'packing cases' was interpreted significantly more as a lexical noun phrase in (i.b) than in (i.a). The result was explained by the authors as a 'pronoun bias effect'. In addition, previous corpus research and experimental studies have demonstrated that differently from Italian, English overt pronouns have a strong subject bias (e.g., Michaelis and Francis 2007, Arnold *et al.* 2000).

parser' strategy may not apply to the anaphoric/cataphoric comparison that our study focused on (but see Sorace and Filiaci 2006; Fedele and Kaiser 2014, for a different interpretation).[7]

Our last research question focuses on the contexts that favor an external referent interpretation. Besides the results previously discussed, a significant increase in external referent interpretations was found when comparing Condition 6 and 4. In Condition 6, the overt pronoun precedes and c-commands the antecedents, while in Condition 4, the overt pronoun precedes but does not c-command the antecedents. Our results show that in Condition 6, Principle C blocked co reference of a lexical DP – an R expression in Chomsky (1981) – with a c-commanding constituent.

A similar result was found for the null pronoun in the matching conditions (5 vs. 3). However, in this case the increase in external referent interpretations is not as strong as for the overt pronoun condition, demonstrating that the subject bias for null pronouns remains relatively strong even in the presence of Principle C effects.

5. Conclusions

In the present study, we investigated if and how the interpretation of null and overt subject pronouns in Italian can be influenced by (i) the presence of c-commanding antecedents (Rizzi 2018) and (ii) the 'impatient parser' (Sorace and Filiaci 2006; Fedele and Kaiser 2014). To disentangle the effects of c-commanding antecedents and of the 'impatient parser', we compared experimental conditions differing only for one of these factors. The results of a sentence comprehension task revealed that c-commanding antecedents influence the interpretation of null pronouns but do not affect the interpretation of overt pronouns. In addition, we did not find evidence of an 'impatient parser' effect on the interpretation of either null or overt pronouns. External referent interpretations increased significantly when an overt pronoun was used as an emphatic pronoun or as an effect of Principle C. Finally, the increase of external referent interpretations due to Principle C effects emerged for overt pronouns more than for null pronouns.

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[7] An 'impatient parser' mechanism, furthermore, is incompatible with models based on an incremental interpretation process, such as Bianchi (2009). Following Williams (1997), Bianchi (2009: 8) assumes that a cataphoric ('backward' in her terms) pronoun implies an antecedent in the previous discourse, i.e. there is no real backward anaphora. This raises an interesting issue concerning how this antecedent is established in experimental settings like ours (or Sorace and Filiaci's, Fedele and Kaiser's), where there is no previous discourse. We leave the issue open for future research.

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Appendix

1. Full model effects: subject interpretations

	Estimate	Std. Error	z value	Pr(>|z|)
(Intercept)	-0.08	0.17	-0.465	0.6
Type of pronoun	-2.80	0.13	-21.527	0.0001
Position of the antecedents	-0.58	0.13	-4.261	0.0001
Pronoun position	-0.14	0.11	-1.246	0.2
Type of pronoun*Position of the antecedents	0.19	0.23	0.821	0.4
Type of pronoun*Pronoun position	1.06	0.23	4.52	0.0001
Position of the antecedents*Pronoun position	-2.59	0.24	-10.742	0.0001
Type of pronoun*Position of the antecedents*Pronoun position	1.44	0.47	3.056	0.002

Note: The maximal random effect structure leading to convergence includes by subject and by item random intercepts and by subject and by item random slopes.

mod1 = glmer (NP1 ~ Type of pronoun*Position of the antecedents*Pronoun position + (1 | Item) + (1 | Subject), data = GD, family = 'binomial')

2. Full model effects: object interpretations

	Estimate	Std. Error	z value	p-value
(Intercept)	-1.0894	0.1245	-8.752	0.0001
Type of pronoun	2.4939	0.1347	18.515	0.0001
Position of the antecedents	-0.3321	0.1472	-2.257	0.02
Pronoun position	-1.5113	0.1307	-11.561	0.0001
Type of pronoun*Position of the antecedents	-0.4276	0.2582	-1.656	0.09
Type of pronoun*Pronoun position	-1.5355	0.2591	-5.926	0.0001
Position of the antecedents*Pronoun position	0.3647	0.2567	1.421	0.1
Type of pronoun*Position of the antecedents*Pronoun position	-1.4665	0.5132	-2.857	0.004

Note: The maximal random effect structure leading to convergence includes by subject random intercepts and by subject random slopes

mod2 = glmer (NP2 ~ Type of pronoun*Position of the antecedents*Pronoun position + (1 | Subject), data = GD, family = 'binomial')

3. Full model effects: external referent interpretations

	Estimate	Std. Error	z value	p-value
(Intercept)	-2.8914	0.2883	-10.031	< 2e-16
Type of pronoun	0.6191	0.2108	2.937	0.003
Position of the antecedents	1.3556	0.2468	5.493	0.0001
Pronoun position	3.0295	0.2286	13.25	0.0001
Type of pronoun*Position of the antecedents	0.3211	0.4157	0.772	0.4
Type of pronoun*Pronoun position	1.6106	0.4209	3.826	0.0001
Position of the antecedents*Pronoun position	2.5791	0.4316	5.976	0.0001
Type of pronoun*Position of the antecedents*Pronoun position	-2.5834	0.8353	-3.093	0.001

Note: The maximal random effect structure leading to convergence includes by subject and by item random intercepts and by subject and by item random slopes.

modExt = glmer (External ~ Type of pronoun*Position of the antecedents*Pronoun position + (1 | Item) + (1 | Subject) , data = GD, family = 'binomial')

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Working papers in Linguistics and Oriental Studies

Firenze University Press
https://oajournals.fupress.net/index.php/bsfm-qulso

Comparatives, Superlatives and Definiteness in Romance*

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OPEN ACCESS

Citation: C. Dobrovie-Sorin (2023) Comparatives, Superlatives and Definiteness in Romance. *Qulso* 9: pp. 97-116. doi: http://dx.doi.org/10.13128/QULSO-2421-7220-15157

Data Availability Statement: All relevant data are within the paper and its Supporting Information files.

Competing Interests: The Author(s) declare(s) no conflict of interest.

Abstract:

Romance languages do not have superlative-dedicated morphemes (see *most/-est* in English) but instead express superlative meanings by using a comparative combined with a definite article. There are, however, interesting crosslinguistic differences that indicate that the role of "definiteness" for the superlative meaning of comparatives is different across Romance languages. Thus, French superlative adverbs and superlative postnominal adjectives are necessarily formed with (what looks like) a definite article (THE notates items that are morphologically identical to the definite article across languages) preceding the comparative morpheme *plus* (ER notates the comparative morpheme across languages, regardless of whether it is an affix or a free standing morpheme), whereas in the Italian corresponding examples THE is banned. According to Loccioni (2018) this crosslinguistic difference is not structural: in order to get superlative meanings Italian comparatives would be formed with a covert D(eterminer) corresponding to THE in French. I will propose instead that whereas French has a superlative-dedicated phrase of the form [THE ER], Italian has a "bare", i.e., a THE-less ER that moreover lacks a *than*-argument, which gets a superlative meaning via raising to the Spec of [$_{D^0}$THE].

Keywords: *Comparative, Definite, Grammaticalization, Superlative*

* Thanks go to Ion Giurgea, Patricia Cabredo-Hofherr, Anisia Popescu and two QULSO reviewers for comments on previous versions of this paper. A previous version of this work can be found in Cabredo Hofherr, Patricia, Herby Glaude, and Elena Soare (eds). 2023. *La grammaire est une fête / Grammar is a moveable feast. Mélanges pour / A Webschrift for Anne Zribi-Hertz*. This work was supported by a grant of the Romanian Ministry of Research, Innovation and Digitization, CNCS – UEFISCDI, project number PN-III-P4-PCE-2021-0042, within PNCDI III and by LABEX-EFL.

1. Definiteness and superlatives across languages

This paper examines the differences between French and Italian regarding the make-up of superlatives. The first obvious contrast, which cannot go unnoticed by anybody who speaks both languages even at a superficial level concerns postnominal superlatives:

(1) a. la ragazza (*la) più povera
the girl (*the) more poor
'the poorest girl'
b. la fille *(la) plus pauvre
the girl *(the) more poor
'the poorest girl'

The other two sets of contrasting French-Italian data concern superlative adverbs and superlative adjectives in predicate positions. These data are more subtle and subject to speaker-to-speaker variation, and as such they cannot be introduced in this introductory section. But importantly, when the data is carefully established, the three sets show a perfect parallelism: compulsory presence vs. absence of a THE immediately preceding the comparative form of the adjective/adverb (see § 2.1); in French DPs with postnominal superlatives this THE co-occurs with [$_{D^\circ}$THE], as in (1a).

Looking beyond French and Italian, all Romance languages to the exception of Romanian are like Italian: the comparative lacks an immediately preceding THE and gets a superlative reading when embedded inside a definite DP. Note moreover that the Italian pattern is found in many (groups of) languages beyond Romance languages: thus, in Greek, Arabic, Celtic or Albanian, superlative meanings are conveyed by embedding comparatives inside definite DPs. This pattern is crosslinguistically so widespread that it seems natural to assume that the *superlative readings of definite-DP-embedded comparatives can be obtained without the mediation of a superlative-dedicated marker* (compare Loccioni 2018, who postulates a covert instantiation of THE in Italian).

In contrast to the large number of languages that are similar to Italian, only very few languages exhibit the French pattern. As a matter of fact, Romanian is the only other documented language (Dobrovie-Sorin and Giurgea 2006; Giurgea 2013: 164-165; Cornilescu and Giurgea 2013: 471-474; Dobrovie-Sorin 2021) that is like French in having a superlative marker (a strong form of the definite article CEL$_{m.sg}$/CEA$_{f.sg}$/CEI$_{m.pl}$/CELE$_{f.spl}$ immediately precedes the comparative adjective).[1] The scarcity of this pattern points to grammaticalization.

Unless otherwise specified, I will examine only THE-marked superlatives in French and their unmarked counterparts in Italian. This concerns postnominal, adverbial and predicative superlatives/comparatives with superlative meanings. Prenominal superlatives are outside the main scope of the paper and will be brought up only briefly when they become relevant (see §4.1).

2. French vs. Italian

2.1 Postnominal, adverbial and predicate superlatives (based on Loccioni 2018)

The contrast between Italian and French shown in (1a-b) above for postnominal adjectives is replicated by the contrast below, which concerns adverbs:

[1] According to Bobaljik (2012), Ubykh, an extinct North-Western Caucasian language, has a superlative marker, a prefix attached to the comparative, that comes from the definite article.

(2) a. la segretaria che scrive (*il) più rapidamente
the secretary who writes (*the) more quickly
'the secretary who writes the most quickly.'
b. la secrétaire qui écrit *(le) plus vite
the secretary who writes *(the) more quickly
'the secretary who writes the most quickly.'

Note now that the superlative reading of adverbs arises in Italian only when the comparative is embedded inside a relative clause headed by a definite DP (see (2a)). When this condition is not satisfied, only the comparative reading is possible:

(3) Maria scrive più rapidamente
'Maria writes more quickly/*most quickly.'

No such constraint holds in French, where the comparative vs. superlative meaning depends on absence/presence of THE:

(4) Marie écrit plus vite /**le** plus vite
'Maria writes more quickly/most quickly.'

Turning now to predicate positions, the use of a definite article preceding a comparative form triggers a superlative reading in examples of the following type:

(5) Maria fu la più veloce
Maria was the more quick
'Maria was the quickest.'

As observed by Loccioni (2018), the presence of the definite article signals a DP projection headed by a null N. Correlatively, the copular sentence is some kind of equative. Under this analysis, the superlative meaning is explained by the general rule for adnominal positions: a comparative embedded inside a definite DP is interpreted as superlative.

More interesting are examples of the type in (6a), which illustrates the *relative*[2] superlative reading of comparative adjectives in predicate positions:

(6) a. l'anno in cui Maria fu più felice
'the year in which Mary was happiest.'
b. Maria fu più felice **nel 2012**
'Maria was happier/*happiest **in 2012** (than in any other year').

In this case the definite article is banned and the superlative reading is made possible by embedding the predicative comparative inside a relative headed by a definite DP, as in (6a).[3]

[2] When applied to predicate positions, the term 'relative' superlative seems out of place. It is used here to indicate a reading for which the *comparandum* is an element other than the subject of the predication (see *Maria* in (5a), e.g., some particular year for the example in (5a).

[3] Giurgea (2022) observes that Loccioni's condition might be too strong: embedding inside a cleft or a question would be sufficient to license the superlative meaning of comparatives in Italian. This type of data is subject to

The example in (6b) shows that in the absence of embedding the relative superlative reading is impossible even if the *comparandum* is focused (as indicated by the bolding).

The contrast between (5) and (6a) argues against Matushansky's (2008) view that all superlatives would be attributive, i.e., they would necessarily modify an overt or a covert N. What Italian shows is that the interpretation is different depending on the presence/absence of the definite article: in the former case it is the subject of the copular sentence that is said to have the highest degree, whereas in the latter case the highest degree is predicated of some other argument or adjunct present inside the predicate of the copular sentence. The systematic absence of the definite article with Italian adverbial superlatives (see (2a)) constitutes further evidence against Matushansky's generalization,[4] which must therefore be weakened. The weakest form is certainly true: a syntactic configuration with a null N *may* underly predicate superlatives that attribute the highest degree to the subject of a copular sentence. I leave it as an open question whether a null N (and correlatively a definite article in languages with articles) is *necessary* in the same context.

2.2 Loccioni's (2018) analysis

According to Loccioni (2018: 74) French and Italian superlatives are structurally identical, the difference pertaining only to PF (Phonological Form). In both languages the superlative would be formed with a DegP-internal definite D(eterminer), which would be realized as $[_{D}$THE] and $[_{D}Ø]$, respectively:

(7) $[_{AP}[_{DegP}$**[$_{D}$THE]** ER DEGREE] Adj] French
(8) $[_{AP}[_{DegP}$**[$_{D}$Ø]** ER DEGREE] Adj] Italian

Loccioni's representation in (7) is meant to convey the intuition that French superlative adjectives mean something like 'Adj (e.g., *nice*) to the unique degree that is higher than all other degrees (on the scale of *nice*)'. This means that in (7) DEGREE notates a set of degrees and the DegP-internal **[$_{D}$THE]** has the semantics of a maximality operator:

(9) The DegP-internal THE functions as a maximality operator over degrees, i.e., it picks up the unique maximal degree.

The necessity of embedding $[_{AP}[_{DegP}$**[$_{D}$Ø]** ER DEGREE] Adj] inside a definite DP would be due to the phonological shape of the DegP-internal D: because it is null, $[_{D}Ø]$ needs to be C-commanded by $[_{D^{0}}$THE]. The unconstrained distribution (no need of definite DP-embedding for superlative adverbs or for relative superlative adjectives in predicate positions) of French superlatives would be due to that fact that $[_{D}$THE] is overt.

Loccioni's proposal is confronted with a number of problems. The first one concerns the relation with Krasikova's (2012) proposal, which Loccioni invokes as being 'similar in spirit' to her own analysis. Krasikova's concern was the presence of $[_{D^{0}}$THE] in English DPs with 'relative' superlative readings, which conflicts with their semantic 'indefiniteness' (Szabolcsi 1986):

variation among speakers, which suggests that the mechanism on which it relies might be of a different type than the one underlying the 'core' cases, which are characterized by embedding inside a definite DP.

[4] Matushansky explicitly leaves aside adverbial superlatives, but nevertheless discusses *nai*-forms in Russian (see her section 10.2). Although English is not my focus in this article, let me observe that *the* is optional (rather than obligatory) with superlative adverbs.

(10) Who climbed the highest mountain?
Absolute reading: the mountain higher than any other out of a context-given set of mountains
Relative reading: the mountain higher than the mountains climbed by other people of a context-given set of people

Krasikova's solution of the conflict exhibited by relative superlatives between morphosyntactic definiteness and semantic indefiniteness is to assume that at LF the [THE] of *the highest mountain* is not interpreted in D° but instead belongs to the DegP projection of the adjective, where it is interpreted as a maximaliy operator over degrees. The morphosyntactic make-up of French superlatives looks like a confirmation of Krasikova's hypothesis: indeed, it seems uncontroversial that the THE immediately preceding the comparative form of the adjective does not sit in D°[5], but instead is internal to the DegP. And given the morphological identity that this DegP-internal THE shows with [$_{D°}$THE] it is tempting to assume that both of the two THE's are maximality operators that differ in the nature of the set they apply to: individuals vs degrees. Note however that whereas Krasikova's hypothesis was only meant for relative superlatives, Loccioni proposes a similar analysis for both absolute and relative readings of French superlatives without explaining why languages would differ along those lines. In the absence of such an explanation, Loccioni's and Krasikova's analyses should be evaluated independently, in the sense that the (in)adequacy of one of them does not bear on the other. In what follows I will therefore concentrate on Loccioni's proposal, bringing up one empirical and two conceptual problems.

The empirical problem (pointed out to me by an anonymous reviewer of GoingRomance 2022) is related to the following examples:

(11) a. Gli amici più poveri
'the poorest friends.'
b. Gli amici di persone più povere
'the friends of people more poor/*poorest.'

It is crucial to observe that in both (11a) and (11b) ER is C-commanded by THE. That C-command holds in (11b) is shown by the possibility of licensing NPIs by a NegQ in a position that is structurally identical to that of the definite DP in (11b):

(12) Nessun amico di persone {con alcuno scrupolo / che abbiano mai sofferto}
no friend of people {with any scruple / who have ever suffered} (NPI licensed)

The problem is that (11b) lacks the superlative meaning despite the fact that the comparative is C-commanded by [$_{D°}$gli]. The difference between (11a) and (11b) cannot be captured by Loccioni's analysis.

A further problem is related to the crosslinguistic rarity of the French pattern (Romanian being the only other instantiation so far documented), which is not expected given Loccioni's analysis. Indeed, if the THE immediately preceding the comparative were a meaningful maximality operator we would expect the French type of superlative make-up to be crosslinguistically widespread, which is the reverse of what we observe.

[5] See Loccioni's (2018) arguments against Kayne (2008), who analyzed the second THE as the D of the whole DP.

In what follows I will first review previous analyses of superlative-dedicated morphemes, and then I will try to integrate the Romance data into a coherent crosslinguistic landscape of superlatives.

3. Superlative-dedicated morphemes

In this section I will first briefly present the decompositional analysis of superlative-dedicated morphemes originating in Bobaljik (2012) and further investigated by Dunbar and Wellwood (2016).[6] I will then comment on the semantic composition corresponding to the morphological decomposition.

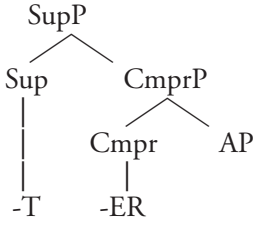
3.1 Decomposing superlative-dedicated morphemes (EST)

Based on an analysis of the suppletive forms of superlatives in a large number of languages, Bobaljik (2012) proposed that:

(13) The superlative contains the comparative operator, both morphologically and semantically.

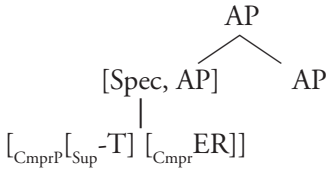
The generalization in (13) is compatible with a number of different hierarchical configurations. One possible structure, assumed by Bobaljik himself, involves two 'nesting' functional heads, Cmpr and Sup:

(14)



Dunbar and Wellwood (2016: 12-13) argue against Bobaljik's structure and in favor of a configuration in which Cmpr and Sup form a constituent sitting in Spec,AP. EST (made up of $[_{Sup}$-T] and $[_{Cmpr}$ER]) is labelled CmprP because $[_{Cmpr}$ER] and EST are in complementary distribution (both occupy Spec,AP) and $[_{Cmpr}$ER] can appear without $[_{Sup}$-T]:

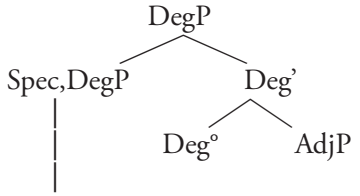
(15)



My own notational variant of Dunbar and Wellwood's analysis is shown in (16), which is more in line with the view that gradable adjectives belong to the functional projection headed by Deg°. I have also replaced the labels Sup1 and Sup2 used by these authors with EST and Sup, where EST is the currently used label for the superlative-dedicated morpheme and Sup is the part of EST realized as [-T]:

[6] See also Szabolcsi (2012) and Al-Bitar (2019), a.o.

(16)



a. $[_{Cmpr}$ER] comparative
b. $[_{EST}[_{Sup}$-T] $[_{Cmpr}$ER]] superlative-dedicated morpheme

3.2 The semantics of superlative-dedicated morphemes

Given the morphological decomposition described above, we may wonder whether the denotation of the superlative morpheme (EST) can be derived from the denotation of the comparative (ER).

Let me directly introduce the denotation of EST:

(17) $[\![\text{EST}]\!] = \lambda R.\boldsymbol{\lambda x}.\ \exists d[R(d)(x) \wedge \forall y\ [[\exists d'R(d')(y) \wedge y \neq x] \rightarrow \neg R(d)(y)]]$

(17) is Heim's (1999) comparison-class-free denotation (her (6)) of EST.[7] According to (17) EST applies to a relation $R_{<d,et>}$, e.g., ⌊d.⌊x *d-poor(x)* ∧ *girl(x),* and results in e.g., *poorest girl*, which denotes the singleton set of individuals x such that the degree d to which the girl x is poor is not attained by any other girl. The restriction to a sub-set of the girls in the whole world is a particular case of the contextual restrictions on quantificational domains (von Fintel 1994; Schwarz 2009), and as such need not be specified as an argument (the comparison-class argument that Heim uses in the other denotations that she envisages for EST) of superlatives *per se*.

Importantly, the denotation of EST given in (17) is independent of $[_{D°}$THE], which denotes the Iota operator and applies at the next stage of the derivation, turning the singleton set into the individual denoted by *the poorest girl*.

Precisely because it is independent of $[_{D°}$THE], the denotation of EST given in (17) is in principle also fit for adverbial and predicative superlatives:[8]

(18) a. Marie writes fastest.
b. Marie was best yesterday.

[7] See also von Fintel (1994), Matushansky (2008), Gajewski (2010) and Krasikova (2012) for analyses that dispense with comparison classes for the absolute readings of superlatives. For relative superlatives, Bumford (2017) proposed a comparison-class-free denotation. The proposal of replacing comparison classes in the analysis of relative superlatives with the situation arguments used for contextual restrictions of quantifiers in general was made by Giurgea (2022) and Dobrovie-Sorin and Giurgea (2023).

[8] It should however be noted that Heim herself does not use this formula for relative superlatives (in either adnominal or predicative positions) and she does not examine superlative adverbs. For relative superlatives Heim proposes denotations that make use of comparison classes and association of focus. However, the LF-raising analysis adopted by Heim constitutes a suitable input for analyzing the relative readings as well as the adverbial superlatives on the basis of the denotation of EST given in (16). For the details of the analysis the reader is referred to Dobrovie-Sorin and Giurgea (2023).

According to Heim's (1999) 'scopal analysis', the semantic composition of examples of the type in (18a-b) rely on LFs of the type in (19a-b), obtained by raising both the *comparandum* (sometimes called 'correlate' or 'pivot') and EST, which targets the position just below the raised comparandum:

(19) a. Marie EST [t_{Marie} [$_{VP}$writes t_{EST} fast]
b. yesterday EST [Marie was t_{EST} good $t_{yesteday}$]

In (19a-b) the relation R in (17) is obtained by abstracting over the d-argument of the adverb/predicative adjective and over the position from which the comparandum (*Marie/yesterday*) has raised. By saturating (17) with *Marie* and *write d-fast*, we end up with (20a) as the truth-condition for (18a). Similarly, (20b) – corresponding to (18b) – is obtained by saturating (17) with *yesterday* and λ*t Marie was d-good at t*:

(20) a. ∃d[wr.-fast(d)(Mary) ^ ∀y [[∃d'wr.-fast(d')(y) ^ y ≠ Mary] → ¬wr.-fast(d)(y)]]
b. ∃d[M was good(d)(yest) ^ ∀y [[∃d'M was good(d')(y) ^ y ≠ yesterday] → ¬M was good (d)(y)]]

Let me stress again that in examples of the type in (18a-b) the superlative adverb/adjective is not DP-internal, and as such its semantics has nothing to do with the semantics of [$_{D°}$THE], not even at some later stage of the derivation (as is the case for adnominal superlative adjectives).

3.3 Deriving EST from ER

Let us now see whether the denotation of EST given in (17)[9] can be compositionally related to the denotation of ER:

(21) ⟦ER⟧ = λy.λR.λx. ∃d[R(d)(x) ^ ¬R(d)(y)]

The crucial difference between ⟦EST⟧ and ⟦ER⟧ (see (17) and (21)) is that the former lacks the *than*-argument (*y* in (21)) but instead introduces universal quantification over all the individuals that satisfy R and are different from the external argument x.

Bobaljik (2012) does not provide a compositional semantics that would do justice to the morphological decomposition of EST into ER and T but makes a conceptual suggestion: superlative meanings are complex, they contain the meaning of the comparative, the additional bit (-T in the English -EST) intuitively corresponding to 'than all the others'. According to Dunbar and Wellwood (2016), the branching configuration in (15) but not Bobaljik's nesting structure in (14) allows a compositional derivation of the denotation of -EST from that of [ER]. [$_{Sup}$-T] (notated SUP_2 in Dunbar and Wellwood) can be assumed to be a higher order function that takes a function of the same type as ⟦ER⟧ as an argument and returns a function of the same type as EST/SUP_1:

[9] This denotation, which takes the *than*-argument to denote an entity, departs from the most frequently assumed definition, according to which ER denotes a relation between degree properties. The lower-level denotation given in the text enables an easier comparison between the denotation of ER adopted in the text and that of EST.

(22) ⟦EST⟧ = ⟦$_{Sup}$-T⟧ (⟦ER⟧)

The reader interested in the details of the semantic composition is referred to Dunbar and Wellwood's denotation of SUP$_2$ (corresponding to our [$_{Sup}$-T]) in (26) and the semantic derivation in (28). I do not reproduce them here because the notations as well as the denotations of ER and EST differ from those adopted in the present paper. It is moreover not necessary to spend time and space with the semantic composition, which interests us here only insofar as it tells us what it needs as a syntactic input. Suffice it to say that the denotation that Dunbar and Wellwood propose for SUP$_2$ (our [$_{Sup}$-T]) captures the intuitive meaning of superlatives as 'more than all others' because ⟦SUP$_2$⟧ / ⟦$_{Sup}$-T⟧ feeds in universal quantification over alternatives to the *comparandum*.

In sum, what I take from Dunbar and Wellwood is the syntactic conclusion: the branching configuration in (15) constitutes a suitable input for a semantic composition that derives EST from ER by means of standard functional application.

It is however important to observe that the postulated denotation of [$_{Sup}$-T] *does not exist independently of its occurrence inside* EST, which signals grammaticalization. The fact that grammaticalization paths are language-specific explains why the diachronic origin of Sup (the prefix or suffix added to the comparative form) varies crosslinguistically and is not even semantically related to the universal quantification over alternatives contributed by EST;[10] it is only in Latvian that the superlative prefix is related to the root that means 'all'.

In sum, the semantics of superlative-dedicated forms such as EST, which can be defined by using a comparative and universal quantification, is arguably universal, on a par with the comparative operator ER. For those languages in which EST is decomposable into ER and Sup,[11] the denotation of Sup (which is also universal, being obtained by 'reverse' functional application from EST and ER) can informally be taken to contribute '(than) all the others', a meaning that is not related to the meanings of the crosslinguistically diverse diachronic sources of Sup.

4. Back to Romance

Let us now go back to the contrasts between French and Italian introduced in section 2:[12] (i) in French postnominal, adverbial and predicative superlatives the comparative (ER) is immediately preceded by [THE] and the latter cannot be (easily) analyzed as sitting in D°; postnominal superlatives end up co-occurring with two THE's: the one immediately preceding the comparative and [$_{D°}$THE], e.g., ***la*** *fille* ***la*** *plus pauvre* 'the girl the more poor', "the poorest girl"; (ii) in Italian postnominal, adverbial and predicative superlatives the comparative (ER) cannot be immediately preceded by THE, but must appear inside a DP headed by [$_{D°}$THE]. In what follows I will examine in turn the French and Italian superlatives against the background of our knowledge of superlative-dedicated morphemes.

[10] Bobaljik (2012: 76-77) gives the following list of different origins of superlative prefixes or suffixes: "[…] in Latvian, the prefix is the root meaning 'all'; in Czech, it is etymologically a preposition and pronoun (roughly, 'on it'); in Hungarian an intensifier of sorts; in Chukchi an emphatic pronoun (roughly 'self', Russian *sam*; Skorik 1977: 334); and in Ubykh, the prefix is the definite article. The generally accepted origin for the PIE [Proto Indo European] suffix *-to is also something like a marker of definiteness or individuation (see Cowgill 1970 for extensive discussion)".

[11] Note that there are languages, e.g., Slavic, or Turkish, where comparatives and superlatives are built with two unrelated markers. Even for such languages the denotation of the superlative morpheme is arguably the same as that of EST in English, although there is no direct evidence in favor of a morphological decomposition into ER and Sup. *Prima facie*, at least, this indicates that Bobaljik's (2012) claim that EST is always built on top of ER should be weakened.

[12] The reader should bear in mind that these generalizations do not concern prenominal superlatives (see §4.1).

4.1 French: A superlative-dedicated phrase

In this section we will examine those French configurations in which THE immediately precedes the comparative:

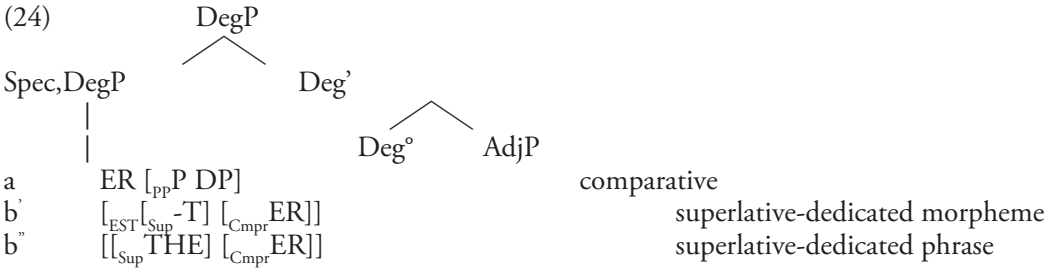
(23)
a. la fille *(la) plus pauvre
the girl the more poor
'the poorest girl.'
b. Marie écrit plus vite **/le** plus vite
Marie writes more quickly/the more quickly
'Marie writes more quickly/the most quickly.'
c. Marie a été la plus heureuse **en 1968**
Marie has been the more happy in 1968
'Marie was the happiest in 1968.'

Quite clearly the THE that immediately precedes *plus pauvre, plus vite* and *plus heureuse* in the examples above does not sit in D° (but see Kayne 2008), which is either altogether absent (see the b-c examples, built with adverbial and predicate adjectives) or filled with another instantiation of THE (see the a example, in which the superlative adjective is postnominal).

Following Loccioni (2018) I will assume that this THE is part of the functional layers of the Adj. I have however argued (see § 2.2 above) against Loccioni's hypothesis that this DegP-internal THE has the semantics of a Max operator.

My core proposal will be that [THE ER] is a superlative-dedicated phrase that sits in Spec,DegP, on a par with EST (the superlative-dedicated morpheme) and ER (the comparative morpheme):

(24)



According to this proposal, the THE that immediately precedes comparatives in French is an exponent of Sup that goes back to a definite article, but which entertains no synchronic relation to the definite article.[13] This means that the denotation of the DegP-internal THE of French is *not* related to the denotation of the definite article THE (*contra* Loccioni 2018, according to whom

[13] As observed by a reviewer, this analysis does not explain why [Sup THE] exhibits number and gender agreement with the head N, on a par with definite articles and contrary to degree modifiers such as *plus* or the Italian unagreeing modal superlatives. I leave this issue for further investigation. But let me just observe that the syntax-semantics of modal superlatives is crosslinguistically crucially different from that of run-of-the-mill superlatives and as such deserve a separate investigation. Clear evidence in favor of the need to keep modal superlatives separate from other superlatives is the fact that modal superlative can be embedded inside indefinite DPs, e.g., *Cerco una ragazza il più gentile possibile* 'I am looking for a girl the more kind possible', 'I am looking for a girl as kind as possible'.

the superlative marker THE is a Deg-P internal D° that functions as a maximality operator). Under my own proposal, [$_{Sup}$THE] is a superlative marker that is merely homophonous to [$_{D°}$THE].

The use of THE as a superlative marker is probably due to the grammaticalization of a syntactic configuration in which THE was used as a definite article. Double definiteness constitutes a plausible diachronic input for a restructuring/grammaticalization process that led to the formation of Romanian superlative-dedicated constituents (which behave by and large on a par with French superlatives). Indeed, double definiteness is very productive in Romanian regardless of whether postnominal modifiers are superlatives or not:

(25) a. fata (cea) blondă
girl-the (THE) blond
'the blond girl.'
b. fata cea mai blondă
girl-the THE more blond
'the blondest girl.'

French does not, however, exhibit double definiteness.

More plausible is the contiguity between prenominal comparatives (necessarily interpreted as superlatives) and THE:

(26) la plus jolie fille
the more pretty girl
'the prettiest girl.'

Note that the DP-initial THE can be shown *not to be part* of Spec,DegP but instead sits in D° (Loccioni 2018), the prenominal comparative occupying a dedicated Sup position unaccessible to positive or comparatively interpreted adjectives (Kayne 2008; Cinque 2010). The relevant examples involve DPs that contain numerals in addition to superlatives:[14]

(27) a. les deux plus jolies filles
the two more pretty girls
'the two prettiest girls.'
b. le deuxième plus riche pays
the second more rich country
'the second richest country.'
c. *les plus jolies deux filles
the more pretty two girls
d. *le plus riche deuxième pays

[14] Romanian differs from Italian and French in that the THE (realized as *cel*, a strong form of definite article, which inflects for gender and number) that precedes prenominal comparatives can never be separated from the comparative, not even by numerals. Examples of this type indicate that in Romanian, a THE preceding the comparative is never in D° but instead the phrase [THE ER] sits in Spec,DP (Giurgea 2013, 2022):

(i) *cele două mai frumoase fete
the two more beautiful girls
(ii) cele mai frumoase două fete
the more beautiful two girls

The fact that in DPs with numerals THE does not belong to DegP does not mean that this is also the case in DPs *without* numerals, e.g., *les plus belles filles*. In these DPs, the structure in (28a) may have gradually been reanalyzed into that in (28b), where THE is part of the DegP:

(28) a. $[_{D^\circ}$les$]$ $[_{XP}[_{DegP}$plus belles$]$ $[_{NP}$filles$]]$
b. $[_{Spec,DP}[_{DegP}$les plus belles$][_{D'}[_{D^\circ}\emptyset]$ $[_{NP}$filles$]]$

But now, the problem is that the contiguity between $[_{D^\circ}$THE$]$ and ER shown in (26) for French also holds in Italian (e.g., *la più bella ragazza* 'the more beautiful girl' meaning 'the most beautiful girl', which arguably has the structure shown in (28a). The question arises as to why this configuration has grammaticalized in French but not in Italian. Differences in the properties of the definite articles in the two languages might be involved.[15]

4.2 The semantics of [THE ER] in French

The morphosyntactic analysis proposed in (24) for French superlatives allows us to extend Dunbar and Wellwood's compositional analysis of $[_{EST}[_{Sup}$-T$]$ $[_{Cmpr}$ER$]]$ to cover $[[_{Sup}$THE$]$ $[_{Cmpr}$ER$]]$ in French. Thus, the Spec,DegP-internal $[_{Sup}$THE$]$ is an exponent of a functional category Sup that could be listed in the Lexicon with the denotation proposed by Dunbar and Wellwood for $SUP_2/[_{Sup}$–T$]$ (see their formula in (26)). The phrase $[_{Spec,DegP}[_{Sup}$THE$]$ $[_{Cmpr}$ER$]]$ would be built in the syntax, and correspondingly its denotation would be obtained by applying $[_{Sup}$THE$]$ to $[_{Cmpr}$ER$]$, as stated in (29), which is parallel with (30), which is Dunbar and Wellwood's proposal for the semantic composition of the English EST (see (22) above, and the discussion there):

(29) $[\![[_{Spec,DegP}[_{Sup}$THE$]$ $[_{Cmpr}$ER$]]]\!] = [\![_{Sup}$THE$]\!]$ ($[\![_{Cmpr}$ER$]\!]$)

(30) $[\![$EST$]\!] = [\![_{Sup}$-T$]\!]$ ($[\![$ER$]\!]$)

Granting that the denotation of $[_{Sup}$THE$]$ is the same as that of $[_{Sup}$–T$]$, the denotation of $[_{Spec,DegP}[_{Sup}$THE$]$ $[_{Cmpr}$ER$]\!]$ is the same as that of EST (see (17) above and (31) below):

(31) $[\![_{Spec,DegP}$THE ER$]\!] = [\![_{Spec,DegP}$EST$]\!] = \lambda R.\lambda x.\exists d[R(d)(x) \wedge \forall y[[\exists d'R(d')(y) \wedge y \neq x] \rightarrow \neg R(d)(y)]]$

Just like $[\![_{Spec,DegP}$EST$]\!]$ itself, $[\![_{Spec,DegP}$THE ER$]\!]$ can combine not only with adnominal adjectives, but also with adverbs and predicate adjectives. The semantic composition will be exactly the same as that presented in § 3.2 for $[\![_{Spec,DegP}$EST$]\!]$.

This semantic analysis, according to which $[_{Sup}$THE$]$ does not share any piece of meaning with $[_{D^\circ}$THE$]$ (in other words $[_{Sup}$THE$]$ and $[_{D^\circ}$THE$]$ are homophones), is radically different from Loccioni's proposal, according to which the DegP-internal THE is a D with the seman-

[15] A reviewer claims that the Italian counterparts of the French (27a-b) are disallowed, e.g. *le due (*più carine) ragazze (più carine)/il dodicesimo (*più ricco) paese (più ricco)*. Note however that examples of this type can be found on the internet as well as in Loccioni (2018), which indicates that this impossibility is a matter of variation inside Italian, for which a fine-grained empirical investigation is necessary. Be this as it may, examples of this type do not directly bear on my main claims.

tics of a maximality operator, on a par with [$_{D°}$THE], but differing from the latter regarding the domain of quantification: set of degrees vs. set of individuals. Postulating homophony is certainly 'non explanatory', and therefore we may be tempted to side with Loccioni against the present proposal. But the advantage disappears (at least to my understanding) as soon as we recall that French is an isolated case (Romanian being the only other instantiation I know of) whereas a great number of languages express superlatives by using THE-lacking comparatives (Italian is a particular instantiation of this pattern, to which I turn in the next subsection). Indeed, the hypothesis that DegP-internal THE denotes a maximality operator over degrees amounts to a fully compositional analysis, which incorrectly predicts that those languages that have both [$_{D°}$THE] and ER will also have a superlative-dedicated phrase of the form [THE ER].[16] In sum, the crosslinguistic scarcity of the French pattern strongly supports the hypothesis of homophony adopted here.

4.3 Italian: ER in Spec,DP

The analysis of French proposed in the previous section goes against Loccioni's structural analysis given in (7) and repeated in (32), in which the DegP-internal THE of French would be a maximality operator (see (9)), on a par with [$_{D°}$THE]:

(32) [$_{AP}$[$_{DegP}$[$_{D}$**THE]** ER DEGREE] Adj] French

Given that I reject the adequacy of (32) for French it goes without saying that I also reject Loccioni's proposal for Italian superlatives, which would be structurally identical to French superlatives, the only difference being the covert nature of the D element inside DegP:

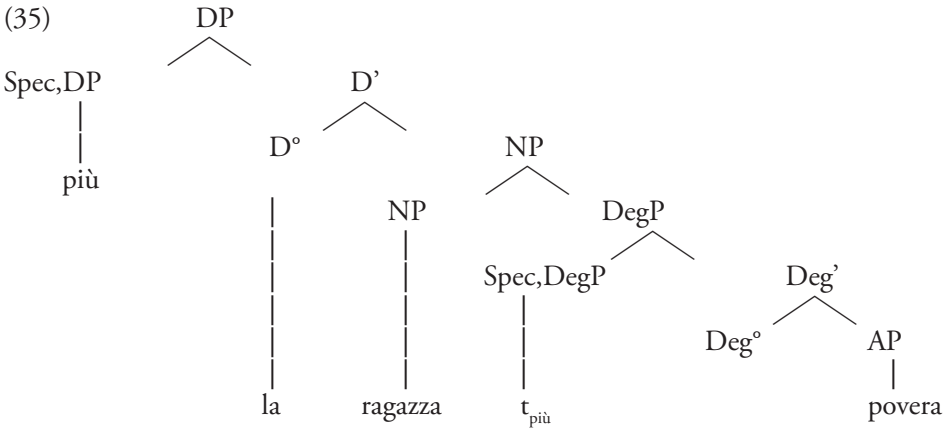
(33) [$_{AP}$[$_{DegP}$[$_{D}$**Ø]** ER DEGREE] Adj] Italian

My proposal will be that Italian 'superlatives' are in fact bare comparatives, i.e., they lack both [$_{Sup}$THE] (superlative marker in French) and the *than*-argument of comparatives. Because it lacks the *than*-argument, ER is uninterpretable locally but it becomes interpretable by raising to Spec,DP, where it gets the denotation of a quantificational determiner:

(34) La ragazza più povera.

[16] As observed by Loccioni (2018), Italian allows an invariable THE in the DegP of modal superlatives in predicate positions and in DPs headed by an indefinite article, e.g., *Ieri Maria è stata il più carina possibile, Cerco una ragazza il più gentile possibile.* Loccioni (2018) argues that in examples of this type (the invariable) THE denotes a maximality operator over degrees, which yields a unique degree value.

(35)



4.4 [$_{Spec,DP}$ER] as a Quantificational Determiner

My next proposal will be that the denotation of [$_{Spec,DP}$ ER] is similar to that of superlatives in that it introduces comparison with all the entities different from the external argument:

(36) $\llbracket [_{Spec,DP}\ ER] \rrbracket = \lambda R \iota \mathbf{x}.\ \exists d[R(d)(x) \wedge \forall y\ [[\exists d'\ R(d')(y) \wedge y \neq x] \rightarrow \neg R(d)(y)]]$

(36) differs however from (31), the denotation of superlative-dedicated morphemes/phrases such as [$_{Spec,DegP}$EST] in English or $\llbracket [_{Spec,DegP}$THE ER$] \rrbracket$ in French, by the presence of an Iota instead of a lambda. This difference is crucial: it says that whereas a superlative-dedicated morpheme such as [$_{Spec,DegP}$EST] or [$_{Spec,DegP}$THE ER] can contribute *only* a descriptive condition that singles out one entity out of the set of entities that satisfy the same type of relation R (thus yielding a singleton set), a [$_{Spec,DP}$ ER] (i.e., a [ER] that sits in Spec,DP) can introduce a superlative-like descriptive condition only because it *simultaneously* introduces the Iota operator. The introduction of the Iota operator could be attributed to the 'Determiner' type of interpretation that is arguably induced by sitting in the Spec,DP position.

Let me insist that under the analysis sketched here for Italian, there is no morphological piece corresponding to Sup (say [$_{Sup}$-T] in English or the DegP-internal [$_{Sup}$THE] of French). This means that the superlative descriptive condition cannot be assumed to be contributed by some piece of morphology, but is instead due to the Spec,D position that a *than*-less ER (realized as *più* in Italian) occupies at LF.

4.5 Vacuousness of THE

Given the denotation of $\llbracket [_{Spec,DP}$ ER$] \rrbracket$ given in (36), [$_{D°}$THE] itself is not interpreted. This analysis seems to illustrate Giusti's (2002, 2015) theory according to which the definite article is semantically empty, having only formal syntactic features (that is case, number and gender) and those operators that function as determiners sit in Spec,DP. Note however that unlike Giusti we do not assume that the definite article is always semantically vacuous: indeed, we do not assume that the Spec,DP related to [$_{D°}$THE] is always filled; and in those cases where it is not, [$_{D°}$THE] has the denotation of an Iota operator.

We may still wonder why the D° associated to the configuration in (35) surfaces as a definite article. My answer is similar to the one given by Dobrovie-Sorin and Giurgea (2023) in their

analysis of the relative readings of superlatives: D^0 carries a definiteness feature as a result of Spec-Head agreement between [$_{Spec,DP}$ ER] and D°. The [def] feature on [$_{Spec,DP}$ ER] is justified by the fact that its denotation (see (36)) introduces uniqueness. Note that the denotation in (36) is meant only for the absolute reading. The reader is referred to Dobrovie-Sorin and Giurgea (2023) for the analysis of relative superlatives.[17]

The analysis proposed here captures the impossibility of superlative readings of ER in the It. examples in (3) (which contrast with their French counterparts in (4)): since in (3) there is no [$_{D°}$THE] there is no Spec to which ER can raise, and the configuration is filtered out (a comparative reading is possible provided that a covert *than*-argument can be contextually retrieved). Under this proposal, the constraint of being embedded inside a definite DP is explained by the assumption that the superlative-like denotation of a bare ER depends on raising to Spec,DP at LF. The problem with which Loccioni (2018) is confronted (see examples (11) and the surrounding discussion) does not arise, because under the present proposal ER does not raise to some run-of-the-mill C-commanding [$_{D°}$THE], but specifically to the [$_{D°}$THE] that binds the variable singled out by the superlative description.

4.6 Adverbs and Predicates

Let us now turn to adverbial and predicative positions. The examples in (2a) and (6a), repeated below in (37a-b), show that Italian comparatives in adverbial or predicative positions can be interpreted as superlative provided that they are embedded inside a relative clause headed by a definite:

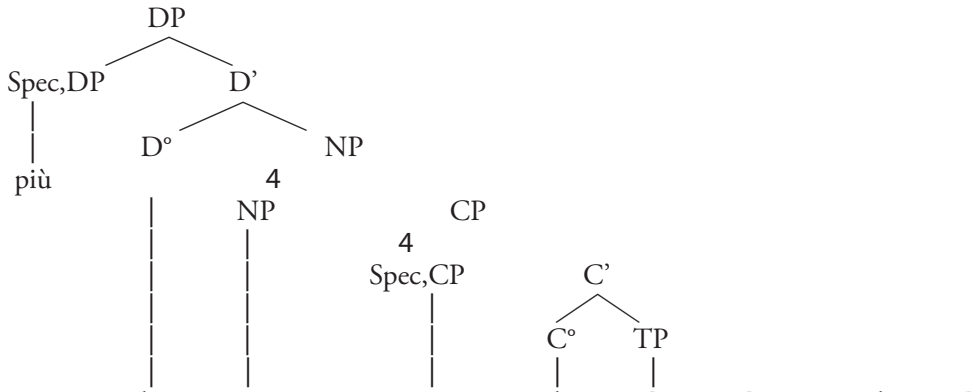
(37) a. la segretaria che scrive (*il) più rapidamente
the secretary who writes (*the) more quickly
'the secretary who writes the most quickly.'
b. l'anno in cui Maria fu più felice.
'the year in which Mary was happiest'

The definite article is excluded with adverbs (see (37a)) and allowed in predicate positions only for the 'quasi-absolute' reading (see (5) in § 2.1), which corresponds to a full DP built with a null N. The analysis of examples of that kind is the same as that of adnominal superlatively-interpreted comparatives in adnominal position (see §4.3-§4.5).

The analysis of (37a-b) is like that of adnominal superlative-interpreted comparatives in that ER raises to Spec,DP. But in this case the Spec,DP position is higher up and in order to reach it ER must move out of the relative clause:

[17] Dobrovie-Sorin and Giurgea do not explicitly discuss the relative readings of Italian superlatives, but the analysis proposed there for the English EST extends to [$_{Spec,DP}$ ER]. Dobrovie-Sorin and Giurgea do not analyze absolute superlatives but implicitly assume that EST is lower in languages which have dedicated superlative markers and correlatively, allow superlative adjectives to combine with other determiners such as the demonstrative and the indefinite article.

(38)



The semantic composition relies on the denotation of ER given in (36) and repeated below:

(39) $[\![_{Spec,DP}\ ER]\!] = \lambda R \iota x.\ \exists d[R(d)(x) \wedge \forall y\ [[\exists d'\ R(d')(y) \wedge y \neq x] \rightarrow \neg R(d)(y)]]$

In this case the R relation is obtained by abstracting over the wh-trace (which corresponds to the comparandum) and the d-trace left behind by the raising of ER from the DegP/AdjP-internal position to Spec,DP: ⌊d. λx. secretary(x) & x writes d-quickly *and* λd.λx. year(x) & Maria was d-happy in x.

By filling these denotations into the R argument of (39a-b) we obtain the observed meanings: 'the unique secretary such that she writes quicker than any other secretary that writes to a certain speed' and 'the year in which Maria was happier than on any other year':

(40) a. ⟦la segretaria che scrive più rapidamente⟧ = ι**x**.∃d[secretary(x) & x writes d-quickly ^ ∀y [[∃d' y writes d'-quickly ^ secretary (y) ^ y ≠ x] → ¬ y writes d-quickly]]

(41) b. ⟦l'anno in cui Maria fu più felice⟧ = ι**x**.∃d[year(x) & Maria was d-happy in x ^ ∀y [[∃d' Maria was d'-happy in y ^ y ≠ x] → ¬ Maria was d-happy in y]]

4.7 Extensions of the Analysis

In what follows I will briefly bring up three pieces of evidence in favor of the hypothesis of LF raising of [$_{Spec,DegP}$ER] to Spec,DP. The first type of data, illustrated below for English and French, comes from languages that have superlative-dedicated morphemes or phrases:

(42) a. the taller boy
b. le garçon plus grand
the boy more tall
'the taller boy'

In examples of this type the comparative *taller/plus grand* lacks a *than*-argument and is interpreted as meaning 'taller than the other', which presupposes the existence of two boys in the discourse context. The point that is relevant in the present connection is that 'than the other' is supplied by default due to the lack of a *than*-complement provided that D° is filled with THE. Arguably, this meaning is difficult to obtain by first combining some silent instantiation of 'than the other' with (tall)ER, letting THE to be fed in at the last stage of the derivation. My suggestion is to assume that in the absence of a *than*-complement ER is uninterpretable in Spec,DegP and must raise to Spec,DP, where it gets the superlative-type of denotation in (36). The fact that in English and French [$_{Spec,DP}$ER] is interpreted as 'than the other' rather than 'than all the others' (as it does in Italian under our proposal) is arguably due to a blocking effect triggered by the fact that English and French have a superlative-dedicated morpheme/phrase [$_{Spec,DegP}$EST]/[$_{Spec,DegP}$THE ER]. Note also that for some English speakers examples of the type in (42) do not constrain the comparison set to just two elements (Szabolcsi 2012).

The second type of data is related to the relative readings of superlatives, which are reputedly difficult to analyze because their semantic indefiniteness (Szabolcsi 1986; Heim 1999) conflicts with the systematic presence of THE in D°. A possible solution to the problem is the hypothesis that in order to get a relative reading it is not just EST that raises (to a position just below the position to which the *comparandum* itself has raised, see Heim 1999), but rather the whole of the superlative DP; inside the superlative DP itself, EST raises to Spec,DP, where it is interpreted as a quantificational Determiner (see Dobrovie-Sorin and Giurgea in progress).

The third type of evidence concerns data already mentioned in footnote 10 in section 4.1, which show that in Romanian numerals intervene between prenominal superlatives and the noun itself:

(43) a. *cele două mai frumoase fete
b. cele mai frumoase două fete

The relative order of the numeral and the superlative [cele mai frumoase] 'the more good-looking' meaning 'the most good-looking' strongly suggests that the latter sits in Spec,DP[18] (Giurgea 2013).

Interestingly, the second and third type of data just invoked involve raising of EST rather than raising of a bare ER. This is not surprising, given that EST can be viewed as a particular value of the comparative (see Dunbar and Wellwood, where the projection of superlatives is labelled CmprP). The difference between EST and a bare ER is that the latter is forced to raise to Spec,DP in order to be interpreted, whereas EST (at least under the absolute reading) can be interpreted in some lower position (but nevertheless has to raise to a DP-internal scope position, see Heim 1999). This does not mean, however, that on its absolute reading EST *cannot* raise to the Spec of [$_{D°}$THE]. Issues regarding the complexity of linguistic computations might help choose between a (i) LF raising of EST to a position lower than Spec,DP + two-step semantic derivation (singleton set formation followed by application of the Iota) and (ii) LF raising of EST to Spec,DP + one-step semantic derivation based on the hypothesis that [$_{Spec,DP}$EST] (or [$_{Spec,DP}$THE ER] in French or Romanian) – on a par with the [$_{Spec,DP}$ER] of Italian – simultaneously contributes the superlative descriptive condition and the Iota operator.

[18] This is not to say that the prenominal [cel mai Adj] necessarily raises to Spec,DP. In particular it does not when D° is filled with an indefinite article, which is a strongly constrained possibility (see Giurgea 2022).

5. Conclusions

I have shown that (i) French has a superlative-dedicated phrase [THE ER] that sits in the same syntactic position and has the same denotation as EST (Germanic or Slavic) and (ii) Italian has a bare ER that can be interpreted as superlative due to raising to the Spec of [$_{D°}$THE]. This proposal opens the way towards making sense of the observation that the Italian pattern is crosslinguistically widespread, in contrast to the French pattern. This generalization indicates that superlative meanings can be assigned 'naturally' or 'by default' to comparative forms (without the mediation of a superlative marker). My hypothesis is that the raising of a bare ER to the Spec of [$_{D°}$THE] is a default syntax-LF rule that applies crosslinguistically, turning ER into a 'superlative determiner' at LF. This rule is arguably blocked by EST in those languages that have EST. Superlative-dedicated phrases such as the French (and the Romanian) [THE ER] may arise via restructuring/grammaticalization, which depends on language-particular properties.

The crosslinguistic picture that emerges from the present proposal turns out to be quite different from the one presented by Bobaljik (2012: 77), who describes the Romance pattern of superlatives as involving 'the addition of a definite article (or other definiteness marker) to the comparative (whether the comparative is itself formed morphologically or periphrastically)'. Bobaljik does not seem to be aware that French and Romanian syntactically differ from Italian and Ibero-Romance, although he does raise the question as to whether there is a real crosslinguistic difference (in his words, 'meaningful line to be drawn') between those languages that are described by grammarians as having superlatives built by combining comparatives with definiteness[19] and those described as lacking a morphological distinction between comparatives and superlatives, the difference in interpretation being indicated by context and/or syntax.[20] After envisaging the possibility that languages without superlatives (in which the superlative meaning would depend on the syntax) may exist, Bobaljik sheds doubt on it by the following reasoning: 'On the other hand, if the combination of a definite article plus the comparative were sufficient to derive a superlative meaning (with no null elements, or equivalent semantic devices such as type-shifting operations or other postulates), then this reading should be routinely available in other languages, such as English, where it is not (except in the superlative comparing two items: *(Of the two books), the shorter one is on the table*). I therefore leave this question open.' The present article may be viewed as a step towards tackling this question. My answer to why the 'more than all others' reading does not arise in English is that English has a dedicated morpheme EST. Such morphemes exist in languages without definite articles (Slavic) and in languages with articles (Germanic) they may have appeared prior to the introduction of the definite article. Among the languages with definite articles on the other hand, the most widespread pattern is the one (discussed here for Italian) in which the superlative reading is obtained by embedding a comparative inside a definite DP. Only French and Romanian have a superlative-dedicated phrase of the form [$_{Spec,DegP}$THE ER], which was obtained via grammaticalization. The rarity of languages with superlative-dedicated phrases

[19] Bobaljik quotes the following languages as illustrating this general pattern: Austrian German, including Upper Austrian (Martin Prinzhorn, Martin Hackl, personal communication), and also in Maltese (in some cases with a change in word order), Neo-Aramaic (Arsanis 1968: 496), Middle Armenian (Karst 1901, 395), and, alone among the Fennic languages, Livonian (Nau 1992: 17).

[20] To illustrate languages that are assumed to lack the morphological distinction Bobaljik quotes some of the Celtic languages ((Modern) Irish, Manx, and Scottish Gaelic), Arabic, Klon (a Papuan language of Alor, Indonesia, as described in Baird 2008: 116) and Misantla Totonac (an indigenous language of Mexico; MacKay 1999: 413). In some of these languages the difference in interpretation depends on the presence/absence of the definite article.

of the form [$_{\text{Spec,DegP}}$THE ER] out of the high number of languages described as forming superlatives by combining comparatives and definiteness in fact illustrates the conjecture that Bobaljik thought did not exist, namely that the combination of a definite article plus the comparative is sufficient to derive a superlative meaning.

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OPEN ACCESS

Citation: G. Mazzaggio, P. Stateva (2023) Two "many"-Words in Italian? On Molto-Tanto and Cross-linguistic Differences in Quantification. *Qulso* 9: pp. 117-134. doi: http://dx.doi.org/10.13128/QULSO-2421-7220-15155

Data Availability Statement: All relevant data are within the paper and its Supporting Information files.

Competing Interests: The Author(s) declare(s) no conflict of interest.

Two "many"-Words in Italian? On *Molto-Tanto* and Cross-Linguistic Differences in Quantification*

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Abstract:

This article investigates the variability in the meaning of vague quantifiers across different languages, focusing on Italian's m(any)-words *molto* and *tanto*. The aim was to replicate a previous analysis conducted on Slovenian *m*-words – *precej* and *veliko* – examining whether the Italian ones exhibit a similar pragmatic strengthening effect. Using a sentence-picture verification task, we tested 88 Italian monolingual participants on their evaluation of sentences of the form "Quantifier X are Y". Our results showed that, unlike Slovenian speakers, Italian speakers do not exhibit a difference in the evaluation of *molto* and *tanto*, suggesting that the two words have the same numerical bound and are interchangeable as amount modifiers. Our analysis suggests that there are underlying semantic distinctions between *molto* and *tanto* that require further investigation. These findings contribute to our understanding of the variability in the use of quantifiers across languages and highlight the importance of examining subtle differences in meaning when studying vague quantifiers.

Keywords: *Cross-linguistic Differences, Pragmatics, Quantification, Semantics, Vague Quantifiers*

Introduction

Natural languages possess a wide set of expressions for referring to quantities. Such expressions can sometimes be very precise, like in (1) or (2), but they can also be vague, like in (3) or (4).

* This work has been supported by a grant from the Slovenian Research Agency (ARRS) (Project number: J6-2580) awarded to Penka Stateva.

Greta Mazzaggio: Software, Formal Analysis, Investigation, Data Curation, Visualization, Writing – Original Draft, Writing – Review and Editing. Penka Stateva: Conceptualization, Methodology, Writing – Review and Editing, Supervision, Funding acquisition.

(1) *No* students attended my class.

(2) *Both* students attended my class.

(3) *Some* students attended my class.

(4) *Many* students attended my class.

Interestingly, vague expressions, such as *some*, *many* or *few*, can be felicitously used to answer a question like "How many students attended your class?", even if the answer will not give a precise idea regarding the number of students who actually sat in the class. Despite this lack of definiteness, these quantifiers are pervasive in our everyday communication (Israel 1999). Even though all languages should have a set of quantifiers available and the meanings of cross-linguistic counterparts are not expected to diverge (Barwise and Cooper 1981; von Fintel and Matthewson 2008), we have to recognize how variability in language use is the norm (Yildirim *et al.* 2016) and recent works present a different and intriguing pattern of cross-linguistic data (Katsos *et al.* 2016; Stateva *et al.* 2019), even within a bilinguals perspective (Dupuy *et al.* 2019; Khorsheed *et al.* 2022; Mazzaggio, Panizza, Surian 2021). This work aims at analyzing Italian translational-equivalents words for *many* (henceforth, *m*-words), within a cross-linguistic perspective, moving from a recent analysis by Stateva and Stepanov (2017) on two m-words in Slovenian.

According to the formal semantic perspective of the Generalized Quantifier Theory, quantificational determiners are defined as non-referential, since they do not denote objects but relations between sets of individuals (Barwise and Cooper 1981). This means that, for instance, the sentence in (3) is true just in a context in which the intersection between the set of students and the set of people that attended the class is not empty, as formally expressed in (5a), and that the meaning of *some* corresponds to the existential determiner ('∃'). For what concerns *many*, the interpretation is ambiguous between its proportional (6a) and its cardinal (6b) reading, due to the choice of the comparison class. If we consider again the sentence in (4), on one hand, its cardinal reading conveys that the number of students that attended the class is understood to be a large number; the proportional reading, on the other hand, expresses the idea that the in-class students' proportion is understood to be large relative to all students that might have attended the class. Interestingly, there are languages, like Russian, which have two different lexical entries for the two cardinal – and proportional – *many* (Babko-Malaya 1998; Krasikova 2011), while others, like Slovenian and Italian, do not. We will return to this.

(5) a. $[\![\text{some}]\!]c = \lambda A.\lambda B.|A \cap B| \neq \varnothing$

(6) a. $[\![\text{many}]\!]c = \lambda A.\lambda B.|A \cap B|/A >$ nc for some large nc

b. $[\![\text{many}]\!]c = \lambda A.\lambda B.>$ nc for some large nc

Under a different approach, quantifiers such as *many* are considered to be extensively affected by the linguistic context in which they are used and it has been proposed that they have a non-extensional nature (Keenan and Stavi 1986; for a recent diverse analysis, see Greer 2014). In order to evaluate the truth-value of two sentences like (7a) and (7b), even under the assumption that linguists and biologists attending the respective conferences are equal in number, there is a clear intuition that we must consider the number of linguists and biologists who used to attend these conferences in the past. For example, in a situation in which a) the

conference is attended by 100 linguists and 100 biologists, b) thousands of linguists usually attend the conference and, c) a dozen of biologists usually attend the conference, (7b) can be easily interpreted as true while (7a) will certainly be interpreted as false (Pezzelle *et al.* 2018).

(7) a. Many linguists attended the conference this year
b. Many biologists attended the conference this year

In the semantic literature, different approaches departed from the classical one, mainly defining quantifiers in terms of probability distributions over scales (Moxey and Sanford 1993; Pezzelle *et al.* 2018; Yildirim *et al.* 2016) or proposing a degree-based analysis. A recent analysis has been proposed by Stateva and Stepanov (2017); in extending Krifka's (2007) analysis of negated antonyms (e.g., *happy*, *not happy*, *unhappy*, *not unhappy*) to the domain of the two Slovenian *m*-words (*precej* and *veliko*), authors propose that these are two semantically equivalent degree quantifiers that are pragmatically differentiated through an M-implicature and an R/I-implicature enrichment. The ultimate goal of this paper is to apply this analysis to a different language, namely Italian, whose *m*-words (*molto* and *tanto*) apparently pattern similarly with respect to both English and Slovenian. In the next paragraphs, we will first introduce data from Slovenian, explaining how Stateva and Stepanov (2017) analyzed those. We will then describe the properties of Italian *m*-words and, finally, our experimental question will be introduced.

1.2 Two "many"-words in Slovenian and the pragmatic strengthening

As previously mentioned, *many* can have both a proportional and a cardinal reading and there are languages, such as Russian, which lexically distinguish the two readings (Babko-Malaya 1998). Considering examples in Krasikova (2011: 94), the proportional reading in (8) is covered by *mnogie*, which agrees with the noun in the Noun Phrase (NP) in case and, thus, it looks like an attributive adjective, while the cardinal reading in (9) is covered by the adverbial *mnogo*, as reflected in the lack of NP-agreement and its adverbial morphology.

(8) Mnogie deti bolejut gripom
many.NOM children.NOM be.ill flu
'A big proportion of children have the flu.'

(9) Mnogo detej boleet gripom
many children.GEN be.illflu
'A big number of children have the flu.'

Similarly to Russian, other languages, like the ones considered in this work (i.e., Slovenian and Italian) feature more than one *m*-words that can be considered translational counterparts of the English *many*. However, as demonstrated in Stateva and Stepanov (2017), Slovenian counterparts of *many* (*precej* and *veliko*) express the same range of cardinal and proportional meanings and are semantically encoded in the same way, but they differ with respect to the possibilities for their semantic meaning to be pragmatically enriched. Consequently, under appropriate contextual conditions, *precej* and *veliko* can be distinguished because their enriched meaning is associated with different numerical ranges (on the scale of degrees). Thus, Stateva and Stepanov's findings support the generalization of Clark (1980, 1983) known as the Principle of Contrast which suggests that trivial synonymy is unavailable within a language.

Throughout three experiments, native speakers of Slovenian evaluated sentences containing *veliko* and *precej*, in the absence (Experiments 1 and 2) vs. presence (Experiment 3) of the other alternative. The design consisted of blocks of thirty dots that could be either red or blue and for each visual stimuli participants had to evaluate a block of sentences of the form "QUANTIFICATIONAL DETERMINER dots are red" using a Likert scale; while in Experiments 1 and 2 only one of the m-words, *veliko* or *precej*, as part of the respective blocks of verbal stimuli, in the third experiment participants gave their evaluation on *precej*-sentences in the presence of a viable alternative, namely, *veliko*-sentences. Results demonstrated a significant difference in acceptability scores between, on one hand, Experiments 1 and 2 in which no differences between the evaluation of *veliko* and *precej* have been detected, and, on the other hand, Experiment 3 in which *precej* is evaluated as related to relatively smaller amounts compared to *veliko*; this suggests that when both quantifiers are considered together, *precej* is associated with lower numerical values, suggesting the addition of a non-stereotypical implicature to its semantic interpretation. On the other hand, *veliko* is linked to higher numerical values, indicating the strengthening of its semantic interpretation with a stereotypical implicature. Thus, data corroborate their "proposal that the meaning of the Slovenian *m*-words *precej* and *veliko* are pragmatically strengthened in the availability of appropriate contextual conditions" (Stateva and Stepanov 2017: 549). Their analysis is inspired by Krifka (2007) and his interpretation of negated antonymic adjectives, like the ones in (10).

(10) a. *happy, not happy, unhappy, not unhappy*
b. *likely, not likely, unlikely, not unlikely*
c. *many, not many, few, not few*

Antonyms pairs, such as happy and unhappy, are "are typically conceived as contraries that apply to the more extreme ends of a scale and leave a zone of indifference" (Krifka 2007: 4). According to Horn (1989), expressions like 'Bill is not unhappy' can be replaced by 'Bill is quite happy' without a drastic change in meaning but, under specific conditions, an utterance like 'Bill is not happy', can be used to implicate that Bill is rather unhappy. This led Krifka to define such antonym pairs as contradictories, rather than contraries; under this assumption, they exhaust the whole range of the scale, which in turn, allows for defining two pairs of synonyms (in the positive and the negative extension of the scale, respectively) in line with the predictions of the meaning of negative elements. The fine-grained differences within a pair of synonyms were attributed to pragmatic strengthening governed by the R/I or M-principles. Stateva and Stepanov (2017) apply this analysis to the interpretation of the Slovenian quadruplet: <veliko 'many', nekaj 'not many', malo 'few', precej/nemalo 'not few'> arguing for a degree-based semantics of that set of quantifiers. Considering that veliko, on one hand, almost exclusively selects NPs – with a higher frequency of occurrence in contexts where it modifies NPs – and, on the other hand, precej has a much wider categorial distribution, authors suggest that both m-words are used with a strengthened pragmatic meaning: an R-I implicature (11-12) is associated with the former, while an M-implicature (13) with the latter.

(11) *R-principle*:

Make your contribution necessary, say no more than you must. (Horn 1984: 13)

(12) *I-Principle*:

(i) *Speaker's Maxim: the Maxim of Minimization*
'Say as little as necessary', i.e., produce the minimal linguistic information sufficient to achieve your communicational ends (bearing the Q-principle in mind).

(ii) *Recipient's Corollary: the Enrichment Rule*
Amplify the informational content of the speaker's utterance, by finding the most SPECIFIC interpretation, up to what you judge to be the speaker's m-intended point.
(Levinson1987: 402)

(13) *M-Principle:*

Speaker's Maxim: Indicate an abnormal, non-stereotypical situation by using marked expressions that contrast with those you would use to describe the corresponding normal stereotypical situation.

Recipient's Corollary: What is said in an abnormal way indicates an abnormal situation, or marked messages indicate marked situations. […]

(Levinson 2000: 136)

In other words,

veliko triggers an R/I-implicature and is related to a stereotypical interpretation, thus reserving an interval on the relevant scale of degrees which is sufficiently higher than the potential cut-off point between *veliko* and *malo* (*few*) on the proportion scale, while *precej* triggers an M-implicature and is related to a non-stereotypical interpretation which results in picking the elsewhere interval, i.e., the one which is closer to the standard. (Stateva and Stepanov 2017: 449)

To sum up, *veliko* being more frequent with NPs and thus specialized as an NP modifier, speakers would use it on all stereotypical occasions, respecting the maxims according to which one should say no more than necessary (R-implicature), in order to produce linguistic information that is sufficient for the purposes of the communication (I-principle); if a speaker decides to use *precej* with NPs, she would be using a marked expression and the listener might interpret this choice as related to a specific purpose (M-implicature), thus communicating a quantity that is moderately smaller than the one communicated by *veliko*. It is important to keep in mind that this happens only in contexts in which the two *m*-words are in direct competition.

Now, likewise Slovenian, the two Italian counterparts of *many* (*molto* and *tanto*) express the same range of cardinal and proportional meanings and share the same semantic features. Our goal is to replicate the experiment by Stateva and Stepanov (2017), which we introduced earlier, to assess the applicability of the same pragmatic analysis to the Italian pair of m-words. We should mention another work on Italian which previously studied how *molto* and *tanto* are perceived: Montalto *et al.* (2010). Authors report a metalinguistic judgment of the participants according to which *molto* and *tanto* are associated with different amounts. However, in the environment of a controlled experiment, participants fail to assess which m-word is associated with a larger amount. Specifically, in Montalto *et al.* (2010) the goal was to assess how and if Italian speakers distinguish low-magnitude quantifiers (*alcuni*, *pochi*, *qualche*) from high-magnitude quantifiers (*molti*, *parecchi*, *tanti*), and whether they can order them on a scale. In Experiment

1 which involved 96 adult participants six different pairs of quantifier contrasts were tested; among those pairs there was *tanti* vs. *molti*. The experiment was designed in a way in which participants were presented with two boxes ("1" and "2"), together with a description of the content of the boxes, like: "Box 1 contains [*tanti*] noun and box 2 contains [*molti*] noun". Then participants had to answer to a question: "Do the two boxes contain the same quantity?". If participants answered negatively, they were further asked: "Which box contains the larger quantity?". A multiple-choice answer was offered: (a) "Box 1", (b) "Box 2" or (c) "The two boxes contain different quantities, but I am not able to say for sure which one of the two boxes contains the larger quantity". The majority of participants answered "No" to the first question (86%) but participants were not in agreement about the larger amount of the two (83.8% of "not sure" answer). Authors concluded that this "is unexpected with a linear scale, but can be explained with an interval scale. If the intervals denoted by the two quantifiers are not identical (thus ruling out perfect synonymy) but only partially overlap, it is impossible to determine an order between the two quantifiers" (Montalto *et al.* 2010: 10). However, in their experiment they also had fillers in which the same quantifiers *molti-molti* and *tanti-tanti* were presented (e.g., "Box 1 contains [*molti*] noun and box 2 contains [*molti*] noun") and participants answered "No" even when the same quantifiers were contrasted.

In their study, the researchers also assessed 5-year-old children (Experiment 2) using an adapted method. Children watched a cartoon featuring a mouse and were asked to help the mouse find the boxes containing a larger quantity of various foods. In the case of *molti* and *tanti*, for example, children were presented with the sentence "Nella scatola a pallini ci sono *tante* mele. Nella scatola a strisce ci sono *molte* mele." ('In the box with dots there are [many_1] apples. In the box with stripes there are [many_2] apples'). They were then asked if the two boxes contained the same quantity. In this case, 97.9% of children answered "Yes." When asked which box contained the larger quantity, the children's performance as a group was at chance level, and the difference was not significant (molti = 43.8%; tanti = 56.3%). The study concludes that there are no significant differences in the interpretation of "molti" and "tanti" between adults and children.

While Montalto *et al.*'s (2010) study provided valuable insights, it is important to note that their analysis encompassed multiple quantifiers and, as they state in the paper, their "experiment was not designed to establish the extent of quantifier overlap" (Montalto *et al.* 2010: 17). In our project, we will focus on *molto* and *tanto*, trying to replicate the experimental methodology by Stateva and Stepanov (2017) which we introduced earlier and that led to interesting results in another language. The suggested analysis of the observed differences in the interpretation of m-words in terms of pragmatic strengthening can be seen as an instantiation of the idea that scale partitioning into intervals (by a closed class of quantificational determiners) can involve overlaps as long as these intervals reflect lexical semantic meanings. In contrast, if semantic meanings are pragmatically enriched, the corresponding scale intervals are easily differentiated. One can argue that participants in the Montalto *et al.* (2010) work failed to identify the m-word linked to greater amount either because i) the Italian m-words are genuine synonyms, or ii) because the experimental protocol was not sufficiently sensitive to record pragmatic differences in interpretation since the discussed amounts were not visually represented in the experiment. Following the methodology of Stateva and Stepanov, we aim to evaluate the applicability of their pragmatic analysis to Italian m-words.

Before delving into the experimental part, it is necessary to conduct the initial probing phase, similar to what was done with *precej* and *veliko* in the original study. This initial probing will serve another purpose: to propose a formal description and comparison of these two quantifiers, which, to the best of our knowledge, have not been comprehensively examined before.

1.3 "Molto" and "Tanto" in Italian: initial probing

Italian features two main counterparts of the English many: Molto and Tanto.[1] Their frequency vary based on their syntactic role: adjective, adverb, and pronoun. As reported in Table 1, molto is overall more frequent, particularly as an adverb, while tanto is more frequent as an adjective (De Mauro et al. 1993). It is worth considering that in a corpus on child production (Cardinaletti and Giusti 2011) only tanto appears and it is indicated as the most frequent form of the colloquial register.

In Italian, nouns are inflected for gender (masculine and feminine) and number (singular and plural); adjectives and most determiners and quantifiers agree in gender and number with the modified noun (Crisma 2012: 467).

	Molto	*Tanto*
Adjective	915	1.190
Adverb	4.272	735
Pronoun	135	240

Table 1. Frequency of the use of *Molto* and *Tanto* in their functions as adjective, adverb and pronoun. Search on the *Lessico di Frequenza dell'Italiano Parlato* (LIP) corpus (De Mauro et al. 1993; date of inquiry: 1 April 2022).

Similarly to English and Slovenian *m*-words, both *molto* and *tanto* form a constituent with an NP and they can modify a countable noun, as in (14a), or a mass noun, as in (14b).

(14) a. Alla festa sono venuti molti/tanti amici
to party are come m-molto$_{M\text{-}PL}$/m-tanto$_{M\text{-}PL}$ friends$_{M\text{-}PL}$
'Many people came to the party.'

b. C'è molta/tanta acqua nel lago
there is m-molto$_{F\text{-}SG}$/m-tanto$_{F\text{-}SG}$ in the lake
'There is much water in the lake.'

Molto and *tanto* can be used predicatively as in (15a). Both words are also similar in their ability to modify a VP (pre- and post-verbal position) and a participle phrase (PartP), or a comparative operator, as illustrated in (15b–d):

(15) a. I visitatori sono stati molti/tanti
the visitors$_{M\text{-}PL}$ are been m-molto$_{M\text{-}PL}$/m-tanto$_{M\text{-}PL}$
'There have been a lot of visitors.'

b. Mangio molto/tanto
eat m-molto/m-tanto
'I eat a lot.'

c. Questo vestito è molto/tanto rovinato
this dress is m-molto$_{M\text{-}SG}$/m-tanto$_{M\text{-}SG}$ ruined
'This dress is very ruined.'

[1] There is also *Parecchio* that we are not going to consider, being it less frequent. A search on the LIP corpus (De Mauro et al. 1993) for "parecchio" scored 33 for adjectival use, 6 for pronominal use and 3 for adverbial use.

d. In parlamento lavorano molti/tanti più uomini che donne.
in parliament work m-molto$_{M\text{-}PL}$/m-tanto$_{M\text{-}PL}$ more males than females
'Much more men than women work at the parliament.'

In contrast to Slovenian, in which just *precej* but not *veliko* is truly cross-categorial, both *molto* and *tanto* can combine with APs, AdvPs and PPs (16a-c).

(16) a. Il libro è molto/tanto interessante.
the book is m-molto$_{M\text{-}SG}$/m-tanto$_{M\text{-}SG}$ interesting
'The book is very interesting.'
b. Lei lavora molto/tanto duramente.
she work m-molto$_{M\text{-}SG}$/m-tanto$_{M\text{-}SG}$ hardly
'She works really hard.'
c. Oggi la temperatura è molto/tanto sopra i 7 gradi.
today the temperature is m-molto$_{M\text{-}SG}$/m-tanto$_{M\text{-}SG}$ above the 7 degree.
'Today the temperature is much above 7 degrees.'

Other characteristics of both *molto* and *tanto* are that a) they can substitute the noun (17a), b) they can occur after a definite determiner; "in the unmarked order, the quantifier not only follows the determiner but also the possessive adjective; the position preceding the possessive is not excluded, but marked" (17b-c; Cardinaletti and Giusti 2011: 5; Cardinaletti and Giusti 2006), c) admit some form of modification, like being intensified with the suffix *-issimo*, used to form superlative adjectives (17d; Crisma 2012: 485).

(17) a. Molti/Tanti credono in lei
m-molto$_{M\text{-}PL}$/m-tanto$_{M\text{-}PL}$ believe in her
'Many people believe in her.'
b. Le sue molte/tante amiche
the her m-molto$_{F\text{-}PL}$/m-tanto$_{F\text{-}PL}$ friends
'The many friends of hers.'
c. Le ?molte/?tante sue amiche
the m-molto$_{F\text{-}PL}$/m-tanto$_{F\text{-}PL}$ her friends
'The many friends of hers.'
d. Moltissimi/Tantissimi amici
m-molto$_{M\text{-}PL}$/m-tanto$_{M\text{-}PL}$–very friends
'A lot of friends.'

Now, similarly to Stateva and Stepanov (2017), we want to rule out the possibility of attributing to *molto* and *tanto* meaning disparities along the dimension of a difference between cardinal and proportional readings. Following Milsark (1977) and Partee (1989), we make the assumption that the acceptance of a Det-NP phrase in existential constructions, the ability to construct partitive phrases, and the ability to combine Det-NP phrases with individual-level predicates can distinguish between the strong (proportional) and weak (cardinal) properties of *molto* and *tanto*. Both terms may be employed, as shown in (18), to create the subjects of individual-level predicates, much like other strong determiners:

(18) Molte/tante donne sono generose
m-molto$_{F\text{-}PL}$/m-tanto$_{F\text{-}PL}$ women are generous
'Many women are generous.'

On the other hand, both *m*-words can occur in an existential construction, analogous to weak determiners, as in (19) to represent the cardinal reading:

(19) Ci sono molti/tanti libri sul tavolo
there are m-molto$_{M\text{-}PL}$/m-tanto$_{M\text{-}PL}$ books on the table
'There are many books on the table.'

Both *molto* and *tanto*, finally, are used in partitive constructions, in a context supporting a proportional meaning. This is shown in (20):

(20) Molti/Tanti degli studenti del corso di matematica hanno scelto anche logica
m-molto$_{M\text{-}PL}$/m-tanto$_{M\text{-}PL}$ of the students of the course of math have chosen also logic
'Many of the students in the math course also chose logic.'

We proved that in Italian, *molto* and *tanto* are not distinct lexicalizations of proportional and cardinal forms of quantity words. Considering data presented until know, *tanto* might simply appear as a lower-register and more frequent variant of *molto* (Cardinaletti and Giusti 2011). However, there are some differences between the two.

1.4 Differences between "Molto" and "Tanto"

A first difference between the two m-words is that *tanto*, but not *molto*, can be used alongside *quanto* 'as many' to create an equative construction (21); *tanto quanto* may be separated by some material or it can be adjacent, like for other correlative elements (Bianchi and Zamparelli 2004). It has to be noticed that in these cases there are no references to big quantities.

(21) Ho mangiato tanto/*molto quanto ieri
have eat m-tanto$_{M\text{-}SG}$/*m-molto$_{M\text{-}SG}$ as yesterday
'I eat as much as yesterday.'

Moreover, if in "English the singular/plural pair q-words *much / many* and *little / few* can be modified by the degree quantifiers (intensifiers) *very/so/how/too/*etc. […] this is not true for the pair *tanto / tanti*. Here we find that *tanto / tanti* can only be modified by *così* 'so' " (Krapova and Cinque 2020: 165). If we agree with Krapova and Cinque (2020) on the fact that *tanto*, but not *molto*, can be modified by *così*, we also have to add that it can actually be modified by expressions like *3 volte* 'three times' or *proprio* and *davvero* 'very' (22-23a-b).

(22) Ho mangiato tre volte tanto/*molto ieri
have eat three times m-tanto$_{M\text{-}SG}$/*m-molto$_{M\text{-}SG}$ yesterday
'I eat three times more than yesterday'

(23) a. Ho mangiato proprio tanto/*molto
Have eat really m-tanto/*m-molto
'I really eat a lot'

b.	Ho	mangiato	davvero	tanto/molto
	have	eat	really	m-tanto$_{M\text{-}SG}$/m-molto$_{M\text{-}SG}$
	'I really eat a lot'			

There are other cases in which only tanto is acceptable: 1) when *tanto* is used at the plural form (or in the collective singular) to mean 'so numerous', referring to things, people or animals (24); 2) when *tanto* is used in correlation with a consecutive proposition introduced by *che* or *da* (25). It has to be noticed, however, that in these cases you can add *così* 'that'/'as'/'so' to *tanto* without any change in the meaning of the sentence.

(24)	Perché	(così)	tanta/*molta	gente	oggi	al	cinema?
	why	(so)	m-tanto$_{F}$/*m-molto$_{F}$	people	today	at	cinema
	'Why there are so many people at the cinema today?'						
(25)	Ho	(così)	tanto/*molto	lavoro	da impazzire.		
	have	(that)	m-tanto$_{M\text{-}SG}$/*m-molto$_{M\text{-}SG}$	work	to go crazy		
	'I have so much work that I get mad'						

There are also cases in which *così* can be used without *tanto* but the meaning of *tanto* is implied, like in (26) which is felicitously uttered together with a (measure) gesture. This seems to go in the direction of Bresnan's (1973: 278) *Much Deletion Rule* (27). The rule states that " much" can be deleted if it occurs in certain positions in a sentence. Specifically, according to Bresnan, "much" can be deleted if it occurs before an adjective, an adverb, or a past participle. For instance, in the sentence "He is much taller than I am", "much" can be deleted and the sentence would still be grammatically correct: "He is taller than I am."

(26)	Quanto	mi vuoi bene?	(tanto/*molto)	Così.
	how much	to me want love?	(m-tanto$_{M\text{-}SG}$/*m-molto$_{M\text{-}SG}$)	that
	'How much do you love me? That much.'			

(27) Much *Deletion*
much → ϕ [... _____A]$_{AP}$
where A(P) = Adjective or Adverb (Phrase)

Furthermore, *tanto*, but not *molto*, can be used in very high structural positions (above the subject or between the subject and the inflected verb (28). This is a very peculiar case and it has nothing to do with quantities, the meaning is rather "anyway".

(28)	Perché lo	giustifico?	Tanto/*molto non apprezza.
	why him-CLIT	justify?	m-tanto$_{M\text{-}SG}$/*m-molto$_{M\text{-}SG}$ not appreciate
	'Why am I justifying him? He doesn't appreciate it anyway.'		

Finally, there are cases in which "*molto* + adverb" is acceptable but "*tanto* + adverb" is not (29).

(29)	**A**: Come stai?	**B**: ?Tanto	bene /Molto	bene./Non tanto/molto	bene.		
	how be	?m-tanto$_{M\text{-}SG}$	well/m-molto$_{M\text{-}SG}$	well/ not	m-tanto/m-molto	well	
	'**A**: How are you? **B**: ?Very well/Not very well'						

Considering the analysis on *molto* and *tanto* sketched above, and considering Stateva and Stepanov (2017) proposal, together with data on Slovenian, we can wonder whether we can apply the pragmatic analysis proposed for *veliko* and *precej* to the Italian *m*-words, that is, whether one of the two *m*-words can be used to relate to a (moderately) bigger quantity compared to the other under appropriate contextual conditions. If this is the case, the question is: among *molto* and *tanto*, which is our *veliko*, that is, which is our extreme member on the scale? When intuitively asked to a speaker, you might find people answering that there is no difference at all, but other speakers seem to find a subtle difference. For example, running a google search you can come up with the idea that "while '*molto*' simply means 'in great quantity', '*tanto*' can be paraphrased with 'in *so* great quantity'" and that *tanto* "may have a tinge of "excess" (there was too much time) that does not have the sentence with *molto*" (translations are mine).

Similarly, Montalto *et al.*, propose that "*Tanto* is said to be equivalent to *molto*, but also to express the idea of "a large quantity" with more strength" (2010: 4); however, authors do not give precise references to whom they refer to with "is said". Despite this, authors propose a linear scale (Figure 1, from Montalto *et al.* 2010: 4) that is based on "the information from grammars and dictionaries". In the Italian Dictionaries that we checked (Palazzi and Folena 1992; Migliorini and Cappuccini 1973) we found similar information. In Palazzi and Folena (1992), *tanto* is said to be sometimes used with the meaning of *troppo* 'too much'.

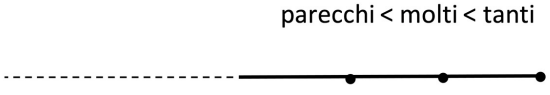

Figure 1. The linear order of the three Italian quantifiers according to Montalto *et al.* (2010: 4).

In our experiment, we will examine the comprehension of the numerical bounds of *molto* and *tanto*: we will use the paradigm that has been proven successful on Slovenian (Stateva and Stepanov 2017) to probe for potential differences (in the context of competition) between the two Italian *m*-words in their function as NP modifiers.

2. Method

2.1 Materials

The experiment is a replication on Italian language of Stateva and Stepanov (2017) and it was designed in the form of a sentence-picture verification tasks in which participants had to evaluate how well a given sentence describes a respective visual context. The visual context consisted in a block of thirty round dots (approx. 1 cm in diameter) that could be either blue or red. The dots were positioned in three rows with 10 dots in each row, on a white background (Figure 2). Participants were presented with twenty-nine contexts; the number of red dots randomly varied from one to twenty-nine, with an increment of one and this provided a variation ranging between roughly 3% and 97% of the total number of dots. Each block of dots was positioned in the center of the computer screen and was accompanied below by a set of four sentences.

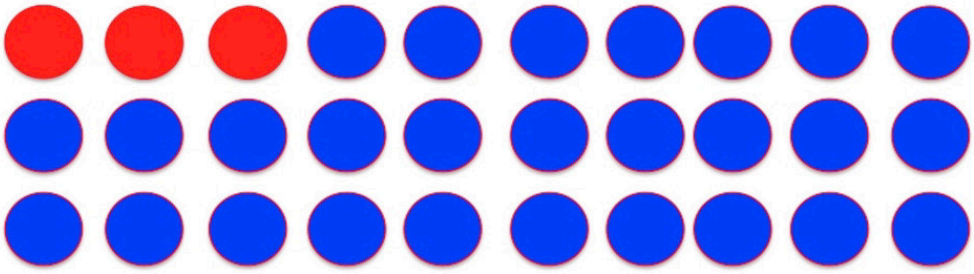

Figure 2. A representative example of an experimental stimulus.
The number of blue and red dots has been manipulated.

Participants could be assigned one out of three versions of the experiment. Version I and II contained one target sentence and 3 fillers. Version 3 contained 2 target sentences and 2 fillers.

In Version I, one of the four sentences was the target sentence with one *m*-word as in (30):

(30) Molti pallini sono rossi.
m-molto$_{M\text{-}PL}$ dots are red
'Many dots are red.'

In Version II, one of the four sentences was the target sentence with the other *m*-word as in (31):

(31) Tanti pallini sono rossi.
m-tanto$_{M\text{-}PL}$ dots are red
'Many dots are red.'

Finally, in Version III sentences with both *m*-words were presented.

Filler sentences were also presented to participants (three fillers in Versions I and II, two fillers in Version III). Filler sentences contained *metà* 'half' (i.e., *Metà pallini sono rossi*, "Half of the dots are red"), *alcuni* 'some' (i.e., *Alcuni pallini sono rossi*, "Some dots are red"), *almeno* 'at least n' (i.e., *Almeno N pallini sono rossi*, "At least N dots are red") and *al Massimo* 'at most n' (i.e., *Al Massimo N pallini sono rossi*, "At most N dots are red"; N was a natural number that varied from 10 to 27). Overall, participants evaluated 116 sentences indicating, by pressing a radio button, how appropriate each of them is in relation with the context (i.e., the number of dots); appropriateness has been evaluated using a Likert scale from 1 "very inappropriate" to 5 "very appropriate". The stimuli items were created by a native Italian speaker, who is also a linguist, and rechecked by two other Italian native speakers.

2.2 Participants

Eighty-eight Italian monolingual speakers living in Italy voluntarily participated in this experiment (M_{age} = 32.4, *SD* = 7.23). Participants were randomly divided into three groups: 1) thirty-one participants took part in the Version I of the experiment including only the target

molti-sentence (M_{age} = 28.87, *SD* = 6.97); 2) another group of twenty-seven participants took part in Version II of the experiment including only the target *tanti*-sentence (M_{age} = 35.78, *SD* = 5.83); 3) the last group of thirty participants took part in Version III, in which both target sentences were included (M_{age} = 31.97, *SD* = 7.45). All participants were recruited via social networking forums and they reported normal or corrected to normal vision and no history of color-blindness.

2.3 Procedure

We replicated the procedure in Stateva and Stepanov (2017). The experiment was administered online via Ibex farm software (by Alex Drummond, <https://ibexfarm.ung.si/>) and participants were recruited via social networks (i.e., Facebook); they volunteered and didn't receive any compensation for their participation. Within each Version of the experiment, participants were presented with items and sentences in a pseudo-randomized order and there were no time limits to evaluate sentences; participants never evaluated, one after the other, two contexts with consecutive number of dots (e.g., 3 and 4).

3. Results

For the purposes of the analysis, we concentrated on the subset of collected datapoints that pertain only to molto and tanto, similarly to Stateva and Stepanov (2017). In Table 2 and 3 we indicate means and standard deviations (SD) for molto and tanto in the two experiments (with and without alternatives).

Group	Mean	SD
1	3.181313	1.661649
3	3.295402	1.691746

Table 2. Mean and SD of "Molto", Experiment 1 (absence of alternative) and Experiment 3 (with alternative)

Group	Mean	SD
2	3.16092	1.668010
3	3.28046	1.675508

Table 3. Mean and SD of "Tanto", Experiment 1 (absence of alternative) and Experiment 3 (with alternative)

We analyzed data with LMMs (library lme4) (Bates *et al.* 2015) considering the acceptability ratings as our dependent variables and participant as random effect. The model selection was then performed by progressively adding the Number of Dots, the Condition (*molti* vs. *tanti*) and the presence/absence of Alternatives to the simplest model and comparing models via Analysis of Variance (anova() function in R). Among the tested LMMs, the model which included the predictor variable "N_Dots," exhibited the best fit based on lower AIC and BIC values. The chi-square test confirmed its significance ($\chi^2(28) = 4569.4849$, $p < .0001$)

These results suggest that *molto* and *tanto*, overall, did not receive statistically different evaluations in our experiment, independently of the presence or absence of the alternative. The

evidence supporting this observation is clearly depicted in Figure 3. On the y-axis, the graph represents the presence (Version III) or absence (Version I and II) of the alternative m-word. The mean scores attributed to *molto* (represented by the green bar) and *tanto* (represented by the purple bar) are plotted on the x-axis. The graph reveals that there is no significant difference in the mean scores, indicating similar results. However, the number of dots does have an impact on the scores, as both *molto* and *tanto* receive lower acceptability ratings when used to refer to small numbers.

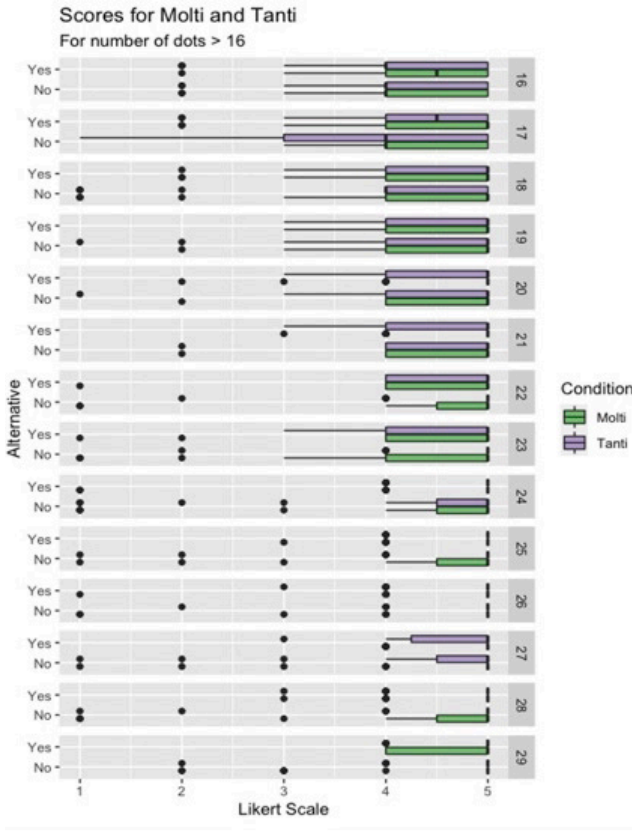

Figure 3. Scores for the condition *Molto* (green) and *Tanto* (purple), considering the presence (Yes, Version III of the Experiment) and the absence of the alternatives (No, Versions I and II of the Experiment). For space reasons, only the last 16 dots-contexts are included.

4. Discussion

Versions I and II of the experiment, in which the two *m*-words *molto* and *tanto* have been tested without having the alternative of the other m-word, demonstrated how their distribution overlaps and their meaning can be interpreted as equivalent in contexts in which they modify NPs. These data replicate the results of Stateva and Stepanov's (2017) evaluation of the pair of Slovenian m-words in contexts where they are not in direct competition for representing particular scale intervals. However, we did not replicate their results of Version III, that is

obtaining different scores when the two *m*-words *molto* and *tanto* have been tested together, serving as an available linguistic alternative for each other. Interestingly, the inclusion in the model of the alternative did not lead to significant differences in scores between *molto* and *tanto*. Unlike Slovenian speakers, where the presence of the alternative led to a different evaluation of the two *m*-words (with *precej* receiving a non-stereotypical interpretation), Italian participants did not exhibit changes in their acceptability ratings based on the presence of the alternative.

5. Conclusion

Previous work on Slovenian language demonstrated a zero tolerance for equal numerical bounds between the Slovenian *m*-words *precej* and *veliko*, leading to a pragmatic strengthening when appropriate contextual conditions are satisfied (i.e., when they are in competition; Stateva and Stepanov 2017). On one hand, this led to *precej* being associated with lower numerical bounds (which correspond to non-stereotypical instances of large amounts) when both alternatives are made relevant. On the other hand, due to an R/I-implicature, *veliko* is associated with higher numerical bounds and stereotypical interpretations. In this work, we hypothesized that Italian native speakers might replicate Slovenian native speakers' results on the interpretation of the *m*-words.

Our data on Italian native speakers, however, show that they did not evaluate differently *molto* and *tanto* when presented as alternatives, leading to different results compared to Slovenian speakers. These results of Italian are corroborated by Montalto *et al.* (2010) who report a metalinguistic judgment of the participants that *molto* and *tanto* are associated with different amounts while failing to assess which amount must be larger.

Overall, research seems to suggest that the Italian *m*-words *molto* and *tanto* have the same numerical bound and that's why they are perceived as interchangeable when acting as amount modifiers. Our tentative analysis is that they don't share the same semantic properties (only *molto* is analyzed as a degree quantifier) and that explains why they behave differently from the Slovenian *precej* and *veliko.* It's important to remember that these share the same semantics and are interchangeable uniquely when they are not presented in the same context as alternatives; asymmetrically compared to the Italian analysis, *veliko* and *precej* do not share the same numerical bound because of pragmatic enrichment when presented as alternatives (Stateva and Stepanov 2017).

Can we conclude that the meanings of *molto* and *tanto* overlap? Our data suggest that when they modify NPs this is probably the case. However, our initial analysis suggests that more work is needed to describe the semantic differences between the two quantity words. In order to do so there is probably a need to consider a diachronic perspective, a cross-linguistic perspective, and an acquisitional perspective. Let's consider again the main differences in the use of *molto* and *tanto*: i) the comparative of equality (*tanto quanto*/ **molto quanto*, see the example in (21)); ii) only *tanto* can be modified by *così* 'so' (Krapova and Cinque 2020: 165); and iii) when *tanto* is used in correlation with a consecutive proposition introduced by *che* or *da* (25). If we consider other romance languages that have more than one translation for *many*, like French or Spanish, we will realize that they have the same differences in these structures. For example, in French one equivalent of *many* is "beaucoup" (32a) and in Spanish it is "mucho/a" (32b).

(32) a. Beaucoup d' amis sont venus à la fête
many of friends are come to the party
'Many friends came to the party.'

b. Muchos amigos vinieron a la fiesta
many friends came to the party
'Many friends came to the party.'

Curiously, in the same circumstances in which the Italian *tanto* is used and *molto* is ungrammatical, both French and Spanish use different *many* translations. The comparative of equality in French is formed by using the word "tant" followed by the base form of the adjective or pronoun. For example, *Elle est TANT intelligente QUE lui* 'She is just as smart as he is'. In Spanish, the comparative of equality is formed using the phrase "tan...como"; for example, you can say *Mi amigo es TAN alto COMO fuerte* 'My friend is as tall as he is strong'. When considering the "così tanto" construction, like in *Ti amo così TANTO DA impazzire* 'I love you so much that I go crazy', in French we have *Je t'aime TANT QUE je deviens fou* and in Spanish we have *Te quiero TANTO QUE me vuelvo loca*. Finally, in the cases in which *tanto* is used in correlation with a consecutive proposition introduced by *che,* like in *Ho letto TANTO CHE mi scoppia la testa* 'I read so much that my head is bursting', again in French we have *J'ai lu TANT DE chose que ma tête est en train d'exploser*, and in Spanish we have "tanto", *He leído TANTO QUE me estalla la cabeza*. This might be traced back to Latin etymology: the Italian words "molto" and "tanto" are derived from the Latin words "multum" and "tantum" respectively. "Multum" is the neuter singular of the adjective "multus", which means "much" or "many". "Tantum" is the neuter singular of the adjective "tantus", meaning "so great", "so much" or " such an amount" (Dizionario Latino Olivetti).[2] For example, in the quote from the Roman poet Lucretius's *De Rerum Natura*, "Tantum religio potuit suadere malorum" is translated as "To such heights of evil has religion been able to drive men". Thus, the feeling that Italian speakers have of this "extra quantity" related to "tanto" can be recollected to the Latin usage; however, we have to deal with the fact that when tested on *molto* and *tanto* speakers' scores overlap when the two *m*-words modify NPs.[3]

Acquisitional data are also interesting in showing that *molto* and *tanto* might differ in some respect. As we have reported in the *Introduction*, in a corpus on child production by Cardinaletti and Giusti (2022) only *tanto* appears and it is indicated as the most frequent form of the colloquial register. When considering the CHILDES corpus (MacWhinney 2000; queried on November 20, 2022) *tanto* appears earlier (18 months) than *molto* (23 months) and has a much higher frequency; indeed, if we consider the age range 0-36 months, we can count only one instance of *molto/a/e/i* and 182 instances of *tanto/a/e/i*.

These results set the baseline for several future works in which the semantics of *molto* and *tanto* can be further analyzed and interesting acquisitional work can be done. There are many Italian-Slovenian bilinguals in the cross-border regions of Friuli Venezia Giulia and the Goriška area of Slovenia; there are bilingual schools with numerous second-language learners and heritage speakers. A question that can be asked is whether the different patterns of interpretation of these *m*-words in the two languages may lead to phenomena of negative transfer when these words are acquired.

Ethical approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

[2] Online at <https://www.dizionario-latino.com/> (07/2023).

[3] In line with the discussion, the paper by Anne Carlier (2011) is interesting due to considerations of the parallelism between the Latin *multum* and the French *beaucoup*.

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Quaderni di Linguistica e Studi Orientali- QULSO
Working papers in Linguistics and Oriental Studies

Firenze University Press
https://oajournals.fupress.net/index.php/bsfm-qulso

OPEN ACCESS

Citation: D. Panizza (2023) A puzzle about Italian, again (ancora). *Qulso* 9: pp. 135-146. doi: http://dx.doi.org/10.13128/QULSO-2421-7220-15161

Data Availability Statement: All relevant data are within the paper and its Supporting Information files.

Competing Interests: The Author(s) declare(s) no conflict of interest.

A Puzzle about Italian, again (*ancora*)

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Abstract:

The present works focuses on the theoretical analysis of the Italian temporal particle ancora, in its aspectual (ancora/still) and non-aspectual (ancora/again) temporal uses. The gist of this proposal is that the additive component of the meaning of ancora comes about as an obligatory inference derived via exhaustification, rather than being presupposed. The interpretation of ancora under negation is subject to another instance of Exh, which operates on the alternatives triggered by the Rise-Fall intonation in Italian, similar to other focus particles like solo (only) and anche (also).

Keywords: *Additives, Exhaustification, Focus Particles, Intonation, Rise-Fall Intonation*

1. Introduction

The Italian temporal particle *ancora* can have several meanings. First, it can be interpreted as an aspectual/temporal particle, like the English word *still* in (1), and as a Negative Polarity Item (NPI), like the word *yet* in (2), when it occurs under negation. Indeed, *ancora* can be translated with *still* even in negative sentences like (2), if the particle takes wide scope with respect to negation.

(1) Lea sta ancora leggendo il libro.
'Lea is still reading the book'

(2) Lea non sta ancora leggendo il libro.
'Lea isn't reading the book yet/Lea still isn't reading the book'

Still and *yet*, as mentioned in numerous works (Michaelis 1993; Krifka 2000; Ippolito 2004), can lead to various interpretations, including temporal, scalar, and concessive readings. We see that the meaning of *ancora* is as complex as that of its English equivalents. However, in this work, we will only focus on the temporal readings of *ancora*.

The following examples illustrate the second meaning of *ancora*, which is that of the English additive temporal particle *again*, in either positive or negative environments.

(3) Sara ha rotto ancora la sua bicicletta.
'Sara broke her bicycle again'
(4) Sara non ha rotto ancora la sua bicicletta.
'Sara didn't break her bicycle again'

One clear difference between *ancora*/*still* and *ancora*/*again* is that the former modifies states, i.e. it combines with an imperfective predicate such as *is reading* in (1) and (2), whereas the latter modifies eventualities such as an event of breaking a bike in (3) and (4). This can be observed by comparing the meaning of sentences (1) and (2) to that of (3) and (4). Intuitively, sentence (1) means that there is an extended interval of time (i.e. a state), which started at some point in the past, where the predicate "Lea is reading the book" holds, while sentence (2) means that there is an interval of time in which the predicate is false. Instead, sentences (3) and (4) refer to a punctual event e taking place at a relevant time t in the past, according to (3), or not happening at t, according to (4). Critically, though, for both (3) and (4) the event e had already happened at least once in the past (additive meaning). The main idea of the present work is that the two different uses of *ancora* share a common semantic core. The gist of our proposal is that the plain assertive component of *ancora*-sentences corresponds to the interpretation of the proposition without the temporal particle. The additional contribution of *ancora* to the sentence meaning is the result of an exhaustivity inference, an obligatory implicature (see Panizza and Sudo 2021, for a similar treatment of additives like *anche*/*also*). Not only does this provide a unitary semantic core for the different meanings of *ancora*/*still*/*again*, but it also accounts for a) their purported presuppositions, derived, here, as obligatory inferences, b) the different semantic effects in interaction with the type of eventualities they operate on, and c) the pattern of interpretations resulting from embedding in negative environments. With respect to the last point, we maintain that a key ingredient to derive the readings of *ancora* under negation is the contribution of a set of pragmatic inferences introduced by Rise-Fall intonation in Italian, which seems to be required for sentences such as (4) to be felicitously uttered.

The next three sections are devoted to the interpretation of *ancora*/*still* and *ancora*/*again* in positive sentences. In the remaining of the paper (sections 4 to 7) we analyse the interpretation of these construals under negation.

2. "Ancora" as "still" and its purported presuppositional behaviour

Following the works by Krifka (2000) and Ippolito (2004) among others, we maintain that *ancora*/*still* refers to a salient time that is specified by the tense of the main verb. For instance, in the example in (1) the salient time corresponds to the utterance tense time, and the plain assertive meaning of the sentence is that of the proposition without *ancora*, i.e. "Lea is reading the book". The contribution of *ancora*/*still* to the meaning of (1) is such that there is a prolonged interval of time lasting at least until now, that is a state, in which the predicate is true. Sentence (1) means that Lea started reading a book at some point in the past, that she is still reading it at the utterance tense time (i.e. now) and that for every sub-interval of time included in the state the predicate holds. According to standard accounts of *still* (cf. Krifka 2000, Ippolito 2004, among others), this interpretation is obtained with two components: an assertoric component that holds that the proposition is true at the tense time plus a presup-

position stating that the predicated event started in the past. The reason why *still* is argued to introduce this presupposition can be illustrated in the following examples:

(5) Lea sta ancora leggendo un libro?
'Is Lea still reading a book?'
(6) Dubito che Lea stia ancora leggendo libro.
'I doubt that Lea is still reading a book'

In both sentences (5) and (6), despite *ancora*/*still* occurs in a question and under the negative verb *doubt*, respectively, the proposition that she started reading a book in the past remains true.

There are a few problems with a presuppositional account for temporal particles such as *ancora*/*still*. Some of them concern the behaviour under negation, which will be discussed in the next section. Here, we highlight two of such issues. First, the presupposition of *still*/*ancora* needs to be stipulated, with its assertoric component being inert. That is, *ancora*/*still* does not provide any semantic contribution to the assertion other than what the sentence already predicates, if not with its presuppositions. The second problem is that the alleged presupposition introduced by *ancora*/*still* seems not to behave like standard presuppositions. Consider the next sentences.

(7) Non so se Gianni guarderà la televisione stasera, ma se la starà ancora guardando quando torno lo sgriderò.
'I don't know if Gianni will watch TV tonight, but if he will still be watching it when I'm back, I'll tell him off.'
(8) ?Non so se Gianni abbia insultato Maria ieri, ma se è dispiaciuto/sorpreso di averlo fatto ne sarò lieta.
'I don't know if Gianni insulted Maria yesterday, but if he is sorry/surprised to have done it I'll be happy.'

Sentence (7) seems to suggest that the purported presupposition "Gianni started watching TV in the past" does not project out of the conditional, or that its accommodation is very easy to obtain. The oddity of sentence (8), instead, is due to the fact that presuppositional triggers like *to be sorry* and *to be surprised* behave differently: they project their presupposition out of the conditional. For this reason (8) can only be felicitous if the relevant presupposition is accommodated in the antecedent, something that requires an additional effort at the level of interpretation, while sentence (7) sounds much more natural and less problematic.

Here, we propose that a) *ancora*/*still* asserts that the proposition in which it occurs is true and b) it asserts the purported presuppositional component, namely the additive one. Similarly to what Panizza and Sudo (2021) claimed for additives like *anche*/*also* (see also Szabolcsi 2017; Ahn 2015) we maintain that the temporal additive component of *ancora*/*still* comes about as an obligatory inference derived via exhaustification. Not only does this derive the fact that a starting event referring to the state in which the predicate holds took place at a previous time in the past, but also that the predicate is true in any sub-interval of time included in the considered state.

3. "Ancora" as "still": an account based on exhaustification

The starting point of the present proposal is the idea that time intervals can be considered as alternatives to the asserted proposition, just like focus alternatives for exclusives or additives such as *only* and *also* (cf. Krifka 1998a, 2000). In the framework of alternative semantics, one of the

mechanisms that has been exploited to derive the meaning of focus particles is that of exhaustification. For instance, Fox (2007) maintains that the meaning of *only* asserts that the prejacent, i.e. the proposition modified by *only*, is true and that any alternative that is not entailed by the prejacent and that is Innocently Excludable (I-E) must be false, as formalised in (9a). Innocent Exclusion in (9b) is a mechanism ensuring that the result of exhaustification does not lead to a contradiction. I-E alternatives are constituted by the maximal subset of alternatives that can be negated consistently with the assertion, as illustrated by (9b).

(9) a. $\text{Only}_{\text{ALT}}(p)=\lambda w: p(w)=1.\ \forall q \in \text{I-E}(p, \text{ALT})[p \not\subseteq q \rightarrow q(w)=0]$
b. $\text{I-E}(p,\text{ALT}) = \cap\{A' \subseteq \text{ALT}: A' \text{ is a maximal set in ALT, s.t., } A' \neg \cup \{p\} \text{ is consistent}\}$; For any A, $A\neg = \{\neg a: a \in A\}$

Let us see how the semantics in (9) works for sentence (10). Assuming the set of salient alternatives activated by focus in (10c), sentence (10a) presupposes the truth of the prejacent in (10b) and asserts that any non-weaker alternative (typed in boldface in (10b)) is false, resulting in the interpretation in (10d).

(10) a. Sara only bought a bicycle.
b. prejacent = Sara bought a bicycle
c. ALT-set of (10a) = {Sara bought a bicycle; **Sara bought a motorbike**; **Sara bought a car**}
d. Sara bought a bicycle and she didn't buy a motorbike or a car.

Panizza and Sudo (2021; cf. also Szabolcsi 2017) employ a non-presuppositional version of (9a), the so-called exhaustivity operator Exh in (11), to derive the interpretation of additives like Italian *anche* and English *also*.

(11) $\text{Exh}_{\text{ALT}}(p) = \lambda w[p(w)=1 \wedge \forall q \in \text{I-E}(p, \text{ALT})[p \not\subseteq q \rightarrow q(w)=0]$

The starting point of the present account is the idea that the difference between additives and exclusives is that the former particles require exhaustified alternatives, as shown in (12):

(12) a. $\text{Also}(p) = \text{Exh}_{\text{Exh(ALT)}}(p)$
b. $\text{Exh}_{\text{(ALT)}} = \{\mathbf{Exh_{ALT}(p)}; \text{Exh}_{\text{ALT}}(q); \text{Exh}_{\text{ALT}}(p)\}$

Notice that, with *anche*/*also* the only exhaustified alternative that is non-weaker than the prejacent p and I-E is the one typed in boldface in (12b), i.e. the exhaustification of the prejacent itself. The other two alternatives contradict the prejacent (i.e. Sara only bought a car contradicts that she bought a bicycle). Assuming a set of focus alternatives as in (10c), sentence (13a) has the meaning in (13c) derived as formalised in (13b).

(13) a. Sara also bought a bicycle.
b. $\text{Also}(\text{Sara bought a bicycle}) = \text{Sara bought a bicycle} \wedge \neg\text{Exh}_{\text{ALT}}(\text{Sara bought a bicycle})$.
c. Sara bought a bicycle and she did not only bought a bicycle
= Sara bought a bicycle and she bought a motorbike or a car.

We are finally ready to advance a semantics for the aspectual *ancora*/*still*, sketched out in (14).

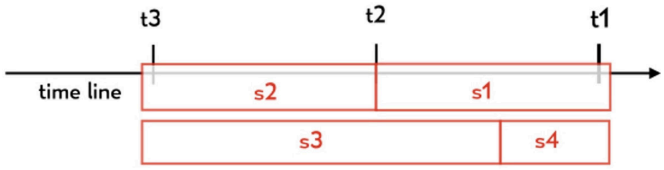
(14) a. *ancora/still* asserts that the host proposition is true
b. it introduces time and state alternatives (e.g. t_1, t_2, t_3, $s_1=(t_1+t_2)$, $s_2=(t_2+t_3)$, etc.)
c. in a state s the sub-intervals of time are all true or all false (homogeneity of states)
d. *ancora/still* requires obligatory exhaustification of the set of alternatives (via Exh)
e. Ancora(p) = $Exh_{Exh(ALT)}(p)$

Let us see how the semantics in (14e) works for sentence (1), reported in (15a).

(15) a. Lea sta ancora leggendo il libro
'Lea is still reading the book'
b. assertion: Lea is reading at t_1
c. ALTs = {Lea is reading at t_1; Lea is reading at t_2; Lea is reading at t_3; Lea is reading at s_1; Lea is reading at s_2; Lea is reading at s_3; Lea is reading at s_4}
d. Exh(ALTs) = {**Lea is only reading at t_1**; Lea is only reading at t_2 … **Lea is only reading at s_1**;
Lea is only reading at s_2; etc.}
e. Ancora(Lea is reading the book) = $Exh_{Exh(ALT)}$(Lea is reading the book)
= Lea is reading the book at t_1 and it is false that she only reads it at t_1 and she is reading the book during s_1 and it is false that she only reads it during s_1
f. Lea is reading the book for any time interval between the utterance tense time t_1 and the moment at which she started reading the book t_3

Sentence (15a) says that there is an interval of time that includes the utterance tense time in which Lea is reading the book. The effect of applying exhaustification to exhaustified alternatives, as in (15e), is such that any exhaustified interval of time that contains t_1 is logically stronger than the assertion hence must be false. From its falsity (i.e. "not only s_1") it follows that a complementary interval of time that does not contain t_1, such as s_2, must be true as well. The same holds for any interval of time that contains t_1 (e.g. s4, as illustrated in (16)).

(16) Illustration of the time and state alternatives considered by *ancora/still*



From this computation the universal force of *ancora/still* is obtained. In section 5 we will discuss how the semantics of *ancora/still* proposed in (14) behaves under negation.

4. "Ancora" as "again"

When the temporal particle *ancora* is interpreted as *again* it is standardly assumed to consider punctual events rather than states or time intervals, to assert the host proposition and presuppose that the predicated event has happened already once in the past (Krifka 2000;

Ippolito 2004). In our account this is achieved with the same semantics based on exhaustification that we proposed for *ancora*/*still* in (14), with the exception that *ancora*/*again* only considers punctual events and not time intervals. Thus, in a parallel way as (15) the meaning of sentences (3) is derived as follows.

(17) a. Sara ha rotto ancora la sua bicicletta
'Sara broke her bicycle again'
b. asserted component: Sara broke her bicycle at t_1
c. ALTs = {Sara broke her bicycle at t_1; Sara broke her bicycle at t_2; Sara broke her bicycle at t_3}
d. Exh(ALTs) = {**Sara only broke her bicycle at t_1**; Sara only broke her bicycle at t_2; Sara only broke her bicycle at t_3}
e. Ancora(Sara broke her bicycle) = $Exh_{Exh(ALT)}$(Sara broke her bicycle)
= Sara broke her bicycle at t_1 and it is false that she only Sara broke her bicycle t_1
f. Sara broke her bicycle at t_1 and she has broken it at some other time in the past

As with *ancora*/*still* the relevant time alternatives are exhaustified, as in (17d), and the only alternative that is non-weaker than the asserted component in (17b) and I-E is the one in boldface in (17d), namely that Sara broke her bicycle at t_1 but not at any other time in the past. From the negation of this alternative in conjunction with the assertion it follows that she must have broken it at least once, at another time in the past.

5. "Ancora" as "still" under negation

When *ancora* is interpreted as an aspectual temporal modifier like *still*, that is when it modifies the interpretation of a predicate of time intervals – such as verbs with imperfective aspect – rather than events, it gives rise to a puzzle. Consider the next sentences.

(18) a. Lea non sta ancora leggendo il libro
b. Lea isn't reading the book yet
c. Lea still isn't reading the book
(19) a. # Lea is not still reading the book
b. Lea is not yet reading the book
(20) a. Dubito che Lea stia ancora leggendo il libro
b. I doubt that Lea is still reading the book

In sentence (18a) *ancora* occurs under negation (*non*, which means *not*), and it may be translated in English with sentences (18b) or (18c), whose meaning is equivalent. In (18c) *ancora* is translated as still *still*, which takes wide scope with respect to negation. In (18b), instead, *ancora* is translated as *yet*, which must is interpreted within the scope of negation. This observation is compatible with the fact that in English the aspectual particle *still* cannot generally occur under the scope of phrasal negation (see (19a) vs. (19b)). However, as shown by sentences (20a) and (20b), in English *still* can be interpreted in a negative environment, such as under the scope of the negative predicate *doubt*. In Italian, too, the particle *ancora* can be interpreted under negative predicates, but in this case it yields a different meaning than that of (18a), namely the one in (20a). While sentence (18a) says that Lea hasn't started reading the book yet, but she may do so in the future, sentence (20a) says that Lea was indeed reading the book in the past but the speaker doesn't think she is reading it at the time of the utterance

anymore. One way to account for this behaviour is to claim that when *ancora* is interpreted as *still*, it behaves like its English counterpart and it must outscope negation in order to be felicitously interpreted, as in (18a). This, however, does not explain why particles like *ancora* and *still* can still be licensed in negative environments such as (20a-b).

Our account offers a possible solution to this puzzle, which builds on the hypothesis that focus particles under negation are subject to another instance of exhaustification. The argument goes as follows. First of all, consider that *ancora*/*still*-sentences generate a universal interpretation over the relevant time intervals (15f), and by assumption this meaning is part of the assertion. If they occur in negative contexts, then, the composition of the meaning in (21a) with a negative operator returns a weak negative existential interpretation, like the one in (21b).

(21) a. Ancora(p) = ∀s such that $t_1 > s > t_3$ p is true at s
where s is an interval of time and ">" means "follows in time"
b. ¬Ancora(p) = ∃s such that $t_1 > s > t_3$ p is not true at s

Notice that according to (21b) the interval of time in which the predicate expressed by the sentence is false does not have to include the utterance tense time t_1, but it may be any interval of time included within t_1 and t_3.

In general, an assertion can be considered as an answer to a question under discussion (QUD, see von Stechow 1991; Krifka 1998a, a.o.). Sentence (18a) is a congruent answer to the question "What is Lea doing now?". The idea, here, is that the meaning in (21b) is too weak in that it does not address this QUD. That is, it does not contribute enough information to the communication exchange because it does not inform on which interval of time the predicate is false, thus it requires further exhaustification, as in (22a). By assumption, *ancora* requires exhaustified alternatives, so the relevant alternatives to the meaning in (21b) could be those in (22b).

(22) a. $\text{not}(\text{Ancora}(p)) = \text{Exh}_{\text{ALT}(22a)}(\neg\text{Ancora}(p)) = \text{Exh}_{\text{ALT}}\ \neg(p \text{ at } s_1 \wedge p \text{ at } s_2 \wedge p \text{ at } s_3) = \ \perp$
b. $\text{ALT}(22a) = \text{Exh}_{\text{ALT}}s_1$; $\text{Exh}_{\text{ALT}}s_2$; $\text{Exh}_{\text{ALT}}s_3$

Notice that any alternative in (22b) is logically stronger than the meaning of ¬Ancora(p) in (21b), therefore every alternative must be false, resulting in a logical contradiction (cf. L-analicity, Chierchia 2013, among others). To avoid this clash at the level of interpretation, Italian and English use two strategies. In Italian, an occurrence of *ancora* under negation triggers a wide scope interpretation of the particle. In English, *still* cannot be licensed under negation, while *yet*, which has an NPI semantics, is to be used in such a context. Why, then, *ancora*/*still* can occur under negative predicate, and how is the meaning of sentence (20) derived? We will address this question in the next section.

6. Exhaustification and the implicatures of the Rise-Fall intonation

Several works have investigated the Italian prosody of Contrastive Topic (cf. Frascarelli and Hinterhölzl 2007; Bocci 2013) but the Rise-Fall (henceforth RF) intonation in negative sentences has drawn little attention. Italian sentences involving phrasal negation can be uttered with two prosodic patterns. One includes a prominent stress (let us call it Focus Stress, FS) on the object, the other one a RF intonation followed by de-accented constituents (let us

call it DA).[1] Consider the next pair of sentences, which share the same lexical material but are pronounced with two different intonation profiles.

(23) a. Sara non ha comprato [una bicicletta]$_{FS}$.
'Sara didn't buy a bicycle'
b. Sara non [ha comprato]$_{RF}$ [una bicicletta]$_{DA}$.

Sentence (23a) is a felicitous answer to a Wh-question like "What did Sara not buy?". Sentence (23b), instead, answers a polarity yes/no question like "Did Sara buy a bicycle or not?". The RF intonation has been associated with Topic (Büring 1997) and Contrastive Topic (Büring 2003; Krifka 1998b, 2000), but it is not clear whether the meaning or the inferences it conveys in a negative sentence is really that of Topicalization (see Wagner 2012). Moreover, it is not clear whether the RF prosodic contour of Italian negative sentences is comparable to that of English and other languages. First of all, it seems that the RF + negation pattern in Italian triggers obligatory wide scope of negation. One issue is whether this is the source of the pattern of inferences we will be discussing or a result of them, as suggested by Büring (1997). Krifka (2000) suggests that the raising pitch on English negated auxiliary (i.e. *didn't*) triggers polarity alternatives such as {p; ¬p}, but in Italian the RF falls on the main verb, the auxiliary or, if present in the sentence, the past participle as in (23b). Let us turn back to the examples in (23). Sentence (23a) conveys the meaning that a bicycle was the only thing that Sara did not buy, among the objects relevant in the context. This interpretation can be derived by considering alternative propositions of the form {x | Sara did not buy x}, where Exh can apply exactly as in the positive examples in (10), with the effect of asserting that every alternative (e.g. she bought a motorbike, a car, etc.) winds up being true. The final result is an interpretation where the focused constituent scopes out of a Wh-version of sentence (23a): "A bicycle is what Sara did not buy".

The RF in (23b), instead, seems to trigger a complete different set of alternatives. Indeed, this sentence could be uttered in order to communicate that the proposition that "Sara bought a bicycle" was salient in the context, but it is false according to the speaker (cf. Wagner 2011). Alternatively, sentence (23b) with exactly the same intonation could mean that "Sara bought something else", or that Sara, rather than purchasing a bicycle, did something else to it, e.g., she rented it. Intuitively, such meanings can be obtained by considering (23b) as the answer to the questions: "Did Sara buy a bicycle?", "Did Sara buy anything?" and "Did Sara do anything with a bicycle?". The three set of alternatives that can be used with standard Exh to derive these three meanings are written in (24a-c).

(24) RF-alternatives for sentence (23b):
a. ALTs = {Sara bought a bicycle; Sara didn't buy a bicycle}
b. ALTs = {Sara bought something; **Sara didn't buy anything**}
c. ALTs = {Sara did something with a bicycle; **Sara didn't do anything with a bicycle**}

[1] We refer to the RF intonation contour, here, as the Rise-Fall or Rise-Fall-Rise contour discussed in many works analysing German and English Topic/Focus marking and scope inversion patterns (see Büring 1997; Krifka 1998b, among many others). It should be noted, however, that the Italian RF intonation pattern could be analysed in different terms, that is, as an instance of Verum Focus or as a focal Pitch Accent realised on the auxiliary or the past participle, rather than on the object (the sentence-final constituent in our examples and thus the standard position for main prominence in Italian). If this is the case, the reason why focus has moved to the auxiliary and its effect on sentence interpretation may still be explained along the hypothesis we propose here, but a serious discussion of this topic goes beyond the scopes of the present work. We thank an anonymous reviewer for pointing out these issues to us.

Büring proposed something very similar for Contrastive Topic in German (1997) but a discussion of why his proposal would not work for the cases under consideration here goes beyond the limits of the present work.

We propose, building on Krifka (2000) and Büring (1997), that RF-alternatives are generated in the following way.

(25) RF-ALT must be:
a. polarity alternatives, i.e. positive or negative (e.g. {p; ¬p})
b. derived by the substitution of some element of the sentence, e.g. the direct object NP or the main verb in (23b), with an existential quantifier
c. stronger or weaker than the assertion (i.e. $\forall p \in ALT\ [\forall q \in ALT\ p \neq q \rightarrow (p \subset q \vee q \subset p)]$)

Then, an instance of exhaustification is computed taking wide scope over negation with these alternatives, as in (26). If (24a) are the alternatives considered by Exh, the exhaustification is vacuous because every alternative is either equivalent or contradicts the assertion. If, instead, the alternatives in (24b) are considered, a scalar-like implicature is computed by negating the logically stronger alternative typed in boldface, and the resulting interpretation is that in (26b).

(26) a. not(Ancora(Sara bought a bicycle)= Exh_{ALT}¬(Ancora(Sara bought a bicycle))
b. $Exh_{ALT(24a)}$¬(Sara bought a bicycle) = Sara didn't buy a bicycle
c. $Exh_{ALT(24b)}$¬(Sara bought a bicycle) = Sara didn't buy a bicycle but she bought something else
d. $Exh_{ALT(24c)}$¬(Sara bought a bicycle) = Sara didn't buy a bicycle but she did something else with it

The fact that the same sentence (23b) may trigger different alternatives, exemplified by different QUDs, supports the idea that they are pragmatically made salient by conversational demands. Moreover, notice that the requirement that alternatives must be entailment-based in (25b) is necessary to filter out the positive alternatives in (24b) and (24c), which are non-weaker than the assertion and whose negation would contradict the meanings in (26c) and (26d). The same constraint has been assumed by Panizza and Chierchia (2019) to account for rank-order readings of exclusives like *solo* and *only*, and it is a hallmark of lexical scales that trigger scalar implicatures.

Finally, as we will se in the next section, if other elements – i.e. focus particles or additive particles – are present in the DA constituent, the exhaustification is obligatory. If additives occur in the DA constituents, the RF-alternatives are exhaustified, just like any other alternative such particles take.

7. "Ancora" under negation with Rise-Fall alternatives

Let us focus on the two relevant cases, namely sentences in which *ancora* occurs in negative contexts and it is interpreted as *still* in (27) and as *again* in (28). Because of the reasons outlined in the previous section, in order to force the interpretation of *ancora*/*still* under negation and prevent it from scoping out in sentence (27) the particle is embedder under *dubito* (*to doubt*), which is usually associated with RF intonation. This strategy is not required for *ancora*/*still*, although embedding it under *doubt* would result in the same effect as that of phrasal negation plus RF intonation.

(27) [Dubito]$_{RF}$ che [Lea stia ancora leggendo un libro]$_{DA}$.
'I doubt that Lea is still reading a book'
(28) Sara non [ha rotto]$_{RF}$ [ancora la bicicletta]$_{DA}$.
'Sara didn't break her bicycle again'

Given that the additive component of sentences (27) and (28) is part of the asserted meaning as a conjunction, their negation results in a weak negative proposition. Moreover, recall that *ancora*/*still* carries a universal interpretation over time intervals while *ancora*/*again* introduces an additive existential inference that the predicate held at least at another time in the past. Their negation, thus, results in the two meanings in (29) and (30).

(29) Believe ($\neg$(p at $s_1 \wedge$ p at $s_2 \wedge$ p at s_3)) = Believe ($\neg$p at $s_1 \vee \neg$p at $s_2 \vee \neg$p at s_3)
= I believe Lea is not reading at s_1 or she is not reading at s_2 or she is not reading at s_3
(30) $\neg$(p at $t_1 \wedge$ (p at $t_2 \vee$ p at t_3)) = $\neg$p at $t_1 \vee \neg$(p at $t_2 \vee$ p at t_3)
= Sara didn't break her bike at t_1 or she never broke it any time earlier than t_1

The RF intonation triggers another round of exhaustification with scope on the whole propositions in (29) and (30). Let us discuss in detail how this exhaustification works for sentence (30).

(31) a. prejacent of *ancora* = Sara broke her bicycle at t_1
b. Exh(ALTs 1) = {Exh$_{ALT}$(Sara broke her bicycle at some t); Exh$_{ALT}\neg$(Sara broke her bicycle at some t)} = {Sara broke her bicycle at some t; $\neg$(Sara broke her bicycle at some t)}
c. Exh(ALTs 2) = {Exh$_{ALT}$(Sara broke her bicycle at t_1); Exh$_{ALT}\neg$(Sara broke her bicycle at t_1)}
= Sara broke her bicycle at t_1 and not at any other t; Sara did not break her bicycle at t1 and she broke it at any other t}

The RF-alternatives in (31b) and (31c) address the polarity question "did Sara break her bicycle at t_1? Did she break it at some time?". Notice that all these alternatives are exhaustified, a requirement of additive temporal particles. If this were not the case, the meaning of (28) would be equivalent to that of the sentence "Sara did not only break her bicycle at t_1". Furthermore, notice that the exhaustification is vacuous for the two alternatives in (31b), which carry an existential positive and the universal negative meaning, because there are no Innocently Excludable sub-alternatives (i.e. alternatives of alternatives) that can consistently strengthen their meaning. That is, it cannot be the case that Sara broke her bicycle at some time t and for every t she only broke her bicycle at that time.

Instead, the exhautification of the alternatives in (31c) produces a noticeable effect. In the end, the two set of alternatives for sentences (29) and (30) are those in (32a) and (33a), respectively, and the final interpretation is obtained as illustrated by (32b) and (33b).

(32) a. ALTs for 29 = {~~I believe Lea is reading at some s~~; **I believe Lea is not reading at any s**; **I believe Lea is reading at t_1 and not at any other t**; ~~I believe Lea is not reading at t_+ but she does at any s that does not include t_1~~}
b. Exh$_{ALTs(32a)}$(29) = Exh$_{ALTs(32a)}$(Believe ($\neg$p at $s_1 \vee \neg$p at $s_2 \vee \neg$p at s_3))
= Believe($\neg$p at $t_1 \wedge$ p at some s that does not include t_1)

(33) a. ALTs for 30 = {~~Sara broke her bicycle at some t~~; **Sara didn't break her bicycle at any t**; **Sara broke her bicycle at t_1 and not at any other t**; ~~Sara did not break her bicycle at t_+ but she did at any other t~~}
b. $Exh_{ALTs(33a)}(30) = Exh_{ALTs(33a)}(\neg p \text{ at } t_1 \vee \neg(p \text{ at } t_2 \vee p \text{ at } t_3))$
$= \neg p \text{ at } t_1 \wedge p \text{ at some t earlier than } t_1$

The alternatives that are neither stronger nor weaker than the assertion are filtered out by the constraint in (25c). The alternatives typed in boldface in (32a) and (33a), instead, are logically stronger than the meanings in (29) and (30), respectively, and thus they must be false. The negation of the universal negative, the first alternative in boldface in (31a) and (32a), tells us that there must be a time at which I believe Lea is reading and Sara broke her bike. At this point, however, we do not know whether this time is the one predicated by the assertion, i.e. the tense time t_1, or another time in the past. This information comes from the negation of the second alternative in boldface in (31a) and (32a), which corresponds to the exhaustification of the proposition hosting the particle *ancora* (i.e. "p is true only at t_1"). The intersection of the two implicatures plus the meaning of the assertion returns the desired meaning, as shown in (31b) and (32b). Notice that this happens exactly in the same way for both uses of *ancora*, regardless of the difference in their semantics.

8. Conclusions

In the present work we advanced an account of the temporal particle *ancora* that derives the interpretation it generates in various contexts by means of exhaustification. Not only does this offer a unified semantics for the Italian word *ancora*, but it also have consequences for the interpretation of its English counterparts *still* and *again*. The core idea is that Italian particles such as *anche*, *ancora*, as well as their English counterparts (*also*, *too*, *still*, *again*) introduce an additive inference that some of alternatives they consider must be true. Such alternatives, for temporal particles, can be events or interval of times. The additive inference is derived as an instance of Exh operating on exhaustified alternatives. The survival of the additive inference under negation is obtained by the presence of an other instance of Exh triggered by the negation + RF intonation in Italian. The evidence supporting this claim is that the RF intonation is mandatory for sentences including an occurrence of *ancora* if they are interpreted under negation. This observation is mirrored by the behaviour of other Italian focus particles like *solo* (*only*) and *anche* (*also*), for which the use of a RF intonation is obligatory in contexts where they are interpreted under a negative operator.

The overall assumption behind the present proposal is that negative sentences introduce a systematic uncertainty as to what the speaker is claiming to be false against a shared communication background. In the relevant literature, this has been analysed in terms of conversational interplay between QUDs and assertions as felicitous answers to such questions. When focus particles are present, such an uncertainty is reflected into where the negative operator takes scope with respect to other particles that are present in the sentence. In the present work we remain agnostic as to whether the RF intonation triggers a Contrastive Topic set of pragmatic inferences, or the algorithm we described is specific to the interaction of such a prosodic contour with negation. Likewise, more work is needed to figure out to what extent this pattern can be generalised to other languages. In English, for instance, the RF intonation falls on the negated auxiliary rather than on the past participle as in Italian. This may well be the source of the different licensing conditions of additives and temporal additives in the two languages.

Here, we only hinted at some reasons underlying the reluctance of *ancora*/*still* to occur under the scope of an overt negative marker, which comes from exhaustification triggered by negation resulting in L-analycity, and we conclude by suggesting that this is a promising route to pursue.

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Quaderni di Linguistica e Studi Orientali- QULSO
Working papers in Linguistics and Oriental Studies

Firenze University Press
https://oajournals.fupress.net/index.php/bsfm-qulso

Citation: A. Roussou, C. Vlachos (2023) Wh-complement Clauses and (non-)local Selection. *Qulso* 9: pp. 147-159. doi: http://dx.doi.org/10.13128/QULSO-2421-7220-15151

Data Availability Statement: All relevant data are within the paper and its Supporting Information files.

Competing Interests: The Author(s) declare(s) no conflict of interest.

Wh-Complement Clauses and (non-)Local Selection*

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Abstract:

This paper revisits c- and s-selection in the context of wh-clausal complements. The standard treatment of predicate-complement selection can be traced back to generative approaches of 70's and says that the selection of a complement by a predicate is evaluated both in syntax and semantics. As regards syntax, the grammatical category of the complement must belong to the subcategorization frame of the predicate, and vis-à-vis semantics, the semantic type of the complement must fall in the set of types selected by the predicate. The present paper examines several licit instances of wh-clausal selection that should have been ungrammatical under the standard treatment, but they are not. The analysis offered here says that c-selection reduces to argument selection and is computed derivationally (at the point of External Merge), while s-selection reduces to an interpretation function that spans a larger grammatical domain and is evaluated representationally (at the syntax-semantics interface).

Keywords: *Antirogative, Responsive, Rogative, Selection, Wh-clause*

1. Introduction: identifying the Problem

Complement clause selection is sensitive to the properties of the selecting predicate and this is usually reflected on the element that introduces the complement clause. For example, a verb like *think* in (1a) takes an embedded declarative, introduced by *that*, while a verb like *wonder* in (1b) takes an embedded interrogative introduced by *if* (or *whether*).

(1) a. John thinks *that*/**if* Peter bought a new car.
b. John wonders *if*/**that* Peter bought a new car.

* For comments and suggestions, we would like to thank the audience at the 48th Incontro di Grammatica Generativa, the Cambridge Linguistics Forum (University of Cambridge, UK), and the Research Seminars of the Department of Linguistics of Queen Mary University of London and of the Université Côte d'Asur (CNRS). Also, we are grateful to two anonymous reviewers. For Christos Vlachos, this paper has been financed by the funding programme "MEDICUS", of the University of Patras. All remaining errors are ours.

In standard syntactic terms, the assumption is that the embedded C can be +/-Q (for Question), which is overtly manifested as *that* (-Q) or *if* (+Q).

Accordingly, *think* excludes a wh-complement, i.e., an embedded wh-question, while *wonder* allows it, as shown in (2a) and (2b) respectively:

(2) a. *John thinks *what* Peter bought
b. John wonders *what* Peter bought

Syntactically, a C_{+Q} acts as a Probe for the wh-phrase, which qualifies as a Goal (Chomsky 1995, *et seq.*). Agree takes place between the wh-phrase and the C_{+Q}. On the assumption that the Probe also has an EPP feature, Internal Merge (IM) takes place between a *what*-copy and C, as in (3) (for (2b)):

(3) [John wonders [what $C_{+Q, EPP}$ [Peter bought ~~what~~]]]

IM of *what* cannot take place in (2a) since C_{-Q} (or a C without a Q feature) does not qualify as a Probe. Hence there is no Agree and consequently, IM is illicit.

Both *think* and *wonder* select for a CP complement, but differ with respect to the semantic type of this CP, distinguishing between embedded declaratives (propositions) and embedded interrogatives, as initially argued by Grimshaw (1979). The distinction between c- (category) and s- (semantic) selection has been well-discussed in the literature. Pesetsky (1982) further argues that c-selection can reduce to s-selection, and that any independent differences among predicates regarding c-selection can be attributed to Case. For example, while both *ask* and *wonder* s-select for an interrogative, *ask* also allows for a DP complement (*I asked the time = I asked what the time is*), while *wonder* doesn't (**I wonder the time*, but *I wonder what the time is*). This restriction follows from the fact that *wonder* is not a Case-assigner. On the other hand, Sag and Pollard (1989), Svenonius (1994), Odijk (1997), among others, offer arguments against this reductionist approach.

Keeping in mind that the basic distinction we've seen above cuts across the +/-Q in C, which is subject to selection by the relevant predicate, let us next turn to some apparently unexpected cases. The predicate *know* takes an embedded declarative, just like *think*, as in (4a). However, unlike *think*, it may also take a wh-complement, as in (4b), or an *if*-complement, provided negation or question is present in the matrix clause as in (4c) and (4d) (see Bresnan (1972) for an early discussion of similar facts):

(4) a. John knows *that/*if* Peter bought a new car.
b. John knows *what* Peter bought.
c. John doesn't know *if* Peter bought a new car.
d. Does John know *if* Peter bought a new car?

Adger and Quer (2001) argue that the *if*-complement in (4c) is an *Unselected Embedded Question* (UEQ), distinguishing it from the *Selected Embedded Question* (SEQ) in (1b). Strictly speaking, the embedded C cannot be +Q, as the matrix predicate s-selects for a proposition. However, an operator like question or negation can trigger a complement that looks like a question. Additionally, it's unclear what triggers wh-movement if C does not have the Q feature. If anything, the interpretation of (4b) is not an inquiry about the value of *x* introduced by *what*

but a declaration that the value of *x* is known.[1] What the data in (4) suggest is that wh-movement should be dissociated from the presence of Q, and that licensing of an UEQ, i.e., a clause that has the form of a question without the interrogative reading, is not restricted to s-selection by the matrix predicate but arises as a function of the predicate and some sentential (polarity licensing) operator.

Another pattern of unexpected complementation arises with the verb *believe*, as in (5) below. Note that *believe*, just like *think*, s-selects for a proposition (that is, a C_{-Q}), and in this respect the ungrammaticality of (5c) is predicted. Unlike *know* in (4), it cannot take an *if*-complement even if there is matrix negation (or question). However, *believe* can take a wh-complement in the presence of the negated auxiliary *can't*, as in (5d).

(5) a. John believes *that*/**if* Peter bought a new car
b. *John doesn't believe *if* Peter bought a new car
c. *John believes *who* bought a new car
d. John can't believe *who* bought a new car!

Once again, the problem that arises is twofold. First, the availability of the wh-complement does not directly depend on the matrix predicate but further requires a negated modal. Second, although Q is not present, wh-movement takes place in the complement clause. Note that the sentence in (5d) converges with an exclamative reading, which is the third semantic type (along with propositions and questions) of complement clauses in Grimshaw's (1979) classification. In this respect, the problem of wh-movement can be resolved if we assume that C has an E (exclamative) feature in (5d). Even so, the first problem remains, as the availability of the E feature on C depends on the negated auxiliary and not directly on *believe*. In other words, the selectional requirements of *believe* are affected by elements that are merged in later steps of the derivation and are not present at the point where *believe* (externally) merges with the wh-clause.

The data presented above show that predicates which take a clausal complement may exhibit variable behavior regarding the properties of their complement but also the readings assigned to it. If complement clause selection is specified in the lexical entry of the predicate, then two options arise: either we assume different lexical entries which project in the syntax accordingly, or a single entry with syntax determining the variable behavior. Interestingly, Karttunen (1977: 18, fn. 11) takes the former view regarding *know*, namely that there is one lexical entry for the interrogative complement, and another one for the propositional complement. We take the second option, i.e., a single entry, for two reasons. First, the type of the complement clause may not be determined by the matrix predicate alone, and second, its form can affect the reading of the matrix (selecting) predicate. The latter pattern is quite typical in the literature regarding NP arguments (e.g., Tenny 1987, Borer 2005 a.o.), and allows us to extend this approach to sentential complements as well. We further argue for the

[1] Ross (2009) argues that the wh-complement of *wonder* is conjunctive (CWH), while that of *know* is disjunctive (DWH). One diagnostic test for this distinction is the availability of apposition or not respectively, as in the following examples.

(i) Peter wonders who left – (namely,) John *or* Mary.

(ii) Peter knows who left – (*namely,) John *and* Mary.

Negation on *know* reintroduces the disjunction, as it uplifts the factive reading of the clause:

(iii) Peter doesn't know who left – (namely,) John *or* Mary.

elimination of features such as Q or E in the embedded C. We show that the full range of readings associated with the wh-complement would require an enrichment of these features, and more crucially, their postulation could only be accounted for in terms of a look-ahead strategy, given that in many cases these readings are not computed locally but require the presence of other elements (operators) in the matrix clause. We present the relevant evidence in section 2 of the paper, focusing on the so-called antirogative predicates, such as 'believe' and 'think'. We next argue in section 3 that there are no abstract features that guide selection: wh-movement in the complement clause is triggered by some generalized Operator-feature in C which satisfies clause-internal properties. In this respect, wh-complements have the same derivation prior to merger of the matrix predicate. This approach allows us to dispense with selectional requirements encoded as abstract features on the embedded C. Furthermore, it shows that while certain aspects of interpretation are satisfied as the derivation proceeds (in a local fashion), others can only be achieved once the whole derivation is completed (globally), that is representationally at the INT interface.

2. Wh-complements with antirogatives

2.1 Some background on predicate classes

In the semantic literature, predicates split according to whether they take an embedded interrogative as their complement or not (see Groenendijk and Stokhof 1984, Lahiri 2002, Dayal 2016, among others), giving rise to the following three classes:

(6) a. Rogatives: *ask*, *wonder*, …
b. Responsives: *know*, *find out*, *understand*, …
c. Antirogatives: *think*, *believe*, *consider*, *claim*, …

Rogative predicates take an interrogative complement, while antirogatives take a declarative complement and exclude an interrogative one. On the other hand, responsives are a hybrid class: they typically take a declarative, but may also allow for a wh-complement, and under certain conditions an *if*-complement as well – this is the case of UEQ of Adger and Quer (2001) (see Roussou 2010 for more references). In more recent accounts, these predicates are also called 'Q-agnostic' (White and Rawlins 2019).[2]

Uegaki and Sudo (2019) further split antirogatives into two classes, given that not all of them pass the Neg-raising test of Zuber (1982). For example, while 'believe' allows for neg-raising (and a wh-complement), 'prefer' doesn't (and excludes a wh-complement):

[2] The discussion on the semantics of interrogatives is modelled around different assumptions on how interrogatives differ from declaratives. Simplifying the picture, there are two main strands. The more traditional one that goes back to Karttunen (1977) takes declaratives to denote propositions and interrogatives to denote sets of propositions, so interrogatives are a special case of declaratives (also Groenendijk and Stokhof 1984; Lahiri 2002; Egré 2008; Spector and Egré 2015). The more recent account builds on the idea that both declaratives and interrogatives denote sets of propositions (Ciardelli *et al*. 2013; Uegaki 2015, 2022; Theiler *et al*. 2018) the difference being that declaratives denote a singleton set of propositions. Since interrogative clauses denote sets of alternative propositions they are 'inquisitive' and accordingly declaratives are 'non-inquisitive'. Under this approach, responsives, which are compatible with either complement (declarative or interrogative), are not sensitive to the inquisitive property.

(7) a. Mary doesn't believe that Peter left early → Mary believes that Peter didn't leave early.
b. Mary doesn't hope that Peter will leave early ≠ Mary hopes that Peter won't leave early.

Their distinction builds on two additional features, namely veridical and representational, as below:

(8) a. Representational, veridical: *know, forget, remember* (cognitive factives)
b. Representational, non-veridical: *believe, be certain, doubt*
c. Non-representational, veridical: *be glad, be surprised, be happy* (emotive factives)
d. Non-representational, non-veridical: *hope, wish, demand* (preferential)

Given the above classification, (8b) and (8d) are antirogatives, while (8a) and (8c) are responsives. The distinction between the two subclasses of antirogatives is due to the representational vs non-representational property. As we saw in the example (5d), under certain conditions which we discuss below, *believe* can embed a wh-complement and converge with a factive reading similar to that of the responsive predicates in (8c) (emotive factives). This indicates that *believe* can shift to a different class. Uegaki and Sudo (2019) argue on semantic grounds that this shift cannot take place for the class of preferential non-veridical predicates in (5d). Their analysis takes notions such as veridicality (and factivity) to be part of the lexical entry of predicates. However, as we will see in the discussion that follows, shifting from one class to the other is also subject to syntactic properties of the clause. On the other hand, it's unclear how notions such as veridicality (and factivity) are lexical properties, given that they refer to propositional content.

White (2021) offers experimental evidence against generalizations over lexical predicates which determine what type of complement clause they embed (i.e., interrogative vs declarative). He tests three such generalizations: (i) A predicate is responsive if it is veridical (Egré 2008), (ii) A predicate is antirogative if it is neg-raising (after Zuber 1982), and (iii) A predicate is antirogative if it is nonveridical and preferential (Uegaki and Sudo 2019). He then shows, building also on work by White and Rawlins (2018, 2019), that generalizations of these sort hold weakly, given that a given predicate can potentially have different senses (veridical and non-veridical) depending on the context and its use, and that neg-raising may be triggered in some contexts but not others. For example, in a sentence like (5d), i.e., *John can't believe who won the race*, neg-raising is blocked, and it is precisely this context where the wh-complement is available (also non-veridical *believe* becomes veridical). Furthermore, the prediction of the above generalizations that preferential predicates (e.g., *prefer*) cannot take a wh-complement is falsified, as examples like *I was hoping whether you were able to guide* are well attested in corpora. White (2021) concludes that complement clause selection is best predicted on properties that relate to the event structure of the predicate, namely aspectual notions such as stativity, durativity and telicity. Regarding the correlation between factivity, veridicality and complement selection, White and Rawlins (2018), following experimental methods, show that there seems to be a canonical correlation between these notions and "the possibility or requirement of a DP direct or indirect object" (232). They take this to support their view that clausal selection should also be linked to aspectual properties, as is the case with NP (DP) arguments.

The above discussion is a brief introduction to the problem of what determines clausal selection and in what ways. In what follows we focus on two antirogative verbs, namely 'believe' and 'think' and show what determines selection of a wh-complement, i.e., what in the above

literature is referred to as an embedded interrogative. We argue that whether the wh-complement is interpreted as an interrogative or not is not determined directly by the predicate or the feature specification of the embedded C but arises as a function of different factors such as: wh-fronting in the embedded clause, the predicate, and other elements that are merged in the derivation above the verb's projection. The interpretation of the wh-complement then is computed once the derivation is complete. Terms like 'responsive' and 'antirogative' are used descriptively in the discussion that follows, with no further implications for lexical semantic classes.

2.2 The case of 'believe'

As we saw in the preceding section, *believe* can take a wh-complement which converges as an embedded exclamative. Roberts (2019) discusses this pattern quite extensively. Consider the following data from his article:

(9) a. Susan {can't/*can/*doesn't} believe which town was obliterated by the meteor.
b. It's unbelievable who is lecturing us about fake news!
c. Can you believe which dessert Sherrod baked?
d. I can *(hardly/scarcely/barely) believe what score I got on the midterm!

(10) a. *I {must not/don't have to/shouldn't} believe who came to the party.
b. You'll never believe what J.J. Abrams wrote before Star Wars.

The data in (9)-(10) show that the wh-complement requires a (dynamic) modal such as *can* in the context of matrix negation (9a) or question (9c). Neither negation nor modality on their own suffice, as the ungrammatical versions of (9a) manifest. An adjectival predicate like *unbelievable* also satisfies both conditions through affixation in (9b), while the negation condition can also be satisfied by negative adverbs, as in (9d). The ungrammaticality of (10a) shows that not any modal would do, i.e., deontic modals are ruled out, while the grammaticality of (10b) shows that *will* can trigger a dynamic modal reading, like *can*.

Roberts' (2019) account is a semantic one within the framework that treats embedded declaratives and interrogatives alike (sets of propositions) with the former reducing to singleton sets (see fn. 3). The veridical reading assigned to *believe*, when followed by a wh-complement, arises compositionally, so it is not part of the lexical semantics of the predicate (as opposed to Uegaki and Sudo 2018). On the other hand, the unified account of declaratives and interrogatives facilitates the availability of a wh-complement provided the matrix predicate is accordingly modified. In his words: "we might want to consider clausal selection not only as a restriction on complements imposed by particular lexical predicates, but rather a bilateral compatibility relation between a predicate and its broader linguistic context, including its complement" (682). We agree on this point and further show how syntax contributes towards the various readings that arise.

The English pattern with 'believe' is also attested in Greek, as the example below (adapted from Vlachos and Balasi 2022) shows:

(11) a. Dhen boro na pistepso pjos irthe!
not can-1sg prt believe-2sg who came
'I can't believe who came!'

b.	Boris	na	pistepsis	pjos	irthe*?*	
	can-2sg	prt	believe-2sg	who	came-3sg	
	'Can you believe who came?'					
c.	Ine	apistefto	pjos	irthe	simera!	
	be-3sg	unbelievable	who	came-3sg	today	
	'It's unbelievable who came today!'					
d.	Dhen	to	pistevo	pjos	irthe	simera!
	not	it	believe-1sg	who	came-3sg	today
	'I can't believe who came today!'					

Despite differences regarding the syntactic expression of modality in Greek (modal verb, modal particle, present tense), the point that the embedded wh-clause converges with an exclamative reading is as in English. Greek further shows that the negated/questioned modal and the wh-complement can be further apart, as the modal embeds a *na*-complement whose verb embeds the wh-complement. In other words, in (9a) and (9b), the sentential operator and the selecting predicate are not in the same clause, a property that follows from the lack of infinitives in Greek. In (9c) both negation and modality are encoded on the adjectival predicate via affixation (*a-* and *-to* respectively). (9d) has no overt modal; however, present tense can give rise to an implicit modal reading (see Tsimpli and Roussou 1996 on polarity licensing by the present tense).

Given the above pattern in Greek and English, one possible way to proceed is to assume that 'believe' selects a wh-CP which is an embedded exclamative. In other words, it selects for a CP which bears the E feature, attributing the difference of rogative and antirogative wh-complement to a different feature on C, that is Q vs E respectively, as in (12).

(12) a. $[_{VP}$ wonder [what C_Q $[_{IP}$ John bought ~~what~~]]] (Rogative)
b. $[_{VP}$ believe [what C_E $[_{IP}$ John bought ~~what~~]]] (Antirogative)

In either case, the relevant feature activates C as a Probe, triggering Agree and IM of the wh-phrase, thus allowing for a wh-complement.

As already pointed out, selection for E does not arise from the matrix predicate directly but requires a negated modal of some form. So, postulating an E feature on the embedded C is a clear case of a look-ahead property, which in the case of Greek at least may cross two clause-boundaries. Another problem that arises has to do with the fact that the wh-complement does not always converge with an embedded exclamative reading. Consider the following examples from Greek and their English translations:

(13) a.	Pistepsa	(sto telos)	pjos	ftei.			
	believed-1sg	in.the end	who	is.responsible			
	'I came to believe (in the end) who was responsible.'						
b.	Mono	o Janis	pistevi	pjos	irthe	simera.	
	only	the John	believe-3sg	who	came-3sg	today	
	'Only John believes (can believe) who came today.'						
c.	Tha	pistepsis	pjos	irthe	otan	ton dhis.	
	will	believe-2sg	who	came-3sg	when	him see-2sg	
	'You will (be able to) believe who came (when you see him).'						

The wh-complements in (13) are grammatical but crucially, they are not construed as exclamatives. The perfective past (aorist) of the matrix verb *pistepsa* in (13a) blocks any modal reading. However, the sentence converges with a dynamic (telic) reading associated with the verb. In (13b), focus along with present tense triggers an implicit modal reading ('only John is able to understand') and the same holds in (13c) where the modal particle *tha* facilitates the modal reading. Irrespectively of whether modality or some aspectual modification is available, the wh-complements in (13) converge in lacking an embedded exclamative readings.

The examples discussed so far from Greek and English show the following: the exclamative reading is not a by-product of the wh-complement and the selecting predicate. Instead, this reading arises in the presence of the wh-complement provided the verb is modified (or embedded) by a modal in the scope of negation or question. Construing in this case the wh-complement as an exclamative further assigns a factive reading to the matrix predicate. In this respect, the data examined so far support White's (2021) and White and Rawlins' (2018) conclusions that factivity (and veridicality) are triggered by the predicate and the syntactic environment. In the next section we consider the case of the verb *think*.

2.3 The case of 'think'

The verb *think*, which is also an antirogative, is taken as a typical case where a wh-complement is excluded. However, White (2021) provides data where a *whether*-complement is possible, as below (his (14a-b)):

(14) a. When Jan Brown completed her safety briefing for the passengers, she tried to think *whether* she had covered everything.
b. I'm trying to think *whether* I'd have been a star today or not.

Özyildiz (2021) offers a thorough discussion of the conditions under which *think* can take a wh-complement. In particular, his argument is that when 'think' takes a 'question' (a wh-clause in our terms), it gives rise to dynamic eventuality; on the other hand, when it takes a 'declarative' (a *that*-clause), the eventuality may be stative or dynamic (see also Dayal 2016). This is clearly manifested in the following pair of sentences:

(15) a. #Anna thinks who she should invite.
b. Anna is thinking who she should invite.

In (15b), the progressive tense creates a licit context for the wh-complement, consistent with a dynamic eventuality. On the other hand, the simple past retains the stative reading. The different readings are tested through various aspectual tests. One of them regarding adverbial modification is given below, which support the dynamic eventuality reading in the presence of the wh-complement.

(16) a. Anna was *carefully/intentionally* thinking who she should invite to the party.
b. Anna *carefully/intentionally* thought who she should invite to the party.

Özyildiz (2021) further argues that as a dynamic verb, *think* further allows for a telic vs atelic distinction, as in (17). This further distinction provides two readings for *think*, the 'decisive' (telic) vs the 'deliberative' atelic:

(17) a. It took Anna an hour to think who she should invite. [Telic - decisive]
→ Anna has decided who she should invite.
b. Anna is thinking who she should invite. [Atelic - deliberative]
→ Anna is deliberating about who she should invite.

The above suffice to support the claim that the type of the complement clause affects the reading (aspectual) of the selecting predicate. Furthermore, the different senses attributed to the predicate, e.g., decisive or deliberative, are, or at least can be, syntactically conditioned. Note that there is no exclamative reading associated with the wh-complement, thus supporting the argument being made so far that the exclamative reading arises from properties of the matrix clause in connection with the wh-complement.

Before leaving this section, it is worth noting that the corresponding verb in Greek, namely *nomizo*, does not permit a wh-complement. Instead, the readings associated with *think* + wh-clause require a different verb, namely *skeftome*. This can only be accounted for as a lexical idiosyncrasy: the English verb 'think' can have multiple senses, while this is not the case for its Greek counterpart. Another point has to do with the eventive vs stative readings attributed to the predicate depending on the properties of its complement. Greek distinguishes between two declarative complementizers, i.e., *oti* and *pu*. The latter is restricted to factive complements, while the former is found in factive and non-factive complements. According to Angelopoulos (2019) the alternation between *oti* and *pu* with cognitive factive verbs gives rise to different eventualities: stative with *pu* vs stative or eventive with *oti*. Due to space limitations, we do not elaborate on this issue any further.

To summarize the discussion so far, in the present section we have shown that the distinction between predicate classes based on the type of their complement clause is not so strict as it appears to be. Specifically, antirogative predicates may also allow for different types of complement clauses, as is the case with responsives, exhibiting variable behavior regarding their argument structure. In the presence of a wh-complement, the otherwise stative predicate can be interpreted as eventive, while further readings in terms of veridicality and factivity can emerge. The latter depend on the presence of other elements in the clause structure, such as modals in the scope of negation or question, focus, etc. In the next section we turn to the syntactic properties of the wh-complement irrespectively of the selecting predicate. We argue that the embedded C has no specialized sub-features such as Q or E, but a generalized Operator feature that triggers movement of the wh-phrase via IM.

3. The wh-complement

As was shown in section 1, different predicates can embed a wh-complement, as repeated below:

(18) a. I *wonder* who John saw. (Rogative)
b. I *know* who John saw. (Responsive)
c. I *can't believe* who John saw! (Antirogative)

While the wh-clause in (18a) is interpreted as an interrogative (inquisitive), this is not the case in (18b) and (18c). This suggests that at least in the latter two cases, movement of the wh-phrase cannot be due to a Q feature; we also saw the limitations of postulating an E feature for (18c).

Let us consider the derivation of the wh-clause in (18). Movement or displacement is analyzed as the output of Internal Merge (IM), a subcase of Merge which requires at least two copies of the same element derivationally related. Internal Merge requires an Agree relation between a Probe and a Goal. In cases under investigation, C is the Probe due to some feature, and the lower wh-copy is the Goal.[3] As a result of this, the higher copy is the one that is externalized (EXT), while both copies count for the purposes of interpretation (INT). At this point we need to elaborate on the feature of C which is responsible for IM. Ideally, we would like to dissociate wh-fronting from clause-typing (see also Tsoulas and Yeo 2017, and references therein) and attribute it to some generalized property. For present purposes, we assume that the wh-phrase is an indefinite which acquires quantificational force under IM, forming an Operator-variable dependency. Suppose then that C, as the head that defines the left periphery where information and discourse-related properties are expressed, is endowed with a generalized Operator feature, which allows it to define a scope domain over the clause.[4] Under IM with C, the wh-phrase also acquires scope. In other words, what the wh-phrase and C share is this property. Translating this in criterial terms, as in Rizzi (2015), we could say that the wh-phrase reaches a criterial position. Note that for Chomsky (2013, 2015) criterial positions have a freezing effect which arises from labeling. Specifically, in the case of wh-clauses, the wh-phrase and the CP share some feature (under Agree); this shared-feature determines the label of the new syntactic object (SO). Once the features of the wh-phrase label SO, they freeze.

Consider then the structure in (19) below. The wh-phrase merges with C(P), and assuming that they share an Op property (wh, Op), the new SO carries the corresponding label.

(19) $V_{\{wonder,\ know,\ believe\}}$ [wh [C_{Op} [...V ~~wh~~]]] where Op is a generalized feature

What the matrix verb sees at the next of the application of merge is the label of the SO it embeds. More precisely V sees a SO with propositional content introduced by a quantificational phrase. Let us elaborate on what sort of implications this has for the sentences in (18). Regarding the rogative predicate in (18a), when the predicate *wonder* merges with the wh-clause, the latter becomes its argument. This follows from EM, which is the operation responsible for introducing arguments in the derivation, according to what Chomsky (2021) calls "Duality of Semantics". Given that the matrix verb is rogative, i.e., inquisitive, the wh-clause converges as an interrogative. This essentially means that the value of the wh-phrase remains unknown. The case of *know* in (18b) is also rather straightforward. The derivation proceeds in the same way: merger of *know* with the wh-clause, turns the latter to an argument. Since *know* is responsive (or Q-agnostic), it does not trigger an interrogative (inquisitive) reading. The wh-clauses converge with a declarative reading, i.e., it is a declaration that the value assigned to the variable introduced by the wh-phrase is known (thus informative in this respect).

Consider now the case of the antirogative *believe* in (18c). Assuming that the derivational steps are those described above, merger of *believe* with the wh-clause, turns the latter to an argument. Given that the verb is neither rogative (inquisitive) nor responsive (Q-agnostic), the question that arises is how the SO formed by *believe* along with the wh-clause is to be interpreted. In other words, we need to account for the contrast below:

[3] On a more recent proposal, IM is followed by Form Copy (FC) which essentially forms a chain with identical (or at least non-distinct) copies (Chomsky 2021).

[4] Chomsky (2013: 46) suggests that this could be a "force feature F, subsuming Q as well".

(20) a. *I believe [who John saw]
b. I can't believe [*who* John saw]

Given that the sentence in (20b) is grammatical, the natural assumption to make is that the ungrammaticality of (20a) does not arise at the point where the wh-clause externally merges with *believe*, but when the derivation is completed. Naturally this should extend to the other two cases we discussed so far. The sentence in (20b) converges with an exclamative reading. As we have already shown this arises from the function of the wh-clause, the matrix predicate and crucially the negated modal. If the negated modal is absent but the matrix predicate is modified in some other way, e.g., via focus as in the Greek examples in (13), the sentence converges with a modal reading but not an exclamative one. Once again, postulating some abstract feature on the embedded C to predict that reading that will arise, apart from being a look-ahead strategy, cannot go through unless there is an enrichment of the potential features C can bear.

To this end, EM between the verb and its complement does not yield ungrammaticality. In other words, EM satisfies some minimal requirement for INT at phase (vP) level, to the extent that the predicate takes a complement (argument) with propositional content, as part of its label.[5] However, the final reading assigned to the wh-clause and the matrix clause can only be computed once the derivation is complete; in other words, the INT interface evaluates the representation of the sentence. This has the crucial implication that while c-selection reduces to an application of EM, s-selection is not computed locally, that is at the point of EM, but on the output of the derivation which is a representation. That this interpretation is not computed at phase level is further supported from data like the following, where the trigger for the wh-complement splits across two clause-boundaries (see also the case of Greek in (12a-b)):

(21) It is *unlikely* that John would believe who did it.

In this respect, Grimshaw's statement "a wh-complement interpreted as a question will be an instance of Q, while a complement interpreted as an exclamation will be an instance of E" (1979: 286) has only a descriptive value, with no formal status. In other words, once we dispense with the postulation of Q and E as features of the embedded C, we can take them to reduce to interpretations which are given as refinements of the generalized Op feature at the INT interface.

In short, in this section we have argued that wh-movement in embedded contexts at least is dissociated from clause-typing and emerges via a generalized Op feature which determines scope. The {wh, Op} label fulfills the minimum requirements regarding EM between the predicate and the complement clause. How the wh-complement and the predicate will be interpreted though is a matter that arises at the INT interface once the derivation is completed.

[5] Note that in some cases, the wh-clause could be construed as a free relative:

(i) I believe *what I see*.

In Greek this is excluded, since wh- and free relative pronouns differ (the former is the basis for the latter, i.e., *o-pjos, o-ti*). At this point variation is subject to lexical differences (of the wh-element) as expected. The sentences in (i) and (20b) in the text raise the question to what extent 'interrogative' wh-clauses differ from free relatives. We leave this issue open for future research (see Donati and Cecchetto 2011).

4. Concluding remarks

To summarize, the argument put forward is that any residues of s-selection are computed at the INT interface. This allows us to account for the variable behavior of predicates which extends to clausal complements as well. At the same time, dispensing with highly specified features on C, which predict the reading that will arise at later stages in the derivation, we dispense with the look-ahead strategy these features impose. The wider picture that emerges is that there are parts of the derivation that are interpreted locally, at phase level perhaps, such as the requirements on argument structure at the vP level, while others can only be computed representationally. Further issues remain open, such as to what extent other properties of the predicate can predict the availability of a wh-complement in the case of responsives and antirogatives for example and how wh-complements differ from free relatives.

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Quaderni di Linguistica e Studi Orientali- QULSO
Working papers in Linguistics and Oriental Studies

Firenze University Press
https://oajournals.fupress.net/index.php/bsfm-qulso

Citation: G. Rugna, M.R. Manzini (2023) Partial wh-movement in North Italo-Romance and the FormCopy Analysis of wh-doubling. *Qulso* 9: pp. 161-176. doi: http://dx.doi.org/10.13128/QULSO-2421-7220-15158

Data Availability Statement: All relevant data are within the paper and its Supporting Information files.

Competing Interests: The Author(s) declare(s) no conflict of interest.

Partial Wh-Movement in North Italo-Romance and the FormCopy Analysis of Wh-Doubling

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Abstract:

This paper analyzes the syntactic derivation of so-called 'wh-doubling', a single-constituent question-formation strategy that features the overt occurrence of two wh-phrases (e.g. *kuza* fa la *ku'zɛ* (lit.) *'what* does she do *what*?') in North Italo-Romance. We argue that the wh-phrases involved in the construction are best treated as being generated independently by External Merge (EM), rather than being bona fide syntactic copies constructed by Internal Merge (IM). This raises the theoretical issue why IM to scope position cannot take place in wh-doubling, despite IM being more economical than EM. We propose that the wh-element merged in argumental position undergoes partial movement to the edge of the v-phase, where it becomes 'frozen' upon entering into a Focus configuration. This makes the derivation of wh-doubling identical to the derivation of wh-in situ up to the v-phase as recently proposed for different wh-in situ languages. The derivation of wh-doubling then proceeds by EM of an additional wh-phrase that gives phonological content to the scope Q position in the left periphery. The single-constituent reading is obtained at Conceptual-Intentional (C-I) via the operation FormCopy (FC), which connects the independently generated wh-elements in the syntactic workspace. We moreover discuss issues pertaining to parametric variation.

Keywords: *FormCopy, Labeling, North Italo-Romance, Phase, Wh-Doubling*

1. Introduction

Apart from the familiar question-formation strategy of wh-fronting (1), some varieties of North Italo-Romance (NIR) may resort to additional strategies that feature either wh-in situ/partial wh-movement (2) or the overt realization of a wh-element in both the canonical left-peripheral position and in what *prima facie* looks like the in situ position (3). These constructions

are all identical from a semantic point of view, i.e. they are interpreted as single-constituent answer-seeking interrogatives.

(1) *kɔha* fa -l
what does-he
'What does he do?'
(Cologno al Serio; Manzini and Savoia 2011: (28a'))

(2) fa-l *ko'hɛ*
does-he what
'What does he do?'
(Cologno al Serio; Manzini and Savoia 2011: (28a))

(3) a. *se* fa la *ku'zɛ*
what does she what
'What does she do?'
b. *kuza* fa la *ku'zɛ*
what does she what
'What does she do?'
(Olgiate Molgora; Manzini and Savoia 2011: (20))
c. *ki* tʃamet *ki*
who you call who
'Who are you calling?'
(La Strozza V. Imagna; Manzini 2014: (29c))

This paper focuses on the syntactic analysis of the question-formation strategy in (3), known as 'wh-doubling' in the literature (Poletto and Pollock 2004, 2015; Manzini and Savoia 2005, 2011; Manzini 2014). One challenge posed by (1)-(3) is to account for the single-constituent reading of the interrogative, i.e., how the presence of multiple wh-elements can achieve the same semantic result as wh-fronting and wh-in situ.

For the sake of explicitness, we begin our discussion by illustrating the derivation of regular wh-fronting. This type of interrogative is standardly analyzed as involving Internal Merge (IM) of a wh-element from its argumental (theta) position to the scope (Q) position. Moreover, the Phase Impenetrability Condition (PIC) requires the wh-element to first undergo IM in any intermediate phase edge before reaching its final landing site – the relevant phases being C and v (Chomsky 2001). The single-constituent reading is implicitly assumed to be obtained by the relation of c-command and the featural identity holding of the IM-copies (Chomsky 1993).

More specifically, however, we follow Chomsky (2021) in assuming that sequences of copies are interpreted as such by means of FormCopy (FC), a non-structure building operation occurring in the syntactic workspace at the phase level and obeying conditions on Σ (Search; e.g., minimality, c-command, the PIC). FC thus creates sequences of wh-elements – syntactic objects sharing the same referential and thematic interpretation (a chain, in more traditional terms) – in a successive-cyclic manner. The derivation of a wh-fronting sentence like (1) can then be illustrated as in (4) (irrelevant details omitted).

(4) a. $\{_{VP}$ fa, kɔha$\}$ *(generation of VP)*
b. {v $\{_{VP}$ fa, kɔha$\}\}$ *(generation of v-phase)*

c. $\{_{vP}$ kɔha {v $\{_{VP}$ fa, ~~kɔha~~}}} *(IM of wh to edge of v)*
d. {C $\{_{IP}$ fa-l $\{_{vP}$ $\{_{vP}$ kɔha {v $\{_{VP}$ fa, ~~kɔha~~}}}}}} *(generation of C-phase)*
e. $\{_{CP}$ kɔha {C $\{_{IP}$ fa-l $\{_{vP}$ ~~kɔha~~ …}}}} *(IM of wh to edge of C)*

At each phase level the operation FC applies and generates copy-pairs (e.g. <kɔha, kɔha> in the v-phase), ultimately forming the sequence <kɔha, ~~kɔha~~, ~~kɔha~~> at the end of the entire derivation. Application of FC determines on the one hand deletion of lower members of the wh-sequence at the Sensory-Motor interface (S-M) and, as noted, their identical referential and thematic interpretation at the Conceptual-Intentional (C-I) interface on the other.

In a nutshell, the analysis to be developed in section 3 maintains that the single-constituent reading in wh-doubling is also obtained by means of FC. However, unlike wh-fronting we argue that the wh-elements in wh-doubling enter the derivation independently, by External Merge (EM). This is because the lower wh-element in a wh-doubling configuration undergoes partial movement to the edge of the v-phase, where it crucially enters into the labeling of a 'criterial' (or scope-discourse) configuration and subsequently freezes in that position (Chomsky 2015; Rizzi 2015). Being frozen at the edge of v, the wh-element is unavailable for further movement. The derivation of wh-doubling is then continued by externally merging an additional wh-element that ultimately gives phonological content to the Q criterial configuration, as demanded by parametric requirements (cf. Section 4). Regardless of how the wh-elements have entered the derivation, they can be connected via FC, provided that they can receive an adequate interpretation at the interfaces. In fact, an important property of FC is that it is Markovian – it does not have access to how items in the syntactic workspace have entered the derivation, i.e., whether by EM or IM.

Partial wh-movement to the edge of v renders the initial derivational stages of wh-doubling identical to the derivation of wh-in situ up to the v-phase, as independently argued for other wh-in situ languages (e.g., Manetta 2010, Kato 2013, Bonan 2021). In the case of wh-in situ the major issue is of course how the correct scope reading is achieved. Though reasons of space prevent us from pursuing this issue here, we note that the analysis to be developed favors an account of scope construal in terms of unselective binding (e.g., Heim 1982, Nishigauchi 1990), i.e. by an interrogative operator that is independently merged from the wh-element. In other words, fronting of the wh-element is not required for reasons of scope. We therefore reject the main alternative accounts of scope construal in wh-in situ, such as covert LF movement (e.g., Huang 1982) or covert syntactic movement with the spell-out of the lower copy at S-M (e.g., Brody 1995; Tsoulas and Yeo 2017; Seguin 2023) (cf. Bayer and Cheng 2017 for an overview of analyses of scope construal in wh-in situ).

This paper is organized as follows. Section 2 provides a brief discussion of the main doubling data to be captured by any analysis of the phenomenon. Section 3 develops the syntactic derivation of wh-doubling, with externally merged wh-elements connected via FC; it moreover provides some intra- and cross-linguistic evidence for movement to and freezing into the Focus configuration at the edge of the v-phase. Section 4 discusses issues relating to parametric variation and suggests a possible way in which patterns of wh-doubling may be captured. Finally, section 5 concludes the discussion.

2. Patterns of wh-doubling: main data

From a descriptive point of view, wh-doubling can be characterized as a heterogeneous phenomenon. As described in Poletto and Pollock (2015) and Bonan (2019: 33ff.), three different types of doubling can be distinguished depending on the nature of the wh-elements

involved, as illustrated in (5)-(7).[1] Type A involves a clitic wh-element in scope position and a clause-internal non-clitic wh-element (5); type B involves a non-clitic wh-element in scope position and a clause-internal non-clitic wh-element (6); finally, type C uses an invariant wh-element in scope position and a 'contentful' clause-internal wh-phrase (7).

(5) Type A: Clitic wh-element in scope position

a. *se* fa la *ku'zɛ* =(3a
what does she what
'What does she do?'

b. *m* i dur'mi ku'mɛ?
how you.have slept how
'How did you sleep?'

(Civate; Manzini and Savoia 2011: (9a'))

(6) Type B: Non-clitic wh-element in scope position

a. *Cusa* t'è fai *cusè*?
what you.have done what
'What have you done?'

(Mendrisio; Poletto and Pollock 2015: 146)

b. *in'do* et *indo'ɛ*
where you.go where
'Where are you going?'

(Adrara San Rocco; Manzini and Savoia 2011: (25a))

(7) Type C: Invariant wh-element in scope position

a. *ke* ma 'portet *'ki*
what me you.bring what
'What are you bringing me?'

(Passirano; Manzini and Savoia 2005: 590)

b. *ch'* ö-t *qual*?
what want-you which
'Which one do you want?'

(Mendrisio; Poletto and Pollock 2015: 147)

Doubling varieties can display one or more of the above patterns, independently of the particular geographical region. As argued in Bonan (2019: §1.2.1), it is in fact often the case that multiple types of wh-doubling co-exist in a given NIR variety. Thus Olgiate in (8), displays type A and B, whereas Mendrisio displays all three configurations.

(8) *se/kuza* fa la *ku'zɛ*?
what does she what
'What does she do?'

(Olgiate Molgora; adapting Manzini and Savoia 2011: (17a, b))

[1] More accurately, Poletto and Pollock's (2015) description makes use of the tripartite distinction of pronominal forms in 'clitic', 'weak' and 'strong' (Cardinaletti and Starke 1999). Since the legitimacy of this distinction is a point of contention in the literature (e.g., Manzini and Savoia 2011, Manzini 2014), and nothing hinges on it for our purposes, we characterize both weak and strong wh-forms as non-clitic.

At least type A and B are also attested in long-distance interrogatives (9), and in indirect questions (10).

(9) a. *koza* pɛnsɛt (k) el faɣɛ *ko'zɛ*
what think.you that he do what
'What do you think he's doing?'
(La Strozza V. Imagna; Manzini and Savoia 2005: 591)

b. *ki* pɛnsɛt ke l vɛɲɛ *ki*
who think.2S that he comes who
'Who do you think will come?'
(Borgo di Terzo; Manzini and Savoia 2005: 591)

(10) a. so mia *kome* i fa *ko'mɛ*
know.I NEG how they do how
'I don't know how they're doing it'
(La Strozza V. Imagna; Manzini and Savoia 2005: 593)

b. al so mia *se* fa *ku'zɛ*
it know.I NEG what do what
'I don't know what to do'
(Civate; Manzini and Savoia 2005: 593)

Doubling has not been attested with the counterparts of *why* in NIR (cf. (11));

(11) **Parchè* veto via *parchè*?
why go-you away why
(Illasi; Poletto and Pollock 2015: 146)

On the other hand, doubling of complex wh-phrases (i.e., wh + NP) is attested in all doubling configurations (12). A generalization is that the order between doubler and doublee cannot be reversed in examples like (12), where the wh-PP occurring clause-internally is doubled by a simple wh-element in scope position.

(12) a. *se* l fet *kuŋ* *ku'zɛ*
what it you.do with what
'What do you do it with?
(Olgiate; Manzini and Savoia 2011: (32))

b. *koha* l fe:t *koŋ* *ko'hɛ*
what it you.do with what
'What do you do it with?'
(Grumello; Manzini and Savoia 2011: (31))

c. *che* l'è-t fat *con cheròba*?
what it have-you done with what thing
‘ With what did you do it?'
(Mendrisio; Poletto and Pollock 2015: 147)

In what follows, we develop a syntactic derivation that underlies all types of wh-doubling. The availability or otherwise of specific patterns of wh-doubling will be relegated to idiosyncratic facets of the lexicon and/or conditions of the Sensory-Motor interface (cf. Section 4).

3. Analysis

As an initial hypothesis, one might postulate that wh-doubling is generated via IM of a wh-phrase from its argumental position to the scope position (eventually passing through phase heads under Phase Theory; e.g. Chomsky 2001), with language-specific rules dictating the overt realization of the syntactic copies (in the sense of Chomsky 1993). Such an account has in fact found consensus for the analysis of wh-copying, a similar construction to wh-doubling found in Germanic varieties, as illustrated in (13) (e.g., Felser 2004), and has also been suggested explicitly by Bošković and Nunes (2007) for NIR.

(13) *Wen* glaubst du *wen* sie liebt?
who believe you who she loves
'Who do you think she loves?'

Such an IM-analysis might readily extend to cases like (3c), where the wh-elements involved are identical, as predicted by the Copy Theory of movement. However, note that wh-doubling in NIR often features a morphophonological asymmetry between the left-peripheral and clause-internal wh-elements (see, e.g., (3a, b) and further data in Section 2). Hence the IM derivation becomes problematic in that it requires an account of how syntactic copies can acquire distinct morphophonological realizations.[2] In some cases, the lexical properties of the wh-elements involved also seem to differ; for instance, (3a) involves a clitic wh-element in the scope position, whereas (3b) makes use of the non-tonic form of the clause-internal wh-pronoun. In line with previous scholarship on wh-doubling (e.g., Poletto and Pollock 2004; Manzini and Savoia 2011), we therefore assume that the two wh-elements enter the derivation independently – i.e., by EM – rather than being bona fide copies generated by IM.

More specifically, according to Poletto and Pollock the two wh-elements involved in a wh-doubling configuration are generated as part of the same phrase in argumental position, effectively importing into wh-dependencies a model independently proposed for so-called clitic doubling (cf. Kayne 1991). They therefore propose that the full wh-pronoun is the Spec of a clitic wh-head, e.g. [*ku'zɛ* [D *se*]] in (3a).[3] Subsequent movement operations, including remnant IP-movement (in the sense of Kayne 1998) are postulated to derive the attested word orders (the reader is referred to the cited works for details).

On the other hand, Manzini and Savoia (2005, 2011) specifically argue against 'the big DP' and remnant movement analysis both in terms of the general complexity of Kayne's (1998) model and on the basis of specific predictions (cf. Manzini 2014). Adopting a representational view of grammar (e.g. Brody 2003), they propose that the wh-elements of a doubling configuration are each generated independently in their surface position, i.e., in the scope position and in situ, and are subsequently connected via interpretive rules at C-I. Our analysis will be close in essence to Manzini and Savoia's (2011), though we crucially recast it in the derivational framework of Chomsky (2013, 2015, 2021).

Note however that the assumption that wh-doubling features independently EM-ed

[2] This problem in fact also arises for wh-copying in some varieties. See Manzini and Rugna (2023) for an analysis of wh-copying that does not make recourse to IM of the wh-elements.

[3] Poletto and Pollock (2009) acknowledge the fact that one of the two copies is not necessarily a clitic, as in e.g. (3b). However, they maintain the 'big DP' analysis, based on the assumption that one of the two copies is at best a weak pronoun (in the sense of Cardinaletti and Starke 1999).

wh-elements raises a theoretical problem in our minimalist derivational framework. Specifically, Chomsky (2021) argues that IM is more economical than EM whenever available. This is because Σ (involved in locating the items to which Merge applies) is restricted to a syntactic object within the current workspace under IM, whereas under EM Σ has access to the entire workspace as well as the lexicon. Assuming this to be correct, the question arises as to why wh-doubling grammars resort to EM of an additional wh-element instead of internally merging the wh-element already available in the syntactic workspace to the scope position (leading to wh-fronting as in (1)).

Here we propose that the derivation of wh-doubling cannot involve IM of the wh-element to the scope position due to its undergoing partial movement to the edge of the v-phase, where it enters into the labeling of a Focus configuration. The clause-internal wh-element thus freezes within the v-phase and becomes unavailable for further Merge. As we discuss below, such freezing opens up the derivational possibility of externally merging an additional wh-element in the scope position, despite EM being more costly in terms of computational resources than IM (Chomsky 2021). The single-constituent reading is then obtained via the operation FormCopy (FC; Chomsky 2021), which connects items in the syntactic workspace under their relation of c-command and, we argue, featural non-distinctness – regardless of whether such items are IM-copies or whether they are drawn from the lexicon independently (as Chomsky 2021 argues to be the case in control configurations).

Partial wh-movement is understood here as a type of 'criterial' freezing (in the sense of Rizzi 2006, 2015), namely merger (and halting) of an element in a position dedicated to the expression of some scope-discourse property. In particular, we assume that the relevant property in NIR is Focus (Manzini 2014; Bonan 2021). Moreover, in line with Belletti (2008), we take it that Focus is licensed at the edge of (some projection of) the v-phase.

That wh-elements can move to – and freeze at – the edge of vP has been argued for several languages for some time now (e.g. Mahajan 1990; Jayaseelan 1996; Manetta 2010; Kato 2013; Bonan 2021). In Hindi-Urdu, for instance, wh-elements consistently freeze in the preverbal position, regardless of whether they are dislocated to the matrix clause (14a), or whether they remain in the embedded clause (14b).

(14) a. Sita-ne *kis-ko* soca: ki Ravi:-ne dekha:?
Sita-ERG who-ACC thought that Ravi-ERG saw
'Who did Sita think that Ravi saw?

b. Sita-ne *kya*: soca: ki Ravi:-ne *kis-ko* dekha:?
Sita-ERG EXPL thought that Ravi-ERG who-ACC saw
'Who did Sita think that Ravi saw?'

(Hindi-Urdu; Manetta 2010: 1)

The freezing preverbal position, which Manetta (2010) identifies with SpecvP, is not available to constituents in unmarked declaratives. Interestingly, however, such a freezing position is available to focused constituents (15), indicating a strict correlation in the structural positioning of interrogative and non-interrogative focused constituents.

(15) Maiñ-ne kamre-meñ [inhi: ti:n laṛkoñ-ko] bhe:ja.
I-ERG room-to [these.FOC three boys-ACC] sent
'I sent *these* three boys to the room.'
(Hindi-Urdu; Manetta 2010: 6, citing Sharma 1999: 10)

With respect to Romance languages, Kato (2013) argues that answer-seeking (as opposed to echo) wh-in situ in Brazilian Portuguese (BP), as in (16), is also the result of focus movement to the edge of vP (more precisely, to Belletti's (2008) FocusP).

(16) Você viu *quem*?
You saw who
'Who did you see?'

This conclusion is supported by both phonological and syntactic considerations. For instance, the intonation contour in BP answer-seeking wh-in situ is shown to be similar to the intonation contour of simple declaratives with postposed focalized subjects (see Kato 2013: 184). Moreover, in BP postverbal subjects cannot be licensed as arguments of transitive verbs (cf. 17a and 18a); as (18b, c) show, the distribution of wh-in situ with a postposed is subject to the same restrictions.

(17) a. Telefonou [A MARIA]
telephoned the M.
'Mary called'
b. Telefonou quem?
telephoned who
'Who called?'

(18) a. *Compraram os CDs [os meninos].
bought the CDs the boys
'The boys bought the CDs.'
b. *Comprou os CDs *quem*?
bought the CDs who
'Who bought the CDs?'
c. *Comprou *o que* os meninos?

Going back to NIR, there is both morphological and syntactic evidence indicating that clause-internal wh-elements are merged in a position dedicated to the licensing of Focus. As Manzini (2014: 187-188) discusses, non-clitic wh-forms that take stressed -*'ɛ* morphology must necessarily appear clause-internally in a *wh*-doubling configuration; see the contrast in (19a, b).

(19) a. *se/'kuza* fa la *ku'zɛ*
what does she what
b. **ku'zɛ* fa la *se/'kuza*
what does she what
'What does she do?'

To understand this distribution, Manzini proposes that -*'ɛ* morphology is associated with the licensing of Focus. This conclusion is supported by the observation that -*'ɛ* morphology is

syncretic with the copula, specifically with the third person singular of the verb corresponding to *be*. Significantly, copulas participate in the construal of Focus in other aspects of the grammar in Romance (as in English), such as cleft constructions (e.g., Italian *cos'è che*… 'what is it that…'), and they can also lexicalize focus particles in other languages, like Somali (e.g., Frascarelli and Puglielli 2005). Assuming with Belletti (2008) that Focus is licensed in a dedicated position at the edge v, the contrast in (19) is then captured rather straightforwardly. Quite simply, in the presence of doubling, the Focus *-'ɛ* morphology is spelled out in the dedicated Focus position at the edge of v, whereas other interpretive properties, like Q, are spelled out in the left periphery, as roughly illustrated in (20).

(20) [$_{QP}$ *se/'kuza* [$_{IP}$ fa la [$_{FocusP}$ *ku'zɛ* [v [$_{VP}$ ~~fa~~ ~~*ku'zɛ*~~]]]]]

Bonan (2021) discusses direct syntactic evidence that clause-internal wh-elements in (at least some varieties of) NIR undergo the kind of partial Focus movement, which she dubs WH-to-FOC, envisaged by Manzini (2014). The data in (21) show that in eastern Trevisian the Indirect Object (IO) represented by the wh-phrase *a ki* 'to whom' must surface above the Direct Object (DO) *i pomi* 'the apples', an option that is not otherwise available to non wh-IOs in unmarked declaratives (22). Conversely, non-wh IOs can surface above the DO when they are focalized (23).

(21) a. ghe ga-tu dato a ki$_i$ i pomi ___$_i$?
3.DAT have=you given to who the apples
'To whom did you give the apples?'
b. *ghe gatu dato i pomi a ki?
3.DAT have=you given the apples to who
'To whom did you give the apples?'

(22) a. ghe go dato i pomi$_{DO}$ a ʤani$_{IO}$
3.DAT have.1S given the apples to John
'I gave the apples to John'
b. *ghe go dato a ʤani$_{IO}$ i pomi$_{DO}$
3.DAT have.1S given to John the apples
(Treviso; adapting Bonan 2021: 5, 7)

(23) ghe go dato A ʤANI i pomi!
3.DAT have1PS given to John the apples
'It's TO JOHN that I gave the apples' (lit: 'I gave TO JOHN the apples')
(Treviso; Bonan 2021: 9)

The morphosyntactic correlations between focalized constituents and clause-internal wh-elements can thus be captured under the assumption that clause-internal wh-elements are displaced onto a dedicated Focus position at the edge of v. The derivation of wh-doubling may then be characterized as being in relevant respects identical to the derivation of wh-fronting and wh-in situ up to the v-phase. More specifically, these types of wh-strategies all involve movement to the edge of v. However, while movement to the edge of v is transitory in wh-fronting, movement is terminal on present assumptions in the case of wh-in situ and wh-doubling. Hence the question arises as to what prevents IM of the wh-element at the edge of v to the scope position in the latter types of interrogatives.

Bonan (2021) analyzes terminal Focus movement in wh-in situ (i.e., WH-to-FOC) as an instance of Criterial Freezing (Rizzi 2006, 2015), according to which phrases entering into a configuration dedicated to the expression of some scope-discourse property (i.e., a criterial configuration) are unavailable for further movement. As such, Focus movement results in Focus freezing. In order to model this intuition, we depart from Bonan and follow Chomsky (2015) in assuming that movement out of a criterial configuration is prevented because such movement would disrupt the label – and hence the particular interpretation – associated with the criterial configuration (cf. also Rizzi 2015 for a different analysis of the freezing effect).[4] Moreover, we adopt the Labeling Algorithm of Chomsky (2013), according to which XP-YP configurations can be labeled by an agreeing feature of X and Y.

Consider then a case of wh-doubling as in (24a). As noted, we assume that the first steps of the derivation of wh-doubling are identical to the derivation of wh-fronting and wh-in situ up to the v-phase, with EM of *ko'zɛ* 'what' in argumental position and its subsequent IM to the edge of v. The crucial difference with respect to the derivation of wh-fronting is that, by assumption, the wh-element *ko'zɛ* is frozen at the edge of v in wh-doubling (as it is in wh-in situ in the languages considered here). The labeling formalization of freezing effects that we adopt then requires *ko'zɛ* and the phase head v to enter into Agree in some formal feature F in (24), as a result of which the v-phase is labeled by F. This is illustrated in (24b, d).

(24) a. *koza* fet *ko'zɛ*
what do-you what
'What do you do?'

b. $\{_{VP}$ fa, *ko'zɛ*$_F\}$ *(generation of VP)*

c. $\{v_F \{_{VP}$ fa, *ko'zɛ*$\}\}$ *(generation of v-phase)*

d. $\{_{FP}$ *ko'zɛ*$_F \{v_F \{_{VP}$ fa, *ko'zɛ*$\}$ *(IM of wh to edge of v* + labeling by F*)*

Following a suggestion by Chomsky, the F feature on wh-elements and phase heads can be understood as a type of generalized "force feature F, subsuming Q as a special case" (2013: 47); wh-elements may then be compatible with a range of interpretations, "[their] interpretation as interrogative, relative, exclamative determined by structural position" (Chomsky 2015: 13 fn. 16).

Let us note further that labeling by F in the v-phase is not a necessary step, see for instance step (4c) in the derivation of wh-fronting. Recall that from a minimalist standpoint operations occurring in the syntactic workspace are optional: their licensing is strictly established at the interfaces (Chomsky 2021). However, labeling is a possible step. In fact, this is the null hypothesis on the natural assumption that the system lacks the look-ahead property that could instruct the derivation on how to proceed on the basis of contextual restrictions imposed from above (i.e. selection). In line with Belletti (2008), we then assume that labeling by F in the v-phase is licensed as a Focus configuration at C-I. Consequently, by entering into labeling, *ko'zɛ* is frozen at the edge of v and becomes unavailable for further IM.

Proceeding with the construction of the interrogative C-phase, we propose that wh-doubling grammars may resort to EM of an additional wh-element in order to lexicalize wh-scope. We assume for simplicity that the wh-element *koza* 'what' is directly drawn from the lexicon at this

[4] The underlying assumption here is that IM-copies are invisible to the Labeling Algorithm (Chomsky 2013; see Rizzi 2015: 326, on why this assumption is compatible with the copy theory of movement).

point and merged at the edge of C.[5] In consonance with our preceding discussion about labeling of criterial configurations, the Q criterial configuration is labeled by an agreeing F-feature shared by the wh-element *koza* and the C phase head, as in (24e).

(24) e. $\{_{FP}$ *koza*$_F$ $\{C_F$ fet $\{_{FP}$ *ko'zɛ* …$\}\}\}$

The derivation developed so far can thus account for why *ko'zɛ* must remain clause-internally. However, the left-peripheral *koza* is not assigned a θ-role at the edge of C. This is once again where the role of FC becomes crucial, which connects *koza* to the lower θ-role-bearing *ko'zɛ* by means of their c-command relation and identity of wh- and φ-features, creating the wh-sequence <*koza, ko'zɛ,* ~~*ko'zɛ*~~>. In other words, by virtue of FC *koza* can be 'θ-linked' (Chomsky 2021: 26) despite being merged in an A'-position.

In the case of cross-sentential wh-doubling, like (9) above, the embedded sentence has the same derivation as that just seen in (24). Suppose however that unlike what happens in (24e) the higher wh-element does not Agree with C, and consequently does not enter into the labeling of the CP. The derivation can then be continued by IM of the higher wh-phrase, as sketched in (25) for the derivation of (9a). As usual, application of FC between *koza* and *koz'ɛ* licenses their being part of the same wh-sequence at C-I.

(25) a. … $[_{CP}$ *koza* k $[_{IP}$ ɛl faɣɛ $[_{FP}$ *koz'ɛ* $[v_F$ $[_{VP}$ ~~faɣɛ *koze*~~]]]]
b. $[_{FP}$ *koza* pɛnsɛt $[_{IP}$ I $[_{vP}$ ~~*koza* pɛnsɛt~~ $[_{CP}$ ~~*koza*~~ k $[_{IP}$ ɛl faɣɛ $[_{FP}$*koz'ɛ*
…

So far we have only considered cases where FC applies between items with identical φ-features. However, as Chomsky (2021) also suggests in considering cases of anaphoric binding, FC may apply between items that are not strictly speaking identical from a featural point of view. Doubling varieties that make use of an invariant scope-marker ('type C' varieties), as in (7) above, indeed provide support for the conclusion that FC need not apply just in the case of featural identity among the members of the copy-pair. We therefore propose that FC is not driven by featural identity but by the next most restrictive condition, i.e. non-distinctness. The degree of tolerance towards non-distinct features among the members of the wh-sequence is a matter that must be established at the S-M interface, according to language-particular rules (cf. Section 4).[6]

One question that arises is why FC does not ultimately lead to the deletion of the lower wh-elements in the case of wh-doubling, unlike what happens in the case of IM, as in, e.g., (25) above. In cases of doubling of type C, like (7) we may appeal to the classical notion of recoverability. For instance, in (7a), deletion of the lower wh-phrase would eliminate non-recoverable information about φ-features. However, this solution clearly does not generalize to

[5] Alternatively, one may assume that a minimal wh-pronoun (in the sense of Kratzer 2009) is merged in this position, i.e. a wh-D with unvalued φ-features. The minimal pronoun may then enter into Agree with a lower wh-phrase and value its φ-features accordingly (cf. den Dikken 2018 for an analysis along these lines for Germanic wh-scope marking and wh-copying; cf. Manzini and Rugna 2023).

[6] As noted in section 2, one *wh*-element that appears to be consistently ruled out in wh-doubling configurations is (the counterpart of) *why*. Luigi Rizzi (p.c.) points out that this generalization can be captured rather straightforwardly under our proposal by the assumption that *why* (and its cross-linguistic equivalents) can only be merged in the C-phase (e.g. Rizzi 2001).

cases where recoverability holds, like (5)-(6). We therefore assume that deletion at S-M may not target elements entering into the labeling of criterial configurations on pains of rendering such configurations illegible at the interfaces.

4. On parametric variation

In this section, we briefly consider issues pertaining to parametric variation. It is important to note at the outset that we take parameters to be descriptive statements relating to language-specific externalization systems. Parameters are therefore not (sets of) choices internal to the language faculty (cf. Chomsky, Gallego and Ott 2019: 244-245). It should go without saying that parameters so conceived must still adhere to – and not be in conflict with – the set of grammars defined by UG. Descriptive statements like those below therefore go towards showing that some basic learnability conditions (essentially, consistency with UG) are met by the grammars investigated.

A first question that must be addressed is why the wh-doubling derivation of NIR should not extend to closely related languages, like Italian, and derive e.g. (26).

(26) **Cosa* hai visto *cosa*?
what have.2S seen what
'What did you see?'

The Focus position is available for labeling in Italian (Belletti 2008), hence the derivation might in principle be extended by EM of *cosa* in the scope position and its subsequent connection with the lower *wh*-element by FC. In fact, we assume that nothing in the syntax itself prevents the generation of (26). This is desirable on independent minimalist grounds, as the burden of explanation must be placed on interface-related conditions. For (26), we then assume that the derivation may go through in the narrow syntactic component, but crashes at the S-M interface on the basis of language-specific conditions. In particular, we may assume that a condition informally statable in the terms of (27) may hold at S-M.

(27) Wh-doubling parameter
Q and Focus spell-out independently: yes/no

The positive setting of (27), requiring that Q and Focus be split at S-M, derives wh-doubling grammars. Such grammars therefore enforce a derivation where criterial configurations are labeled (hence interpreted as such at the interfaces), regardless of whether labeling takes place after the wh-phrase undergoes IM (as in the most embedded vP) or EM (as in subsequent phases) in phase edges. The negative setting of (27) will instead derive wh-fronting and wh-in situ languages, where Q and Foc are not spelled out independently (28b, c).

(28) a. $[_{\mathbf{FP}}\, wh_F\ C_F\ [_{IP} \dots\ [_{\mathbf{FP}}\, wh_F\ v_F]]]$ (wh-doubling)
b. $[_{\mathbf{FP}}\, wh_F\ C_F\ [_{IP} \dots\ [_{\mathbf{vP}}\, \sout{wh_F}\ v_F]]]$ (wh-fronting)
c. $[_{CP}\ C_F\ [_{IP} \dots\ [_{\mathbf{FP}}\, wh_F\ v_F]]]$ (wh-in situ)

The parameter distinguishing wh-fronting and wh-in situ languages may be captured by various means. Here we tentatively adopt the formulation in (29), according to which wh-in situ languages are characterized by the requirement of spelling out (and therefore labeling) the

Focus configuration. The negative setting of (29) instead derives the unmarked word order of wh-interrogatives in English and Italian among other languages. To account for languages like Brazilian Portuguese and Trevisian, where both wh-in situ and wh-fronting are legitimate strategies for answer-seeking interrogatives (Kato 2013, Bonan 2021), we may simply assume that (29) is not active in the relevant grammars. Optionality therefore arises, and the spell-out may target either the Q or the Focus configuration – but not both, due to the negative setting of (27).

(29) Wh-in situ/fronting parameter
Spell-out Focus: yes/no

A related issue to consider is that, as far as we can see, there is no clear correlation between parameters in the wh-dependencies that we consider. That is, the positive setting of (27) does not entail the positive setting of the 'wh-in situ' parameter in (29) (or vice versa). Although the parameter involved in both wh-doubling and wh-in situ gives rise to the spell-out of Focus, there is no attested implicational relation between the two grammars. Indeed, as Manzini and Savoia point out, some NIR varieties like "Civate and Olgiate have wh-doubling but not wh-in situ", and conversely "Cologno has wh-in situ but not wh-doubling (as does Bellunese)" (2011: 107).

Let us then turn to considering the parametric variation among the doubling varieties of type A, B and C described in section 2. The differences among these varieties amount to aspects of the lexicon and/or conditions holding at the S-M interface. Thus the parameter discriminating between varieties of type A and B, for instance, can be reduced to the availability of wh-clitics in the language. Quite simply, we may postulate that the presence of type A in a variety depends on the availability of wh-clitics in its lexicon. In the absence of wh-clitics, the grammar makes use of regular non-clitic wh-elements to construct the wh-sequence, giving rise to wh-doubling of type B (which may coexist alongside type A as it does in several varieties).[7]

An explanation in terms of lexical properties does not lend itself very straightforwardly to accounting for wh-doubling of type C, which makes use of an invariant *what*-like element in the scope position to construct the wh-sequence. For such varieties, it may be assumed that S-M conditions regulate the realization of the members of the copy-pair generated by FC, as in the parameter in (30) (cf. Chomsky's 2001 Maximization Principle)

(30) Type A/B vs C parameter:
In a copy-pair, maximize matching with respect to formal features (wh, φ, N…) (yes/no)

Specifically, we assume that elements in a copy-pair must enter into agreement (i.e., matching) relation if the parameter is set positively. This leads to type A/B varieties, which require maximal matching in the featural composition of the members of the copy-pair (31a). The negative setting of the parameter is instead exploited by varieties of type C (31b). The parameter in (30) can also remain unvalued, and therefore allow for multiple options, as attested at least in Mendrisio (cf. Section 2).

[7] Though we cannot enter into details here, we note that lexical properties of the language are implicated also in the possibility of realizing criterial positions by phase heads, rather than by wh-phrases, as attested in e.g., Q-particle languages such as Japanese (Nishigauchi 1990) and Mandarin Chinese (Cheng 1991), among others.

(31) a. %<[$_{DP}$ *ki* **wh φ$_{+human}$**], [$_{DP}$ *ki* **wh φ$_{+human}$**]> → OK at S-M if (30) is positive (type A/B))
b. %<[$_{DP}$ koza wh φ], [$_{DP}$ ki wh φ$_{+human}$]> → OK at S-M if (30) is negative (type C)

Insofar as conditions of the type advocated here can be maintained, the core of the derivation developed above does not change. We leave it to future research, however, to provide a full-fledged account of further parametric differences.[8]

5. Conclusion

This paper argued that wh-dependencies may involve partial wh-movement to the edge of v and subsequent labeling of the configuration by the F(orce) feature. Being frozen in a labeled configuration, the wh-phrase cannot undergo further IM on pains of disrupting the label (Chomsky 2015). Grammars involving partial wh-movement thus instantiate derivations where IM of an element is blocked, despite being the more economical option under resource restriction (cf. the control analysis of Chomsky 2021).

Here, the possibility of freezing a wh-element is made available by (i) the third-factor principle of no-look ahead, potentially leading to labeling by Agree in the current phase; and (ii) language-specific S-M conditions, dictating whether or not a given criterial configuration must receive phonological content. More specifically, we proposed that doubling grammars are characterized by the requirement for the split spell-out for the Q and Focus criterial configurations (which is instead set negatively in wh-fronting/in situ; cf. Section 4). Due to the scope of this article we leave open to future research how more fine-grained parameters can be captured under the current proposal, as well as how Q-scope can be determined in wh-in situ (though we note in passing that the current proposal favors an unselective binding approach à la Nishigauchi 1990; cf. Cheng 1991).

Labeling of non-scopal configurations by Agree therefore opens up the derivational possibility, exploited in wh-doubling, of merging additional copies, which may extend the chain up to the scope position. The newly merged element, requiring a theta-role, obtains the latter via FC under conditions on Σ. We moreover proposed that FC is not restricted by featural identity between the members of the copy-pair, but by the most restrictive condition, i.e., non-distinctness.

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[8] For instance, doubling of type B in Pagotto appears to be restricted to the counterpart of *what* (Bonan 2019: 36 and references cited therein). It may then be postulated that the members of the copy-pair may not involve [human] features in Pagotto, thereby excluding doubling with *who* in this variety. Different types of featural agreement is also what characterizes differences in patterns of so-called wh-scope marking and wh-copying across Germanic varieties; see Manzini and Rugna (2023) and Rugna (2023: §5.4) for further details.

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Quaderni di Linguistica e Studi Orientali- QULSO
Working papers in Linguistics and Oriental Studies

Firenze University Press
https://oajournals.fupress.net/index.php/bsfm-qulso

Citation: R. Petrosino, J. Sprouse, D. Almeida (2023) Asymmetries in the stem and suffix masked priming response in a large-scale online study. *Qulso* 9: pp. 177-194. doi: http://dx.doi.org/10.13128/QULSO-2421-7220-15154

Data Availability Statement: All relevant data are within the paper and its Supporting Information files.

Competing Interests: The Author(s) declare(s) no conflict of interest.

Asymmetries in the Stem and Suffix Masked Priming Response in a Large-Scale Online Study

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Abstract:

Models of visual word processing incorporate morphological decomposition as a step in the recognition process, but they vary as to when this step happens, and what kind of information is used in it. In particular, the affix stripping model proposes that words are accessed through their stems, after affixes are automatically stripped off. This dichotomy between stems and affixes seems to be mirrored in masked priming. Masked stem priming is quite robust and comparable to masked repetition priming, whereas masked affix priming is often null, or very small. However, the literature on masked affix priming is much smaller than the one on masked stem priming. This study investigates the stem vs suffix asymmetry in masked priming by running an online experiment with a large sample size (*N*=161) to ensure higher statistical power. For comparison and validation, the same experiment was also conducted in a standard lab setting. In addition, we ran a follow-up experiment with two additional suffix priming conditions with an even larger sample size (*N*=400) to assess the influence of orthographic and strategic confounds. The three experiments show significant stem priming, but null or very small suffix priming, thus supporting the asymmetry between stem activation and affix stripping.

Keywords: *Affix Stripping, Lexical Access, Morphological Decomposition, Suffix Priming, Visual Word Processing*

1. Introduction

Models of visual word processing often posit that morphologically complex lexical entries are decomposed into their morphemic constituents in the process of lexical access, although details vary as to whether the decomposition happens early or late in the recognition process (Baayen *et al.* 1997; Taft 2004), and whether morphological decomposition is blind to semantics or not (Feldman *et al.* 1999; Rastle et al. 2000; Feldman *et al.* 2004). Evidence for an early, semantic-blind decomposition

stage as claimed in the affix stripping model decomposition (Taft 1994) comes from a series of masked priming findings wherein a monomorphemic word (called *target*: e.g., *DRIVE*) is recognized faster when preceded by a morphologically related word (called *prime*: e.g., *driver*) that is masked (i.e., visually presented for such a short time, 40-60 ms, so that subjects do not consciously perceive it), but also wherein a monomorphemic target (e.g., *BROTH*) is recognized faster when preceded by a seemingly, but not actually morphologically related prime (morphologically "opaque" words; e.g., *brother*, which does not mean "someone who broths", even though it displays the *-er* agentive suffix). Crucially, a similar facilitation fails to obtain when the target (*BROTH*) is only orthographically similar, with no possible morphological parse of the prime (e.g., *brothel*, where *-el* is not an extant English suffix; Rastle et al. 2004). This pattern of results has been argued to support a procedure of MORPHOLOGICAL DECOMPOSITION (henceforth, MD) occurring early in word processing and prior to lexical access, as it seems to rely on the morpho-orthographic form of morphemes (that is, the phonological realization and the orthographic sequence of letter strings associated with a given morpheme; in this sense, *-er* would elicit decomposition, but *-el* would not), and does not depend on semantic interpretation (since *-er* elicits decomposition even in morphologically opaque, monomorphemic words like *brother*). However, the affix stripping model makes the extra assumption that only *stems* are used for lexical search, whereas affixes are just stripped off (Taft and Forster 1975; Taft 1981). This would predict that masked affix priming may either not occur or be very weak under the same circumstances where masked stem priming is robust. This prediction seems to be borne out. On the one hand, the literature of masked stem priming has reported robust effects across languages, even with different systems of word formation (e.g., Semitic languages: Frost et al. 2001; Boudelaa and Marslen-Wilson 2001). On the other hand, masked affix priming, while comparatively understudied, provides less robust results across different languages (among others, English: Crepaldi *et al.* 2016, Petrosino 2020; French: Giraudo and Grainger 2003; Italian: Giraudo and Dal Maso 2016; Spanish: Dominguez *et al.* 2010, Andoni Duñabeitia *et al.* 2008; for a review, Amenta and Crepaldi 2012). However, while masked affix priming results seem to be less robust than masked stem priming, it is hard to ascertain whether they are really null, as the affix stripping model would predict, or just much significantly smaller than stem priming effects. The results in the literature could be used to support either conclusion, and there is an unfortunate trend in the literature to consider small effect sizes as null if they are not statistically significant, which is never a warranted conclusion, even when statistical power is taken in consideration (which is rarely done anyway).

Here, we turn to internet-based online experimentation to provide a well-powered test for the asymmetry between affix masked priming response – in particular, the *suffix* masked priming response – compared to the stem masked priming response. Online experimentation has three main advantages: (i) an order of magnitude increase in the potentially recruitable sample size; (ii) dramatic decrease in the time needed to test a desired sample size; and (iii) easy access to populations that may not be easily available in lab based experiments. In recent years, the number of cognitive science labs and departments capitalizing on the HTML5 capabilities has rapidly increased, also thanks to the proliferation of stable and powerful software packages for stimulus delivery and data collection. Here we provide a test of *Labvanced* (Finger *et al.* 2017), a GUI-based web app that allows researchers to dispense with local installation issues (thus preventing potential incompatibilities with the CPU of the local machine and ensuring cross-platform consistency) and yet another programming language to learn (thus facilitating experimental designing and deployment). The same experiment was conducted online with a larger sample size than ever reported before (experiment 1a; N=161). At the same time, the very

same experiment was also conducted in the traditional setting of a controlled room, albeit with a smaller sample size (*N*=58), as a way to further assess the reliability of the online environment (experiment 1b). Both experiments show comparable results, and in particular no priming effects in the affix priming conditions tested. We then carried out a follow-up study, in which we tested additional affix priming conditions (experiment 2), with an even larger sample size (*N*=400). The combined results show little to no evidence of there being masked suffix priming effects, and therefore seem to be compatible with an affix-stripping model of MD.

2. Experiment 1

In experiment 1, we tested the suffix masked priming response to bimorphemic word targets preceded by bimorphemic word primes sharing the same suffix. We tested two suffix priming conditions, each with the same suffix recurring throughout. This was done to assess the potential decomposition and activation of each suffix, rather than mixing them up in a single condition (as usually done in stem priming conditions, in which words with different stems and affixes are grouped together). We chose two of the most productive English suffixes: *-er* (agentive suffix; derivational morpheme), and *-s* (plural suffix; inflectional morpheme). All words tested were nouns, to avoid the potential overlap in the activation of homophonic morphemes (i.e., *-er* is also the surface representation of the comparative suffix; *-s* is also the surface representation of the 3SG.PRES verbal suffix). As a way to assess the effect size of the suffix priming response, we additionally tested the typical spectrum of relatedness between prime and target words reported in the literature: repetition or identity (in which the same word is presented as both prime and target), morphological (in which the target is the morphological stem of the corresponding prime), orthographic (in which prime and target words are orthographically similar, but not related morphologically nor semantically), and semantic (in which prime and target words are semantically connected, but not related orthographically nor morphologically). The same experiment was conducted both online (experiment 1a) and in lab (experiment 1b), so to (i) validate the experimental results of the data collected online and (ii) assess replicability across different data collection settings and sample sizes.

2.1 Methods

Two-hundred and forty words were selected from the English Lexicon Project database (ELP; Balota *et al*. 2007) to construct twenty word pairs of each of the six conditions tested. In the identity condition, the same monomorphemic word was presented as both prime and target (e.g., *shrimp-SHRIMP*). In the stem condition, a bimorphemic word was presented as prime and its corresponding stem as a target (*boneless-BONE*). In the plural condition, regular plural nouns were presented (*worlds-HEAVENS*). In this condition, we made sure that all plural forms had the [z] allomorph of the suffix to avoid potential confounds due to the phono-orthographic differences with the other allomorphs (i.e., [ɪz, s]). We also made sure that all plural forms were less frequent than the corresponding singular forms, to avoid potential confounding effects due to relative whole-word frequency (*dominance*; Baayen *et al*. 1997). In the *er*-condition, words ending with the suffix *-er* were presented (*driver-RUNNER*). In the semantic condition, monomorphemic word pairs involving a semantically (but not morphologically or orthographically) transparent relationship were presented (*squid-OCTOPUS*). Finally, in the rhyme condition word pairs sharing the rightmost phono-orthographic portion were presented (*casket-BASKET*). Because we are interested in the priming effects within each

condition, it was not necessary to control lexical properties such as frequency (HAL) and orthographic length across all conditions. The conditions were split into two different groups. The first group of conditions included the identity, semantic, and plural conditions, since we wanted to compare the priming effects to the first two conditions (which we expect to elicit large and small-to-null effects, respectively) to the plural condition (which is one of the crucial experimental conditions tested here). We matched the frequency of prime words of the plural and semantic conditions, and the target words of the plural, identity, and semantic conditions (primes: $F(2, 57)=0.878$, $p=.42$; targets: $F(3, 76)=0.784$, $p=.51$). Orthographic length was not controlled due to interdependency between the several constraints applied in word selection. For this reason, the length of the prime words significantly varied across conditions, but it did not after removing the semantic condition ($F(1, 38)=0.018$, $p=.89$). The length of all target words did not vary across conditions ($F(3, 76)=1.90$, $p=.14$). The second group of conditions included the stem, *er*-, and rhyme condition, as a way to gauge potential asymmetries in the priming response to stem and suffix priming; the rhyme condition was tested to parse out the potential effects of phono-orthographic priming. While frequency did not vary across conditions (primes: $F(2, 57)=1.50$, $p=.23$; targets: $F(2, 57)=0.008$, $p=.99$), orthographic length could not be controlled across conditions due to the idiosyncrasies of the conditions tested: the *er*-condition consisted of bimorphemic primes and targets, the rhyme condition consisted of monomorphemic primes and targets, and the stem condition consisted of bimorphemic primes and monomorphemic targets. Descriptive statistics of the lexical properties of each condition are reported in Table 1 below. An additional subset of one hundred and twenty words that were unrelated to each target along all possible dimensions were also chosen from the ELP and were used as unrelated primes. They were matched with the corresponding related prime as much as possible in frequency ($t(139)=-0.43$, p=.66) and orthographic length ($t(139)=-1.64$, p=.10). The complete word list is reported in the appendix.

	ITEM TYPE	CONDITION	HAL LOG FREQUENCY	ORTHOGRAPHIC LENGTH
GROUP 1	related primes	plural	6.74 (1.90)	7.4 (1.05)
		semantic	7.37 (1.49)	5.85 (2.08)
	targets	plural	7.34 (1.50)	6.8 (1.20)
		identity	7.52 (0.33)	6.45 (0.51)
		semantic	7.30 (0.61)	6 (1.12)
GROUP 2	related primes	stem	6.72 (0.55)	6.3 (0.80)
		er	6.50 (0.11)	6.55 (0.76)
		rhyme	6.46 (0.694)	5.85 (0.49)
	targets	stem	8.44 (1.24)	4 (0.73)
		er	8.41 (0.543)	6.5 (0.69)
		rhyme	8.43 (1.24)	5.95 (0.61)

Table 1. Mean and sd (in parenthesis) of the lexical properties of the items selected for experiment

Finally, one-hundred and twenty non-words were selected from the ELP database, so that they matched in length with the word target items of the first group condition (mean: 6.22, sd: 1.30; $F(4, 215)=1.71$, $p=.15$). One hundred and twenty bimorphemic words from the ELP

(different from the words used in the word-word conditions described above) were selected as unrelated primes of the non-word target items.

We then constructed two different word lists. In one list, the six word conditions had half of the targets preceded by the corresponding related prime; and the other half preceded by the unrelated prime. In the other list, the order was reversed. The two lists presented the same set of target words and non-words (120 word-word pairs + 120 word-nonword pairs = 240 pairs in total). Labvanced automatically assigned each participant a list, so that all participants would see the same target items, but differed in the list being assigned.

2.2 Procedure

2.2.1 Experiment 1a (online)

Experiment 1a was conducted online. One hundred and sixty-one native English speakers (71 females; age mean: 41.32, age sd: 13.73) were recruited on Cloud Research and Prolific. All participants were located in the U.S., had English as their first and only language; none of them reported any neuro-cognitive impairment. Participants were asked to perform a lexical decision task on Labvanced by pressing keys on their keyboard. Each trial consisted of three different stimuli appearing at the center of the screen: a series of hashes (#####) presented for 500 ms, followed by a prime word and finally the corresponding target word, which disappeared from the screen at button press. The prime duration was set to 33 ms because a pilot study had shown that setting prime duration to a longer duration would lead to a higher number of trials with the prime duration fluctuating beyond the subliminal threshold (>60 ms). Participants were also given a few breaks throughout the experiment to avoid exertion. The experiment lasted around 11 minutes on average.

2.2.2 Experiment 1b (in-lab)

Experiment 1b was conducted in a sound-shielded room at New York University Abu Dhabi. Fifty-five native English speakers (39 females; age mean: 28.27, age sd: 9.73) participated in the experiment with the same inclusion criteria indicated above. The task was the same as described above for experiment 1a, with the only difference being that the items were presented on PsychoPy (Pierce *et al*. 2019). Each participant received either course credit or a gift voucher.

2.3 Analysis & results

The two datasets were analyzed separately as follows. We will discuss the results of both experiments in a single section below.

2.3.1 Experiment 1a (online)

Prior to analysis, the dataset (consisting with a total of 45,080 observations) went through three steps to remove outliers. Current online stimulus delivery programs offer sub-optimal timing precision, which may dramatically depend on a number of uncontrollable variables, such as the system specifications (operative system, CPU), the browser used by each participant, as well as the number and the type of programs remaining active in the background.

Therefore, as a first step we removed all trials in which the duration of the prime word was out of an acceptable range to elicit masked priming. The target duration was 33 ms (corresponding to 2 refresh cycles in a standard 60-Hz monitor). The upper bound was set to 60 ms, as priming subliminality has been shown to arise as long as the prime item is presented below that threshold (Forster 1999; Forster *et al*. 2003). This meant that we kept trials with a prime word being presented for up to 3 complete refresh cycles in a standard 60-Hz monitor (roughly corresponding to 48 ms). The lower bound was set to 25 ms, which is half a cycle (i.e., 8 ms) away from the target duration; this was done to remove trials with subliminally undetectable primes. This meant that 15% of the trials were removed from analysis. In the second step, we removed 4 subjects whose error performance was above 30%. We also removed 2 items whose overall error rate was above 30% (*dogmas, wean*). After this step, we removed one extra subject because they had at least one condition with a number of trials that was lower than 5. Finally, in the third step, we removed 0.62% trials with RTs that were below 200 ms or above 1800 ms (as suggested by Ratcliff 1993). The final shape of the dataset had 20,460 observations (word trials only) and 157 subjects.

Priming calculations and statistical analyses involved the word trials only. For each condition, we calculated priming as the difference between the RTs to related trials and RTs to unrelated trials. The mean response time (RT), standard deviations (SD), Pearson's *r*, raw priming magnitudes, and standardized effect sizes (ES; Cohen's *d*) of the conditions tested are reported in Table 2 below. As Figure 1 shows, the identity and stem conditions elicited medium-size priming (~20 ms), the rhyme condition elicited small priming (10 ms), and the semantic condition negative priming (-3 ms). Both suffix conditions (the plural and the *er*-conditions) elicited small priming effects (3 and 5 ms, respectively), thus being more comparable to semantic effects than to morphological effects.

	CONDITION	EXAMPLE	MEAN RELATED RT (SD)	MEAN UNRELATED RT (SD)	*PEARSON'S* CORRELATION	PRIMING (SD)	ES
GROUP 1	identity	*glance-GLANCE*	642 (110)	661 (110)	0.79	19 (72)	0.26
	plural	*worlds-HEAVENS*	677 (113)	680 (112)	0.76	3 (79)	0.04
	semantic	*squid-OCTOPUS*	659 (111)	656 (107)	0.84	-3 (61)	-0.05
GROUP 2	stem	*driver-DRIVE*	622 (100)	640 (99)	0.79	18 (65)	0.28
	er	*driver-RUNNER*	635 (109)	640 (98)	0.80	5 (66)	0.08
	rhyme	*casket-BASKET*	634 (107)	653 (96)	0.77	10 (69)	0.15

Table 2. Summary of the priming effects elicited in experiment 1a.

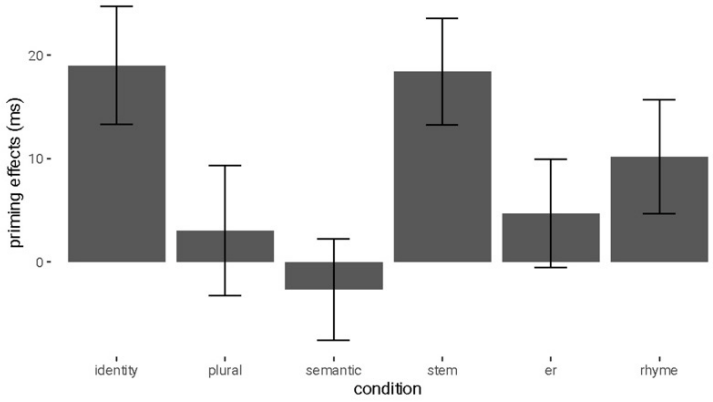

Figure 1. Priming effects for experiment 1a. Error bars represent one standard error from the mean in either direction.

For each condition we ran a *t*-test for RELATEDNESS (2 levels: related vs. unrelated). The details of the statistical results (*t*-values, dfs, and *p*-values) are reported in Table 3 below. The identity and stem conditions elicited significant priming, and the semantic condition did not. These results are reassuring, in that they are in line with the previous literature on masked priming and validate the reliability of the results of the other conditions. The rhyme condition elicited trending-to-significant priming effects, whereas neither suffix priming condition (i.e., the plural condition nor the *er*-condition) elicited significant effects.

	CONDITION	*T* (DF)	*P*-VALUE	SIGN.
GROUP 1	identity	-3.30 (2963)	0.001	*
	plural	-0.489 (2743)	0.625	n.s.
	semantic	0.449 (2937)	0.653	n.s.
GROUP 2	stem	-3.22 (2781)	0.001	*
	er	-1.05 (3016)	0.294	n.s.
	rhyme	-1.85 (2975)	0.065	(*)

Table 3. Summary of the statistical results for experiment 1a.

2.3.2 Experiment 1b (in-lab)

Prior to analysis, the dataset (consisting with a total of 15,400 observations) went through the same outlier rejection pipeline described for experiment 1a. Experiment 1b was carried out in the lab, so the prime duration could be maintained constant at exactly 33 ms. Therefore, no

trial had to be removed because of out-of-range durations. None of the subjects had an error score higher than 30%, so no subject was removed from analysis because of it. We removed three items whose overall error rate was above 30% (*dogmas, vane, wean*). Finally, we removed 0.33% trials with RTs that were below 200 ms or above 1800 ms. The final shape of the dataset had 7,236 observations (word trials only) and 55 subjects.

Priming calculations and statistical analyses involved the word trials only and were performed in the same way as described above. The mean RTs, standard deviations, Pearson's *r*, raw priming magnitudes, and standardized effect sizes (ES; Cohen's *d*) of the conditions tested are reported in Table 4 below. As Figure 2 shows, the identity and stem conditions elicited medium-size positive priming (30 and 13 ms), along with the rhyme condition (19 ms), and the semantic condition negative small priming (-7). Both suffix conditions (the plural and the *er*-conditions) elicited small priming effects (2 ms for each), thus being more comparable to semantic effects than to morphological effects.

	CONDITION	EXAMPLE	MEAN RELATED RT (SD)	MEAN UNRELATED RT (SD)	*PEARSON*'S CORRELATION	PRIMING (SD)	ES
GROUP 1	identity	*glance-GLANCE*	617 (86)	647 (77)	0.56	30 (77)	0.39
	plural	*worlds-HEAVENS*	648 (92)	650 (74)	0.49	2 (85.7)	0.02
	semantic	*squid-OCTOPUS*	645 (82)	638 (74)	0.72	-7 (59)	-0.12
GROUP 2	stem	*driver-DRIVE*	616 (95)	629 (75)	0.59	13 (79)	0.17
	er	*driver-RUNNER*	625 (79)	627 (82)	0.54	2 (77)	0.03
	rhyme	*casket-BASKET*	619 (81)	638 (92)	0.77	19 (59.7)	0.32

Table 4. Summary of the priming effects elicited in experiment 1b.

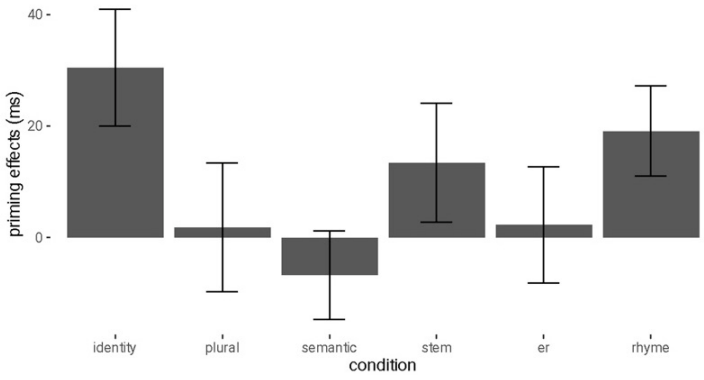

Figure 2. Priming effects for experiment 1b.
Error bars represent one standard error from the mean in either direction.

Statistical analyses were performed in the same way as described for experiment 1a. The details of the statistical analysis are reported in Table 5 below. The identity elicited significant priming. The other conditions did not.

	CONDITION	*T* (DF)	*P*-VALUE	SIGN.
GROUP 1	identity	-3.14 (1059)	0.002	*
	plural	-0.2 (970)	0.841	n.s.
	semantic	0.711 (1040)	0.477	n.s.
GROUP 2	stem	-1.27 (920)	0.203	n.s.
	er	-0.205 (1065)	0.838	n.s.
	rhyme	-1.76 (1060)	0.079	n.s.

Table 5. Summary of the statistical results for experiment 1b.

2.4 Discussion

The goal of Experiment 1 was to address the asymmetry between the (consistently large) stem priming effects and the unreliable affix priming effects, by eliciting them both in an experiment with a larger-than-usual sample size. As a way to further assess the reliability and replicability of the data collected independently of the setting, we ran the same experiment both online (experiment 1a) and in-lab (experiment 1b). In both experiments, the two suffix priming conditions (i.e., the *er*- and the plural conditions) showed no significant priming along with the semantic condition and the rhyme condition. The identity condition elicited significant priming effects in both experiments, whereas stem priming was not significant in experiment 1b. The unexpected null effect (and small effect size) for stem priming in experiment 1b was likely due to the low sample size and the short prime duration.

The general consistency of the results for these conditions provides further evidence for the asymmetry reported in the literature between stem and affix priming: the average stem priming effect in the two experiments was 15.5ms, whereas the average suffix priming effect in the two experiments was five times smaller, only 3 ms. This is compatible with the proposal from the affix stripping model of lexical access. Nonetheless, two potentially interacting confounding factors were identified that could explain the absence of suffix priming in this experiment. First, the numerically much smaller effect size in the suffix priming conditions could be due to the unusually short prime duration of 33 ms. Perhaps the morphological parser does not have the time necessary to get to the end of the suffixed prime word (i.e., where the suffixal orthographic unit occurs) and activate the corresponding lexical entry, thus inhibiting suffix priming. Second, the lack of suffix priming effects could just be due to the minimal morpho-orthographic overlap within the pairs of these conditions. The two suffix priming conditions only involve a one-letter (*-s*) and a two-letter (*-er*) suffixes, respectively. Therefore, such minimal overlap might have just been not enough for priming to arise in these conditions, especially at such a short

prime duration. Similarly, the unexpected significant rhyme priming effects could be explained as triggered by the overly large proportion of orthographic overlap in the rhyme condition. For this reason, we ran a follow-up experiment that could overcome such potential confounds.

3. *Experiment 2 (online)*

Experiment 2 explores the extent to which either (or both) of the two confounds identified above might have impinged on the results of experiment 1. Both the short prime duration and the minimal overlap size might have somehow brought about suffix priming inhibition. In this experiment, we made three crucial modifications from experiment 1. First, we set a longer prime duration (48 ms, roughly equal to three full cycles in a standard 60-Hz monitor), to provide the parser more time to fully process the prime while still ensuring a subliminal prime presentation. Second, we tested two additional suffix conditions involving the two derivational suffixes that are comparably productive, but orthographically longer than the two used in the experiment 1 (4 letter each): *-able* and *-ness*. This was done to gauge the extent to which the orthographic overlap size impinges on the priming response. Should either/both confounds be playing a role in masked priming elicitation, priming would arise in all, or at least in a subset of the four suffix priming conditions tested. Finally, to further enhance the statistical power of the experiment and therefore the reliability of the results, we conducted the experiment online and increased the sample size.

3.1 Methods & procedure

Materials and procedure were the same as in experiments 1a-b. In addition to the six conditions above, we prepared two more suffix priming conditions, consisting of 20 related word pairs each. In the *able*-condition, prime and target words shared the suffix *-able* (*washable-NOTABLE)*; in the *ness*-condition, prime and target words shared the suffix *-ness* (*weakness-SICKNESS*). The words were all chosen from the ELP database. The prime and the targets were matched across the two conditions in frequency (primes: $F(1, 38)=0.024$, $p=.88$; targets: $F(1, 38)=2.22$, $p=.15$) and length (primes: $F(1, 38)=0.18$, $p=.66$; targets: $F(1, 38)=0.02$, $p=.90$), but could not be matched with any of the other conditions tested, in particular because of the different orthographic length of the suffixes involved. Therefore, these two conditions were constructed as an additional, separate group (see Table 2 for the descriptive statistics). Forty unrelated bimorphemic words were used as unrelated primes. They were matched with the corresponding related prime as much as possible in frequency ($t(139)=-0.43$, p=.66) and orthographic length ($t(139)=-1.64$, p=.10). The words of these two conditions are reported in the appendix below. The same word-nonwords pairs used in experiment 1 and 2 were also used for experiment 3, while adding forty more pairs of the same length. The two lists were constructed as described above, with a total of 280 pairs for each list.

	ITEM TYPE	CONDITION	HAL LOG FREQUENCY	ORTHOGRAPHIC LENGTH
GROUP 3	related primes	*able*	6.43 (1.82)	9.11 (0.99)
		ness	6.51 (1.57)	8.95 (1.28)
	targets	*able*	8.39 (1.04)	8.7 (1.38)
		ness	7.82 (1.34)	8.5 (0.95)

Table 6. Mean and sd (in parenthesis) of the lexical properties of the items selected for experiment 2.

The experiment procedure was the same as reported for experiment 1a, with the only difference that the target prime duration was longer and set to 48 ms (corresponding to three full refresh cycles in a standard 60-Hz monitor), instead of 33 ms. Four hundred native U.S. English speakers (200 female; age mean: 42.4; age sd: 13.1) were recruited on Prolific with the same inclusion criteria as indicated for experiment 1a. The average completion time was about 13 minutes, and participants were compensated for their participation.

3.2 Analysis & results

Prior to analysis, the dataset (consisting with a total of 108,000 observations) went through the same three outlier detection steps described above. First, 24% of the trials had a prime duration below 30 ms or above 60 ms and thus had to be removed from analysis. Second, 5 subjects were removed because their error performance was above 30%. We also removed 3 items because their overall error rate was above 30% (*dogmas, dilemmas, wean*). Finally, we removed 0.87% of the trials whose RT was below 200 ms or above 1800 ms. This left 37,623 observations (word trials only) and 295 subjects suitable for analysis.

Priming calculations and statistical analyses involved the word trials only as described above. The mean RTs, raw priming magnitudes, standard deviation, and standardized effect sizes (ES; Cohen's *d*) of the conditions tested are reported in Table 7 below. As Figure 3 shows, the identity and stem conditions elicited medium-size priming (47 and 31 ms, respectively), the rhyme condition elicited medium priming (10 ms), and the semantic condition elicited small priming (7 ms). All suffix priming conditions elicited small priming effects (ranging between -3 and 5 ms).

	CONDITION	EXAMPLE	MEAN RELATED RT (SD)	MEAN UNRELATED RT (SD)	PEARSON'S CORRELATION	PRIMING (SD)	ES
GROUP 1	identity	*glance-GLANCE*	635(127)	682 (120)	0.78	47 (83)	0.57
	plural	*worlds-HEAVENS*	682 (128)	687 (123)	0.72	5 (94)	0.05
	semantic	*squid-OCTOPUS*	662 (114)	669 (115)	0.72	7 (86)	0.08
GROUP 2	stem	*driver-DRIVE*	619 (107)	650 (105)	0.73	31 (79)	0.39
	er	*driver-RUNNER*	651 (108)	648 (107)	0.78	-3 (72)	-0.04
	rhyme	*casket-BASKET*	634 (112)	653 (112)	0.79	10 (74)	0.17
GROUP 3	*able*	*washable-NOTABLE*	668 (115)	671 (117)	0.80	3 (74)	0.04
	ness	*weakness-SICKNESS*	674 (129)	679 (129)	0.64	5 (109)	0.05

Table 7. Summary of the priming effects elicited in experiment 2.

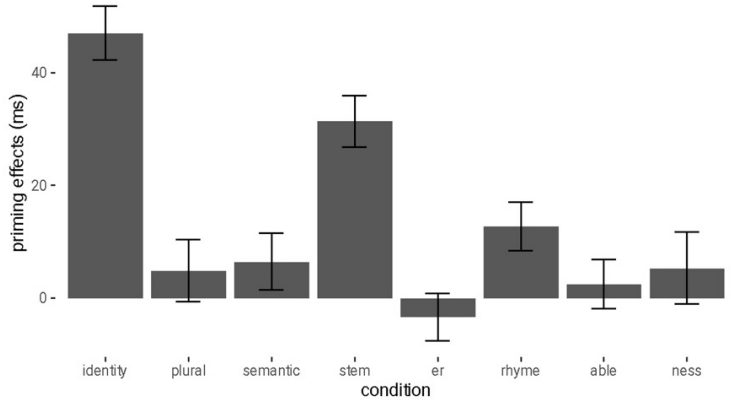

Figure 3. Priming effects for experiment 2.
Error bars represent one standard error from the mean in either direction.

Statistical analyses were performed separately for each of the 8 conditions as described above. The details of the analysis are reported in Table 8 below. The results of experiment 2 are essentially the same as the results of experiment 1.[1] The identity, stem, and rhyme conditions elicited significant priming. Along with the semantic condition, all suffix priming conditions (i.e., the plural, *er-, able-,* and *ness*-conditions) did not elicit significant priming effects.

	CONDITION	*T* (DF)	*P*-VALUE	SIGN.
GROUP 1	identity	-8.28 (4282)	< 1.59e-16	*
	plural	-0.568 (3731)	0.57	n.s.
	semantic	-1.47 (4239)	0.141	n.s.
GROUP 2	stem	-5.91 (3979)	3.8e-9	*
	er	0.06 (4352)	0.95	n.s.
	rhyme	-1.98 (4254)	0.048	*
GROUP 3	*able*	-0.237 (4407)	0.812	n.s.
	ness	-1.05 (4078)	0.292	n.s.

Table 8. Summary of the statistical results for experiment 2.

[1] We take the numerical and statistical discrepancies in the effects elicited across experiments as resulting from natural sampling variance, and therefore are not discussed further.

3.3 Discussion

Experiment 2 was specifically designed to address two potential confounding variables that could have played a role in the results of experiment 1. First, we increased the prime duration to 48 ms, to provide the parser more time to fully process the prime, while still ensuring its subliminal presentation. Second, we added two suffix priming conditions wherein suffixes were orthographically longer than those tested in experiment 1. Third, we increased the sample size to ensure higher statistical power. The results for this experiment were in line with the results of experiment 1: significant priming effects were found in the identity, stem, and rhyme conditions, but in none of the suffix priming conditions (the plural and *-er* conditions, as well as the *-able* and *-ness* conditions). The increase in priming duration (33ms to 48ms) did not increase the affix masked priming effects for the two conditions also tested in experiment 1 (M_{suffix} = 3 ms in experiment 1a-b, M_{suffix} = 1 ms in experiment 2, for the *-er* and *plural* conditions), unlike what was observed for instance in the identity condition ($M_{identity}$ = 25 ms in experiment 1a-b, $M_{identity}$ = 47 ms in experiment 2). The increase in orthographic length of the suffix also did not seem to increase the effect size of the masked suffix presentation: M_{suffix_short} = 3 ms (experiment 1) and 1 ms (experiment 2); M_{suffix_long} = 4ms (experiment 2). Thus, averaging all the effect sizes of suffix masked priming observed across all experiments here, we obtain an estimate of M_{suffix} = 2 ms, which can be safely discarded as either null or theoretically uninteresting. We take stock of all the results reported above, and discuss the theoretical implications thereby in the next section.

4. General discussion and conclusions

In this paper, we reported two experiments aimed at determining whether putative early and automatic morphological decomposition (Taft 2004; Rastle and Davis 2008) is differentially sensitive to stems and affixes. Previous studies have consistently reported such an asymmetry in masked priming studies: masked priming of stems lead to large effects, whereas masked priming of affixes have either null or small effects. The study reported here attempted to directly address this potential asymmetry by eliciting suffix priming on a larger sample size than ever recruited before (N>100) and directly compare it with other relevant effects, such as identity, stem, semantic and orthographic (rhyme) effects. In order to achieve these large sample sizes in a reasonable time frame, we chose to use *Labvanced*, a GUI-based stimulus delivery program that facilitates experiment implementation and deployment without having to use a specific programming language. In both experiments 1 and 2, we attempted to elicit masked priming effects for different suffix conditions, in addition to other theoretically important conditions: identity, stem, rhyme, and semantic relatedness. The combined results of experiment 1 and 2 reveal uniformly small and statistically non-significant *suffix* priming effects, no matter whether shorter or longer prime durations were used (M_{suffix} = 2 ms). Effects of *stem* priming, on the other hand, were substantially larger and statistically significant, and varied as a function of the prime duration (M_{stem_exp1} = 16 ms vs M_{stem_exp2} = 31 ms), mirroring the dynamics of the *identity* condition ($M_{identity\_exp1}$ = 25 ms vs $M_{identity\_exp2}$ = 47 ms). Effects of semantic priming were null ($M_{semantic}$ = -2 ms), while orthographic similarity effects were non-negligible (M_{rhyme} = 13 ms). As reported in the literature, this pattern of results confirms the idea that stem priming is due to morphological relatedness, thus being comparable to identity priming; while ruling out the possibility that it may just be due to a combination of similarity in form and similarity in meaning, which morphologically related words share by definition. The results here strongly suggest that simple meaning similarity does not give rise to masked priming effects

between prime and target words. Orthographic similarity on the other hand seems to give rise to non-negligible effects, but they are still substantially smaller than the stem priming effects, indicating that the latter cannot be reduced to a special case of the former. It should be noted that the orthographic rhyme similarity results observed in our study contrast with previous studies reporting null effects for other types of orthographic similarity (e.g., Rastle et al. 2000: *electrode-ELECT, typhoid-TYPHOON;* Rastle et al. 2004: *against-AGAIN*). Whether this is a function of the particular type of orthographic similarity used in the experiment or some other factor (e.g., online vs. lab setting) merits further exploration.

The contribution of the study reported here is twofold. First, it adds to a growing body of similar studies (e.g., Angele et al. 2022) confirming the feasibility of running masked priming experiments online. Despite current technical limitations preventing equally precise and accurate timing of stimulus presentation in web browsers as can be obtained in the lab, these limitations are seemingly due to the variability of devices used by participants, and may be overcome by applying design-specific rejection criteria. In masked priming experiments, the prime duration is crucial for subliminal prime presentation This can be implemented in a web-based experiment by removing all trials whose prime duration was out of the desired range, or participants in which a substantial proportion of trials had prime durations outside of the desired range. As a consequence, an online experiment may require a substantial increase in sample size (our experience so far indicates at least double the subjects) compared to what would be needed in a regular lab setup. Second, the consistency of null suffix priming effects in our experiments support the affix-stripping model of morphological decomposition in lexical access. At early stages of visual word processing, decomposition occurs on the basis of morpho-orthographic regularities, and eventually triggers lexical activation of the stem, thus leading to priming. However, suffixes do not seem to be activated at all – they are just "stripped off" of the stem, and do not appear to be used in lexical retrieval in the same way stems are, as the latter give rise to priming effects but the former do not. Such a conclusion raises two important questions. (1) Does the same occur for other affixes (prefixes, infixes, etc.) as well? The location of affixes with respect to the stem may indeed impinge on early processing and ultimately priming elicitation. Previous studies on prefixes have however provided mixed results, likely because of lack of statistical power. (2) Why would stems prime more than affixes in the first place, under the assumption that masked priming occurs prior to lexical access, and should therefore be blind to the distinction between stems and affixes? It is crucial to point out that the bulk of the literature of morphological priming is primarily based on English, a stem-based language where words may surface as phonologically identical to the underlying stems. This property of English is not very common cross-linguistically; in many languages (e.g., Romance languages) stems are instead always bound, in the sense that they never occur without at least one grammatical affix. Such an idiosyncratic property may ultimately hinder the more direct comparison between the affix and stem masked priming response, and therefore detection of potential differences between the two. A thorough investigation of stem and affix priming that takes into account such considerations and operationalizes them accordingly is therefore much needed, but must be left for future investigation.

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Appendix

related prime	**unrelated prime**	**TARGET**	**related prime**	**unrelated prime**	**TARGET**
	plural condition			**identity condition**	
sarcasms	canonize	GENDERS	shrimp	enigma	SHRIMP
panoramas	flutist	CHAPTERS	culprit	diploma	CULPRIT
careers	bundled	WAYS	cocoon	fiddle	COCOON
manners	eternity	FELLOWS	tomato	breeze	TOMATO
morals	vaguely	EMPERORS	algebra	villain	ALGEBRA
carpenters	constipated	TAVERNS	ribbon	coffin	RIBBON
goods	mailed	TOWNS	glance	tattoo	GLANCE
valleys	sobbing	DILEMMAS	whistle	persona	WHISTLE
worlds	assumed	HEAVENS	sorrow	coyote	SORROW
councils	inscribed	CEILINGS	fridge	locale	FRIDGE
colonels	possessor	CAMELS	terrace	shackle	TERRACE
kitchens	vengeful	ROADS	toggle	blight	TOGGLE
acorns	rougher	LIZARDS	zodiac	caress	ZODIAC
cancers	booming	PERSONS	acrobat	inferno	ACROBAT
fountains	tormented	DIAMONDS	juggle	saliva	JUGGLE
humans	managed	CREEDS	ghetto	benign	GHETTO
domains	collision	DOGMAS	shuffle	lantern	SHUFFLE
husbands	coastal	MASONS	gorilla	conduit	GORILLA
operas	snowy	PASSIONS	dolphin	sheriff	DOLPHIN
umbrellas	adornment	PROTEINS	tornado	treason	TORNADO

semantic condition			**rhyme condition**		
cauliflower	allegorical	BROCCOLI	ballad	muffin	SALAD
quench	pidgin	THIRST	beetle	pupil	NEEDLE
fork	ugly	SPOON	casket	noxious	BASKET
niece	swipe	NEPHEW	cuddle	midget	SUBTLE
tutu	patron	BALLET	petal	convey	MEDAL
pint	lair	QUART	deceit	cripple	RECEIPT
bee	mat	STING	fennel	mutton	KENNEL
alto	ammo	SOPRANO	ferry	violin	CHERRY
squid	drool	OCTOPUS	hurdle	apron	TURTLE
sprain	thrall	ANKLE	lactic	garnish	TACTIC
wick	tart	CANDLE	lotion	fissure	NOTION
lizard	oxygen	REPTILE	marrow	gradient	NARROW
circus	walnut	CLOWN	zealous	devour	JEALOUS
chipmunk	dandruff	SQUIRREL	mumble	sundry	HUMBLE
grain	panic	WHEAT	rattle	violet	CATTLE
bacteria	frontier	FUNGUS	ravage	troupe	SAVAGE
poem	dose	RHYME	saloon	purport	BALLOON
convince	terrible	PERSUADE	taper	mimic	VAPOR
entertain	intellect	AMUSE	tumor	satin	RUMOR
volcano	scholar	ERUPT	wallow	torrent	HOLLOW
	***er*-condition**			**stem condition**	
scorer	bulging	STALKER	boneless	doctored	BONE
forger	butchered	DANCER	cloudy	sweaty	CLOUD
shipper	outing	BINDER	calmly	dearly	CALM
jogger	excused	FREEZER	dreadful	appealed	DREAD
booker	hostess	HUNTER	egoism	chimed	EGO
grabber	brainless	PREACHER	fondly	eroded	FOND
whiner	sealing	TRAINER	flawless	communal	FLAW
thriller	chopping	CALLER	foggy	renal	FOG
reaper	weaning	MARKER	madden	choked	MAD
cooker	grassy	DRUMMER	waived	choppy	WAIVE
rancher	toxic	BUILDER	acidic	touchy	ACID
golfer	steely	BREEDER	rusted	dreamy	RUST
gunner	likeness	RUNNER	melted	evenly	MELT

stroller	panicked	SENDER	awaken	hinted	AWAKE
drinker	fondness	STICKER	weaned	choral	WEAN
learner	stressing	SCANNER	sadness	agility	SAD
hatter	tickled	FOUNDER	sinful	bridal	SIN
solver	warping	JUMPER	smelly	molded	SMELL
wrangler	sewage	LOVER	vanity	autism	VANE
sniper	bedding	WINNER	wisely	loosen	WISE
	***able*-condition**			***ness*-condition**	
advisable	silencer	PLAYABLE	weakness	container	SICKNESS
honorable	referral	NOTICEABLE	correctness	disposal	FORGIVENESS
washable	theorize	NOTABLE	baldness	childless	KINDNESS
quotable	humorist	ADJUSTABLE	smoothness	distinction	AWARENESS
commendable	vacationing	PAYABLE	blindness	strictest	SOFTNESS
variable	greatest	READABLE	harshness	sparsely	BUSINESS
detectable	timeless	USABLE	fitness	quicker	MADNESS
curable	frontage	PROFITABLE	calmness	vicarious	READINESS
debatable	courageous	DESIRABLE	rudeness	mobilize	GOODNESS
dependable	currencies	PORTABLE	soreness	molesting	UNIQUENESS
traceable	parenthood	VALUABLE	toughness	visionary	ILLNESS
suitable	resistance	ACCEPTABLE	gentleness	voiceless	SWEETNESS
attainable	affliction	RELIABLE	fairness	yearly	SLOWNESS
observable	possessing	REASONABLE	aloofness	flutist	DARKNESS
favorable	adequately	BELIEVABLE	crispness	victimize	HAPPINESS
admirable	descendant	TAXABLE	stubbornness	accentuate	STIFFNESS
pardonable	spiritless	WORKABLE	darkness	coverage	GREATNESS
manageable	imposition	RESPECTABLE	politeness	snapping	HARDNESS
cashable	improviser	EXPANDABLE	awkwardness	subjection	HOLINESS
adaptable	ascension	ALLOWABLE	boldness	fiendish	EMPTINESS

Quaderni di Linguistica e Studi Orientali- QULSO
Working papers in Linguistics and Oriental Studies

Firenze University Press
https://oajournals.fupress.net/index.php/bsfm-qulso

Citation: L.M. Tovena, D. Fleury (2023) Situations and Modality in Predicative Modal Superlatives. *Qulso* 9: pp. 195-211. doi: http://dx.doi.org/10.13128/QULSO-2421-7220-15156

Data Availability Statement: All relevant data are within the paper and its Supporting Information files.

Competing Interests: The Author(s) declare(s) no conflict of interest.

Situations and Modality in Predicative Modal Superlatives

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Abstract:

Predicative modal superlatives, such as Italian *Luisa è stata il più calma possibile* ('Luisa was the most unperturbed possible'), state that the highest amount of calm that could be instantiated in the type of situation at hand, was associated with Luisa in the actual world. The semantic strategy proposed for tracking situations of the relevant type across worlds and varying individuals builds on the assumption that the modal adjective projects a predicate (*Q*) that captures specific circumstances affecting individuals that do not necessarily have a counterpart in all worlds, and that such circumstances cannot therefore be included in a standard modal base. The analysis verifies a relation between Luisa and a particular amount q in the real world w under some specific circumstances, and checks that for all amounts q' and accessible worlds w', if there is an individual holding the same relation to q' in w' and under the same circumstances, then $q' \leq q$.

Keywords: *Modality, Predicative Modal Superlatives, Semantics, Situations*

1. Introduction

Predicative modal superlatives (1) differ from ordinary superlatives (2) at least insofar as the entity that is ranked highest according to the relevant gradable property is not necessarily the only one to occupy that position.

(1) Luisa è stata (il) più calma possibile
'Luisa was the most unperturbed possible'

(2) Luisa è stata la più calma
'Luisa was the most unperturbed'

Narrowing down the relevant alternatives is crucial, given that the amount of the gradable property is not necessarily the

all-times maximum for the individual considered, and that the individual is not unique. Such narrowing is done too systematically to be just a contextual effect. We propose a way to restrict the alternatives in the class of comparison in predicative modal superlatives. The modal adjective is assumed to project a predicate (*Q*) that makes it possible to express specific circumstances that affect individuals that do not necessarily have a counterpart in all worlds, and thus cannot be included in the modal base. Other than that, individuals and worlds can vary independently. This semantic analysis verifies for (1) a relation between Luisa and a particular amount *q* in *w* under some specific circumstances restricted by *Q*, and checks that for all *q'* and accessible *w'*, if there is an individual holding the same relation to *q'* in *w'* and under the same circumstances, then *q'* ≤ *q*.

The paper is organised as follows. Section 2 outlines the main semantic characteristics of the interpretation of modal superlatives and positions it in the landscape of readings of ordinary superlatives. The issue of how to restrict the domain of the alternatives considered in the comparison is tackled in section 3. A way to connect the so-called equative reading with the presence of a modal is explored, and the predicate *Q* that selects the type of situation to be verified in the words is introduced and motivated. Section 4 develops a formal proposal for the comparison class used in predicative modal superlatives. While the comparison classes vary due to the superlative readings, the superlative operator remains unchanged, modulo semantic type adjustments. In the last part of the section, the properties of the proposed analysis are explored in more detail by testing it with a number of scenarios. In particular, it is considered how the restriction of the comparison class should be achieved in these cases and the consequence on the truth conditions. Section 5 concludes the paper with some considerations on the modality of the adjective in modal superlatives.

2. Peculiarities of modal superlatives

A 'modal superlative' is a sentence with superlative morphosyntax, a modal adjective, and the so-called equative reading. In this section, it will be seen that the three indicated components are all required to yield the interpretation we are interested in.

2.1 Three components for the modal superlative reading

The term superlative morphology has to be taken in a broad sense, recall that Romance languages do not have a dedicated operator like -est in English. Basic components for superlatives in Romance are comparative morphology, definite articles, and syntactic conditions. We refer the reader to Giurgea (2022), Dobrovie-Sorin (2022) on this complex issue. See also Dobrovie-Sorin and Tovena (2022) for a recent assessment of the ongoing debate.

Larson (2000) has shown that a sentence with the combination of superlative morphology and modal adjective is potentially ambiguous. It is possible to interpret the superlative in (3) as an ordinary one and to assign it an absolute reading. This interpretation meets the uniqueness constraint, and the modal adjective is taken to be a modifier of the noun. The paraphrasis Larson provides is something like (3a). In addition, (3) can also be interpreted as containing a modal superlative, and be paraphrased as in (3b), whose reading is equative with respect to the girls.

(3) Don tried to hire the kindest girl possible
  a. Don tried to hire the kindest x such that x is possibly a girl
  b. Don tried to hire as kind a girl as it was possible for him/one to hire

(4) Alex tried to hire the tallest possible players

Although Larson's example (3) with the modal adjective in postnominal position has sometimes been challenged, other examples of his with the modal in prenominal position are broadly accepted, such as (4) that he does not analyse in details. Larson does not discuss predicative modal superlatives. The prenominal vs. postnominal position of the modal adjective is a debated issue for English, but does not seem to be relevant for Italian, where the adjective *possibile* is ordered after the superlative marked adjective, and where there would be no nominal head in the predicative superlative phrase (Loccioni 2018).

Larson associates each reading of (4) with a specific syntactic structure, while acknowledging that the modal adjective is lexically restricted almost only to *possible*, and Romero (2013) concurs. In minimal terms, the adjective is an existential modal without intrinsic special colouring (circumstantial, deontic, etc.). An analogous situation is found in various languages that have modal superlatives.

Not in all languages are modal superlatives as natural as claimed for English. For example, in Italian modal superlatives such as (1) are not accepted by all speakers.[1] Certainly, there are sentences that contain superlative morphology and a modal adjective, but they may not qualify as modal superlatives. For instance, consider (5), that is broadly accepted by native speakers of Italian, much more easily so than (1), as revealed by the informal survey we conducted on a group of about ten speakers.

(5) Il Pendolino è il treno più veloce possibile
'Pendolino is the fastest existing train'

Sentence (5) and the like are not modal superlatives, though. To establish where the difference lies, note that the available reading is the absolute ordinary superlative, namely a uniqueness constraint is imposed on the referent of the superlative phrase. There is a unique individual – more precisely a unique type of trains in (5) – that satisfies the property of being fast to a higher degree than all others. That degree of speed holds for that (type of) individual in the actual world. Likewise, it is in the actual world that the degree of speed of alternative individuals is verified. Possible means possible in the actual world, which means existing. The so-called equative reading, discussed shortly, is not available, and the modal does not give access to worlds other than the real one. Next, (5) and (1) differ in the presence of a nominal head in the superlative phrase that imposes a restriction on the entities that are compared. As Loccioni (2018) has shown, no (c)overt noun can be assumed in predicative modal superlatives in Italian, see her example (6). This second peculiarity and the properties of the definite article – which in (6) and (1) is optional and does not agree – will not be discussed in this paper.

(6) Lenuccia è il più gentile possibile
'Lenuccia is the kindest possible'

The third relevant component is the so-called equative reading. Example (1) can be paraphrased as 'Luisa kept as much calm as possible', an interpretation labelled 'equative' in the literature (Larson 2000; Schwarz 2005; Romero 2013; Loccioni 2019). Unlike ordinary superlatives, modal superlatives do not identify an entity in a group as the one that uniquely

[1] The issue is made more complex by the existence of idiolects with opposing preferences. Our reviewers expressed equally categorical and completely opposite views on the obligatory presence or absence of the definite article for the modal reading of (1).

shows the highest degree of a quality either because i) it directly displays the quality, e.g. being a mountain and comparing the height of mountains in the absolute reading of (7), with unicity, see the contrast between (8) and (9), or ii) it shows a derived quality, e.g. being a mountain climber and associating them with the height of the mountains they climbed in the relative reading of (7). Intuitively, the equative reading in modal superlatives comes out from comparing amounts of a gradable quality. The uniqueness of the amount does not correlate with the uniqueness of the individual associated with that amount.

(7) Louise climbed the highest mountain

Luisa in (1) is not what Farkas and Kiss (2000) call the correlate of a relative superlative. The modal superlative does not distinguish from the others that particular member of a set of girls that has the highest degree of a property, see the acceptability of (8).

(8) Luisa è stata il più gentile possibile, così come Maria
'Luisa was the kindest possible, as was Maria'

Recall that a similar form of non-uniqueness of the individual associated with the top value is not possible with ordinary superlative, see the marginality of (9).

(9) ?*Luisa è la più gentile, tanto quanto Maria
'Luisa is the kindest, as much as Maria'

The first conclusion is that not any modal adjective in a superlative DP suffice to yield a modal superlative interpretation, and the use of *possibile* in a superlative does not secure the availability of the reading straightforwardly. The modal superlative distinguishes the unique higher amount of the gradable property that is realised in context, the reading is equative only relative to individuals. For this reason, we refer to it as so-called equative.

2.2 Comparing the modal superlative reading with those of ordinary superlatives

A point of similarity between the absolute superlative reading and the modal superlative reading, concerns the association with the gradable property described by the adjective. In both cases, and unlike the case of the relative superlative, the relevant entity is directly associated with an amount of the gradable property under discussion. Mountains are high in (7), and Luisa is calm in (1). An important semantic difference is that the individuals that are compared in the modal superlative interpretation need not belong to the same world, unlike what is the case in the absolute reading of ordinary superlatives.

As for the relative reading of ordinary superlatives, a point of similarity between it and modal superlatives concerns the possible use of an intensional property to characterise the alternatives in the comparison class. The intensional characterisation of degree sets is useful to make the correlate (Farkas and Kiss 2000) play a role (Heim 1999, and subsequent work). Sets of degrees are identified via the 'quantitative' information related to the degree and the 'qualitative' information about who instantiates that quantity. The correlate instantiates the degree in a particular eventuality (state or event), and the property of degrees must contain information that captures how it participates in the eventuality. Thus, the verb of the clause contributes to the definition of the intensional property and so does the wording of the property, which may

be understood as providing a sort of theta information. The world scopes high. The quantity information makes the ordering possible, no order is directly based on individuals. In semantic terms, it could be said that intensions are used in the analysis of ordinary superlatives not to bring worlds into the picture per se, but in order to enrich the content of the expression used to characterise sets of degrees. The net result is that degree properties (intensions) allow one to avoid ties due to identical extensions (Howard 2014). Note that in the relative reading, similarly to what holds for the absolute one, all the individuals that are compared belong to the same world, namely the real world. It should also be noted that these analyses do not mention how worlds are restricted. In short, this style of analysis brings in worlds but seems to have no specific use for them. This is in stark contrast with what goes on in modal superlatives, where the individuals that are compared do not necessarily belong to the same world.

The use of intension for ordinary superlatives is not without consequences, as Howard (2014) points out. The fact that Howard, among other scholars, distinguishes sets of degree (extensions) via degree properties (intensions) creates problems for him with modal superlatives, where ties among alternatives are admitted/recorded. In the case of modal superlatives, his analysis would predict the correct truth conditions only under the assumption that the superlative operator -est is quantifying over degree sets (extensions), not degree properties (intensions), as he acknowledges himself. Consider (10), and the degree sets in (11), which are identical. If -est could distinguish between them, then the predicted truth conditions would be impossibly strong: "There is no other possible world where John climbed as many mountains as he did in w@".

(10) John climbed the most possible mountains
There is no accessible world where J. climbed more mountains than he climbed in w@

(11) a. λd. John climbed d-many mountains in w_1
b. λd. John climbed d-many mountains in $w_@$

The second conclusion we can draw in this section is that the availability of the so-called equative reading is distinctive of modal superlatives and is apparently connected with the presence of some form of modality. The individuals that are compared need not necessarily belong to the same world, contrary to the absolute and relative readings of ordinary superlatives. This prompts the questions of what type of connection is at play and what is the relevant form of modality. The literature on modal superlatives (Larson 2000; Schwarz 2005; Romero 2013; Loccioni 2019) seem to take for granted that *possible* is run-of-the-mill modality. As a matter of fact, they either underestimate the treatment of modality that is required by these superlatives and dismiss it as a question of defining the relevant modal base (Romero 2013; Loccioni 2019), or are silent about it (Schwarz 2005).

3. Situations and modality in predicative modal superlatives

As seen above, modal superlatives do not singularise a particular individual by attributing to them a higher degree of a property than the other members of a certain group. The comparison is not constructed from a specific individual, which does not detract from the fact that conditions are used in exploring the space of alternatives. This section focuses on the question of how restrictions are applied, and this is where modality kicks in.

3.1 Forms of homogeneity that restrict predicative modal superlatives

A first type of restriction concerns the individual variable. There is a form of homogeneity constraining the individual who can instantiate the argument of the adjective that goes beyond pragmatic relevance. This is close to the effect obtained by the consistent application of a predicate across worlds. Yet, this is not done (or not only) through a (c)overt noun that restricts the individual, which is said not to be available in Italian (Loccioni 2018), see (12).

(12) a. *Luisa è restata la persona più calma possibile Luisa kept the calmest person possible
b. *Luisa è restata la più calma persona possibile

A second form of restriction concerns situations. The superlative in (1) is about the amount of calm considered, which is ordered regardless of who displays it in the accessible worlds. Like for individuals, there is a homogeneity condition restricting the type of situation. This can be expressed overtly via a modifier, see (13).

(13) Luisa è restata (il) più calma possibile in quel frangente
'Luisa was as calm as possible in that juncture'

An available interpretation for (13) implies that in other situations the amount might well have been superior – see the explicitly concessive flavour of (14) – while asserting that the actual amount was the maximal one under the circumstances.

(14) Non sarà sembrata particolarmente calma, ma ad essere sinceri, è stata il più calma possibile
'She may not have seemed particularly calm, but to be honest, she was the calmest possible'

A restriction can also be provided by mentioning other participants in the situation, e.g. by mentioning the customer in (15).

(15) Dato il cliente difficile, Luisa è stata il più gentile possibile.
'Given the difficult customer, Luisa was the kindest possible'

In short, there is a condition on the individual and a condition on the situation, and the two are visible to each other. This is going to be captured by positing a predicate that constrains them both. It is worth underscoring that a reason why it is unsatisfactory to merely assume a form of contextual restriction is that such restrictions are used in the formalisation to select the relevant worlds among those that are accessible, and thus must be made explicit to perform that task consistently.

3.2 Situations and modality

Individuals play a prominent role in ordinary superlatives, and they are considered within the same world. In predicative modal superlatives, individuals and worlds can vary and the values for their variables are defined without one necessarily depending on the other. Amounts contribute information for the construction of equivalence classes of individual and world pairs, anticipating

on subsection 4.1 below. The successful semantic analysis has to be able to restrict the alternatives in the class of comparison in predicative modal superlatives, while getting the right truth conditions.

When speaking of restrictions, it is natural to first consider whether there are any and what linguistic material expresses them. Overt restrictors for individuals and situations are virtually non-existent in (1), which makes the syntactic option of reconstructing lexical material from outside the superlative phrase, as proposed by Larson (2000), Romero (2013), and Loccioni (2019), uninteresting for this type of sentence. For instance, Romero's syntactic raising analysis with ACD rests on the assumption that the predicative DP contains a trace whose antecedent is deleted but provides a restriction for the comparison class. However, typical cases such as (1) are simple copular sentences where the only possible antecedent is the copular sentence itself.

As for the semantic side, in a nutshell, Romero proposes to build the comparison class in two steps: i) go through all the possible worlds and extract the set of degrees which makes true the degree predicate expressed by the sentence, and ii) apply a shifting function on each extracted degree in order to get an abstract degree predicate of the expected type. The set of these degree predicates constitutes the comparison class to which the degree predicate expressed by the sentence is compared to in the real world. Let's consider example (16), which contains a quantity superlative.

(16) John climbed the most possible mountains.

Romero's analysis applied to example (16) exploits downward monotonic degree predicates[2] of the form $\lambda d[\exists x[^*mount(x) \wedge climb(j,x) \wedge |x| \geq d]]$, i.e. the set of degrees d such that John climbed at least d mountains. The logical form of the sentence is [-est [1 possible <for John(/him) to climb A t_1-high mountain>]] [2 John climbed A t_2-high mountain]. The first argument of the superlative operator -est is obtained by the ACD mechanism and gives rise to the comparison class. More precisely, a set is made of all the degrees d verifying the predicate in possible worlds. Then a shifting function transforms each degree in this set into a downward monotonic degree predicate, in order to constitute the comparison class of degree predicates. The degree predicate in the second argument of the superlative operator -est, i.e. the predicate $\lambda d[\exists x[^*mount(x) \wedge climb(j,x) \wedge |x| \geq d]]$, is compared to the degree predicates in the comparison class: there exists a degree d such that this degree predicate is true at d and all the other degree predicates in the comparison class are false at d. Note that the starting point of this analysis is a set of possible worlds determined by the context. Their selection is not clearly explained, and we observe that no progress has been made on the precise way of selecting the types of situations to be considered. Moreover, the role of the type shifting function is only to get the expected semantic type of objects that constitutes the comparison class and to make the proposition work, without further motivation.

Also of reduced interest is a pragmatic option analogous to assuming that the collection of relevant alternatives is provided by the context, e.g. via the focus operator as proposed by Heim (1999) and followers. Note that focus is compatible with a predicative modal superlative, but it does not bring in the alternatives for the modal superlative. Example (17) is understood as saying that Luisa is the one who did her best to be kind, the others did not really try. It doesn't mean that everyone tried, and she is the one who did the best, among the set of individuals determined by the focus, a reading close to a relative superlative interpretation where *Luisa* would be playing the role of correlate.

[2] A downward monotonic degree predicate is a degree predicate of the form $\lambda d[X(d)]$ such that if $X(d)$ is true then $X(d')$ is also true for all d' smaller than d.

(17) LUISA è stata il più gentile possibile
'LUISA was the kindest possible'

The risk for a pragmatic option is to put too much into 'relevant in context' and understand it a little too much as a synonym for homogeneous. One can easily imagine a scenario where different individuals are relevant for different contextually valid reasons, but such a potential dishomogeneity is not tolerated in modal superlatives. Incidentally, the subject is not focussed in (1), and there are no other licensing operators among those identified by Farkas and Kiss (2000) for the relative reading of ordinary superlatives.[3]

This leads us to explore a semantic option for restricting the class of comparison and capturing the consistency of the situations considered across accessible worlds. Obvious candidates for the task are the modal base and what can be expressed via the accessibility relation (*Acc*), and/or a predicate constraining the type of situation (*Q*), used in characterising the class of comparison, and verified in the accessible worlds. These options have been unevenly used in previous analyses.

Loccioni (2019) is practically silent on the modal ◊ and the accessibility function, but the solution of assuming a circumstantial base and just the relevant situations in which Luisa finds herself (without other individuals being considered), as she seems to do, only models one particular reading. As a matter of fact, it is not certain that there is a reading of the predicative modal superlative in Italian where an individual is compared exclusively to themself, without such self-referentiality being an accidental contingent fact. In any case, it is not available to all speakers who nevertheless have modal readings. In what follows, we discuss it anyway, because it seems accessible to some speakers, including a reviewer, or in some languages. We are interested in showing how our proposal would be able to handle it, if it ever existed and was not blocked by factors yet to be defined. So, assume with Loccioni (2019) that sentence (1) can be interpreted in this particular way. Let's imagine that Luisa gets carried away easily or that she was particularly on edge that day. Let's suppose she managed to control herself when faced with a difficult customer. In this context, by uttering the sentence *Luisa è stata il più calma possible* (1), the speaker can express the fact that Luisa was calm to at least as great a degree as she could have achieved in similar circumstances, given her temperament or mood. The calmness of individuals other than Luisa is not taken into account in this comparison. If a colleague of Luisa is calmer than she is, then this does not change the truth value of the sentence. In this particular reading, some of the characteristics of Luisa and the situation she finds herself in could be translated within a circumstantial modal base, in the form of propositions such as "Luisa gets carried away easily" and "Luisa is faced with a difficult customer".[4]

But there is another interpretation of the sentence (1), where the calm Luisa shows in the real world is not compared to the calm she would show in a similar situation, but to the calm any individual (sharing with Luisa some common characteristics) would show in a similar situation. In this reading, the sentence in (1) can be used to express the fact that Luisa is at least as calm as any shop assistant faced with a difficult customer. It's true that the context

[3] Focus, interrogative operators, and relative wh-phrases, all help to get at the alternatives that are the members of the comparison class. The observation that focus in (17) fails to contribute alternatives for the modal superlative could be an indication against a raising style analysis with ACD, a line to be explored in the future.

[4] Although we are not interested in this particular reading here, we will show that we can adapt the semantics proposed in this article to this particular case. What will change is not the superlative operator itself but the construction of the comparison class, which will be based on individual-world pairs in which the individual is constant and coincides with Luisa (or her counterparts in the possible worlds).

gives us some general information about the individuals being compared. For example, they are not Buddhist monks (known for their legendary calm), but shop assistants faced with a difficult customer, and this has an impact on the truth value of the sentence. The problem is that information about these individuals cannot be encoded in the form of propositions in a circumstantial modal base. Intuitively, such information would take the form of a formula such as "x is a shop assistant faced with a difficult customer", to be evaluated for a certain *x* in a possible world, which is not the usual way of using a modal base. Moreover, it may be that certain individuals *x* in certain possible worlds have no counterpart in the real world. However, the propositions within a circumstantial modal base are true propositions in all the accessible worlds, in particular in the real world.

The description of the situation extended to other undefined or not (fully) defined individuals cannot technically constitute a usual modal base, because of the remaining undefined part, as explained shortly. We need a situation type that allows for the selection of situations in accessible worlds. Similarly, Romero (2013) does not say how adding propositions to the modal base would get her the restriction effect that is needed.

Let's clarify why the ordinary treatment of modality is not enough for restricting the alternatives in the comparison class of predicative modal superlatives. Consider Luisa and sentence (1), sticking to the scenario where she is a shop assistant. The superlative expresses a comparison of Luisa's amount of kindness with the amounts of kindness of other individuals *x'* in possible worlds. The pairs of individuals and worlds (*w'*, *x'*) represent the alternatives to Luisa in the real world. The comparison class itself is constructed from these alternatives, see subsection 4.1. An obvious way to restrict these alternatives is to restrict the worlds using a modal base. Recall that a modal base is a set of propositions that restricts the possible worlds in which a proposition is evaluated. Its modal colour (circumstantial, deontic, etc.) is given by the propositions that compose it, e.g. the scene takes place in a shop, or employees must comply with a minimum set of rules, etc. But these propositions make it difficult to select individuals *x'* within accessible worlds. A proposition of the modal base that would only concern Luisa would bring no restriction on individuals *x'* in worlds *w'*. Conversely, a proposition that would concern all individuals without distinction would give rise to too strong a restriction. For example, a proposition of the modal base that would impose that every individual is a shop assistant would give rise to worlds populated only by shop assistants. It might be tempting to consider propositions with a more complex form, e.g. a conditional, such as "if an individual is a shop assistant, then they has such-and-such a property", but this also does not allow one to select the individuals *x'*. Next, some of the individuals *x'* may not belong to all the accessible worlds and may not necessarily have a counterpart in the real world. Some characteristics of such *x'* are undetermined and do not allow the modal base to perform a restriction on *x'*. The use of an ordering source in addition to the modal base does not help, as the selection made by the ordering source is also based on a set of propositions. The order defined by the ordering source does not change this.

The information that allows the selection of individuals *x'* is not a set of propositions (the modal base) but information about the situation in which *x'* is found in the possible world *w'*. What is evaluated is not a simple proposition, as in the case of the usual modality, but a predicate about *x'* and *q'* in the world *w'*, which can be expressed with a predicate *Q* in the form $Q(w')(x')(q')$. The individuals *x'* in the accessible worlds *w'* are indirectly selected through *Q*, e.g. *x'* is a shop assistant and *x'* is in a situation where s/he is confronted with a difficult customer, etc. The specification of this type of situation is an enrichment of the explicit content of the sentence. This enrichment comes from the context and can, to some extent, be made explicit as in (13)-(15).

We now have two types of restriction, one on the possible worlds – given by the modal base – and one on the type of situation, and the two cannot be combined as by intersection of propositions or conjunction of predicates. However, since the *x'* selected by the predicate *Q* belong to the *w'* worlds selected by the modal base, the restriction of the ones induces a restriction of the others. The predicate *Q* is applied uniformly across the possible worlds and expresses homogeneity of the situations in the worlds *w'*, and of the individuals *x'*.

Let us assume that a situation in a world is (merely) a part of this world (Barwise and Perry 1980, and subsequent work), just as an event in a world is a part of the world, implying a temporal dimension. *Q* is applied to an individual *x'*, an amount *q'*, in a world *w'*, and describes a situation involving these three components. *Q* is a predication extracted from the linguistic material of the sentence, with an attribution of an amount *q'* to *x'* in the world *w'*, namely *x' was q' -calm in the world w'* , (which is the minimum that *Q* is asked to do). But that is not all. It also contributes to describe additional features that constitute the right content of the situation and engage *x'* in the world *w'*, e.g. there is a certain unpleasant person opposite *x'*.[5]

A crucial and surprisingly new issue in the discussion on modal superlatives is what the modal *possibile* expresses in these sentences. It could express only the accessibility of possible worlds, i.e. worlds compatible with circumstances, obligations, etc., or also the type of situation. The former option has been widely adopted tacitly in the literature, and we have shown that is not viable on its own, insofar as accessibility (*Acc*) is not sufficient. On closer inspection, two matters can be separated, namely the need to add other conditions besides accessibility, and the need to establish what these conditions are and how they are added. According to the line sketched in this section, the modal adjective would encapsulate both accessibility (*Acc*) and the type of situation (*Q*), which would result in a kind of mixed modal operator. This line raises important issues related to the interface with syntax that call for further research. The focus of this paper is on working out what are the additional semantic conditions minimally required.

4. Building the superlative

4.1 Each superlative has its type of comparison class

In general terms, the comparison class of a superlative can be taken to be a set of entities *C* compared to one of its members *c*, such that *c* is distinguished from the other entities of *C* with respect to some measurement property. Moreover, these entities are obtained by abstraction from the semantic content of the sentence. In order to better appreciate this notion, let us first consider the ordinary superlative in (7). In its absolute reading, the comparison class corresponds to the denotation of the head noun. A mountain in such a set exceeds the others in terms of a height property. In its relative reading, the comparison class is a contextually relevant set of individuals who have each climbed one or more mountains, in a simplified analysis.[6] Louise stands out from the other individuals in the comparison class in terms of a height property, in

[5] The careful reader will have noticed the different nature of the contextually relevant *Q* assumed in the analysis and *C* assumed in (Heim 1999). It is not an object with an extension in the actual world, rather it is a predicate that allows one to filter out the individuals and worlds that constitute possible alternatives.

[6] As mentioned in subsection 2.2, in some analyses, the elements of the comparison class of a relative superlative are defined in a more abstract way as predicates of degree or 'intensionalised' predicates of degree of the form $\lambda w \lambda d$[*x'* climbed a *d*-high mountain in the world *w*] (Heim 1999; Matushansky 2008, and others).

the sense that the height of a mountain climbed by Louise is greater than the height of mountains climbed by the other individuals in the comparison class.

Let us now consider predicative modal superlatives. We have proposed in subsection 3.2 that the amounts of the gradable property that are compared in a modal superlative do not characterise specific individuals, rather they are associated with individuals and worlds pairs. In order to build the comparison class, we start by considering the set of pairs (w', x') that provides the collection potentially to be compared, namely S in (18). Set S is constructed by going through all individuals x'in all accessible worlds w'such that $x'$and w'verify the predicate Q for some amount q'.

(18) $S = \lambda x' \lambda w' [\exists q' [w' \in Acc(w) \wedge Q(w')(x')(q')]]$

S does not yet fulfil the characteristics of a comparison class in the sense that we understand it. It is true that we can associate to an element (w, x) of S a (unique) amount q verifying $Q(w)(x)(q)$, but we cannot necessarily distinguish this element from the other members of S by using this amount property.[7] Suppose that example (1) is true. It is not necessary that the pair (w,l) – corresponding to Luisa in the evaluation world w – is distinguished from the other members of S by its amount. Luisa, or any other individual in a comparable situation, can show the same amount of calm in other accessible worlds without challenging the truth of the sentence. This observation leads us to identify the elements of S associated with the same amount, in order to obtain the right characterisation of the comparison class. For each pair (w', x') in S, there is a unique amount q'verifying $Q(w')(x')(q')$. We say the amount $q'$is associated to (w',x'), and define an equivalence relation ~ on S as in (19).

(19) $(w_1, x_1) \sim (w_2, x_2)$ iff $\lambda q' [Q(w_1)(x_1)(q')] = \lambda q' [Q(w_2)(x_2)(q')]$

The set of equivalence classes defined by the equivalence relation forms a partition of the set S. This set of cells of the partition constitutes the comparison class of the modal superlative, is called C and is defined as $C=S/\sim$. The perspective initially adopted by constructing the set S on the individuals and the worlds has slightly changed when the amounts are taken as criterion to classify the individuals, more exactly the pairs. To each cell of C is associated an amount, namely the amount common to all the individuals of the cell. Such an association allows us to compare Luisa's amount with the amounts associated to the cells of the partition, i.e. from the formal point of view we now arrive at being able to perform the operation done by the superlative.

The association between cells and amounts can be made explicit via a function. Function f is introduced precisely to allow us to associate to each equivalence class $c' \in C$, the unique amount q'associated to the elements of the class c', written $f(c')=q'$.

The amounts associated to the cells are distinct among them, because of the way the partition has been constructed, i.e. $c=c' \leftrightarrow f(c)=f(c')$. Therefore, there is a bijection between the partition C and the set $C'$of all the q'that satisfy $Q(w')(x')(q')$ for some x' and w', defined in (20). Deriving the semantics of the modal superlatives from the superlative operator is easier if one exploits this bijection.[8]

[7] In other terms, we encounter a version of the problem that led some scholars to adopt intensional properties of degrees in their analysis of ordinary superlatives.

[8] Given c the equivalence class of (w, x), the formulae $f(c)=q$ and $Q(w)(x)(q)$ are equivalent; and given $c'$the

(20) $C' = \lambda q' [\exists x' \exists w' \in Acc(w)[Q(w')(x')(q')]]$

In sum, the definition of the comparison class crucially varies according to the superlatives, while the superlative operator – relating to that comparison class – remains unchanged, modulo semantic type adjustments. The fact that the amount *q'* becomes the only criterion to distinguish the elements of the comparison class of a modal superlative, is a major difference with the ordinary superlative. In example (1), the uniqueness of Luisa as an individual who manifested a greater amount of calm, is not required. The set of individuals in a comparable situation and in accessible worlds, is not provided by the context and is potentially open.

4.2 The superlative

In the above, a view of the comparison class for modal superlatives as a set of complex entities that are differentiated in terms of amounts has been presented. Each of these complex entities is a collection of individual + world pairs (*w', x'*) that differ either relatively to *w'* or to *x'*, but are all associated with the same amount *q'* verifying $Q(w')(x')(q')$. In other words, the comparison class for modal superlatives is a set of entities, the entities are equivalence classes established on the basis of the information on the amount, thus the members of the comparison class are uniquely identifiable via the amounts. Conversely, the comparison class for ordinary superlatives generally assumed is a set of entities whose members are uniquely identifiable via an identity criterion. In the remainder of the section, it is demonstrated that no consequences necessarily derive from this difference in comparison class for the superlative operator.

The superlative operator is a function that applies to the partition *C* and returns True if the amount $f(c)$ of the class *c*, e.g. the class of Luisa in (1), is the largest amount among all the cells of the partition. The superlative is defined as in (21).

(21) $\lambda C[\exists q[f(c)=q \wedge \forall c' \in C[c' \neq c \rightarrow f(c') < f(c)]]]$

Leaving the semantic type of at least *C*, *f* and *c* underspecified in the definition (21), enables it to work for modal and ordinary superlatives. In the general case, the function *f* is not necessarily bijective, and it could be the case that another member *c'* of *C* is associated with the same amount as *c*. As [it] is usual in this kind of formula, the restriction $c' \neq c$ and the strict inequality $f(c') < f(c)$, in the definition (21), prevents *c* from sharing the same amount as another element of the comparison class. In the specific case of the modal superlative, the function *f* establishes a bijection between the set *C* of equivalence classes and the set of restricted amounts as in (20). Therefore, the class *c* associated with the largest amount is unique and the formula (22) is equivalent to (21), in this case.

(22) $\lambda C[\exists q[f(c)=q \wedge \forall c' \in C[f(c') \leq]f(c)]]]$

In the case of the modal superlative, the formula in definition (22) entails the uniqueness of the element *c* as the largest element of its comparison class *C*. In example (1), the element *c* is an equivalence class potentially containing several pairs of individuals-worlds, including the

equivalence class of (*w', x'*) with $f(c')=q'$, the formulae $f(c') < f(c)$ and $q' < q$ are equivalent too. These equivalences are the tools that would allow us to state the superlative operator with *C'*, even if it will not be done in the paper.

pair (w, l) of Luisa in the evaluation world w. No unicity constraint applies to the individual Luisa, which is consistent with the expected reading.

The formula (21) is the general one, and we briefly discuss how it works for the absolute and relative ordinary superlatives in turn. In the absolute reading, individuals play a discriminating role in the comparison class. The comparison class C described by the expression ***the highest mountain*** in (7), can be considered as a set of mountains restricted by the context. The function f that associates the height of an element (a mountain) of C is not necessarily bijective, because two mountains in C can have the same height. Applying the operator (21) to C gives $\exists q[f(c)=q \wedge \forall c' \in C[c' \neq c \rightarrow f(c') < f(c)]]$, which entails the uniqueness of the highest mountain c. By abstracting the free variable c and applying the iota operator to it, one arrives at this highest mountain, i.e. $\iota c[\exists q[f(c)=q \wedge \forall c' \in C[c' \neq c \rightarrow f(c') < f(c)]]]$, the unique mountain whose height is greater than the height of the other mountains.

In the relative reading, the two variables taken into account to constitute the comparison class in (7) are individuals x' and mountains y'. Suppose that example (7) is true. The mountaineer who climbs the highest mountain is unique, which shows that the variable x' must be discriminating in the comparison class. However, in the case where this mountaineer climbs two mountains of the same height higher than the mountains climbed by the other mountaineers, (7) is generally assumed to be false. If it is so, the variable y' must also be discriminating in the comparison class.[9] The comparison class C is a set of (x, y) pairs, namely $C = \lambda x \lambda y[x$ has climbed a d-high mountain $y]$, where x and y can be restricted by context. The function f associates the height d to a pair (x,y). Such function f is clearly not bijective. Applying (21) to C, we obtain $\exists q[f(x,y)=q \wedge \forall (x', y') \in C[(x', y') \neq (x, y) \rightarrow f(x', y') < f(x, y)]]$, where x is Louise, and y a mountain Louise climbed. The formula means that x climbed a mountain higher than the mountains climbed by the other people. The mountain y climbed by x is undefined, which we express, as a first approximation, by an existential on y. By abstraction on the variable x and application to l (the constant for Louise), we obtain the formula for the whole sentence $\exists y \exists q[f(l, y)=q \wedge \forall (x', y') \in C[(x', y') \neq (l,y) \rightarrow f(x', y') < f(l, y)]]$. This formula correctly accounts for the truth conditions of (7), under the assumption of the uniqueness of the highest mountain. In order to determine the validity of this assumption, it is necessary to take into account psycholinguistic data. The advantage of an analysis that treats both individuals x and mountains y as discriminating in the class of comparison is that it makes it easier to take into account this type of empirical data, which is not possible with analyses using degree predicates (intensionalised or not).

4.3 Discussion

In this section, we explore in more detail the properties of the proposed analysis by testing it with a series of scenarios. More specifically, we examine how the restriction of the comparison class should be achieved in each case and the consequence on the truth conditions.

We start with a scenario proposed by a reviewer, in which Luisa and Anna are working in the same shop when a difficult customer comes in. Anna is a quiet type, whereas Luisa is not. Luisa has to cope with the difficult customer. In these circumstances, the sentence *Luisa è stata*

[9] In case variable y' is not discriminating, it is needed a more abstract comparison class made up of the sets of mountains climbed by each individual and associating to each of these sets the height of the highest mountain. Such an analysis reminisces the use of degree predicates (intensionalised or not) that aggregate all the degrees associated with the mountains climbed by the same individual.

il più calma possibile (1) is acceptable even though Anna, had she been in Luisa's shoes, would have been much calmer. This scenario is intended to test whether our analysis leads to truth conditions that are too strong. At first glance, it may seem that a world-individual analysis cannot exclude Anna from the individuals to be compared, insofar as Anna seems to be in the same situation as Luisa. Put like this, the scenario requires that certain points be made explicit in order to evaluate the interpretation of the sentence. One point is that if the character traits are relevant and Anna's known patience eliminates her from the possible alternatives, then in the relevant characterisation of the situation via *Q* one is also including the constraint that the person is known not to be particularly patient. The paraphrase would be "Luisa was as calm as possible, for someone in her condition and in similar circumstances". This interpretation clearly leaves Anna out of the comparison. Another point is whether it is possible to explicitly restrict the set of alternatives by fixing the extension in the real world, as can be done in the relative superlative reading. This may go beyond the reviewer's scope, but it would theoretically be a way of eliminating Anna from the comparison. It has been observed that it is not possible to provide an explicit comparison class in predicative modal superlatives in Italian (Fleury and Tovena 2023). Most probably the question is not whether it is possible to set the extension explicitly, but whether it is possible to set it at all, e.g. by considering a particular set of individuals in the real world. Such a restriction would, at best, combine with the restriction based on the relevant type of situation, and at worst compete with it. We were unable to find any convincing example of this type of complex combination.

Another case where Anna is trivially ruled out from the comparison is when only Luisa is taken into consideration, as in the paraphrase "Luisa was at least as calm as she herself could have been in a similar situation". The reviewer seems interested in this case. It has already been pointed out in section 3.2 that the availability of this reading is not uncontroversial, but also that it coincides with the particular type of reading analysed by Loccioni (2019). Let us now see how it can be tackled. When Luisa's calm in the real world is compared with Luisa's calm in possible worlds, the comparison class can be constructed from predicates of the form $\lambda q[\exists w' \in Acc(w)[calm_{w'}(q)(l)]]$,[10] where *l* is the constant for Luisa and *Acc* an accessibility function that can take care of Luisa's circumstances, whether personal circumstances or circumstances in which Luisa finds herself. It is theoretically possible to adapt our analysis to the reading with a single individual by fixing the variable *x* to the constant *l* (Luisa). The set *S* on which the comparison is built becomes the set of all pairs (w', l) such that $\exists q'[w' \in Acc(w) \wedge Q(w')(l)(q')]$. The equivalence relation remains unchanged except that its domain is restricted to the new set *S*. We can write it $(w_1, l) \sim (w_2, l)$ iff $\lambda q'[Q(w_1)(l)(q')] = \lambda q'[Q(w_2)(l)(q')]$. Then the comparison class *C* is built as the quotient of the set *S* by the equivalence relation ~, that is *S*/~. Such a class can be mapped to the set $\lambda q'[\exists w' \in Acc(w)[Q(w')(l)(q')]]$, i.e. the set of all the amounts of calm *q'* manifested by Luisa in accessible worlds, in the relevant type of situation expressed by the predicate *Q*. The superlative operator is unchanged and applies to the comparison class *C*. If this reading exists, the question is to know how the restriction of the situations is distributed, between the modal base and the predicate *Q*.

In the reading involving a single individual, we may explore the case where the predicate *Q* merely contains the linguistic material from the sentence, and the type of situation is almost entirely expressed within the modal base. Technically, the starting set *S* would become the set of pairs (w', l) satisfying $\exists q'[w' \in Acc'(w) \wedge calm_{w'}(q')(l)]$, where the new accessibility function *Acc'* would contain all the information relevant to the comparison. The equivalence relation

[10] In Loccioni's notation, it would be $\lambda d.\Diamond[calm(Luisa,d)]$, where *d* is a variable of degree.

on S would be adapted as follows: $(w_1, l) \sim (w_2, l)$ iff $\lambda q'[calm_{w1}(q')(l)] = \lambda q'[calm_{w2}(q')(l)]$. The comparison class C would be the quotient of S by $\sim$ and could be mapped to the set $\lambda q'[\exists w' \in Acc'(w)[calm_{w'}(q')(l)]]$. The superlative operator would be unchanged. Note that in all these representations of the modal superlative, the comparison is essentially between degrees of calmness. There is no way of ruling out the possibility of Luisa achieving the maximum degree of calm in several possible worlds, which is the expected reading.

Summing up, in the readings where Luisa is compared to other partly undefined individuals, and not just to herself, the relevant type of situation cannot be entirely translated as a set of propositions true in the real world. The reason is the lack of sufficient information about the individuals whose degree of calm is being compared, some of whom are located in accessible worlds and have no counterpart in the real world. This was discussed in section 3. The relevant type of situation for these readings is coded within the predicate *Q,* which is therefore not limited to the linguistic material of the sentence. We emphasise that this way of restricting the type of situation keeps working also for the reading involving a single individual. There is no clear rationale for introducing two mechanisms for selecting the relevant situation type, depending on whether the comparison involves one or several individuals. On the contrary, an analysis for the case where Luisa is compared only with herself that does not make use of a predicate like *Q,* does not extend to cover the case where she is compared to other partly undefined individuals.

The previous scenarios allowed us to address the issue of circumstantial selections through the modal basis and the *Q* predicate. In the last scenario, the selection of possible worlds is based on deontic considerations, expressed through an ordering source. Imagine that the shop regulations dictate that a purchased article can only be replaced with an article of the same category. The difficult customer wanted to return the purchased article and have their money back. Luisa decided to slightly bend the regulations by allowing for a replacement of the purchased article with one of a different category. A reviewer mentions this scenario in order to test the truth conditions predicted by our analysis. As a matter of fact, with or without an ordering source, the question arises as to the level at which we select the type of situation relevant to the comparison of the modal superlative. In our approach, we would first have the modal base, which selects a set of worlds, then the ordering source establishes an order on the accessible worlds, as usual, and finally the *Q* predicate is used to select the type of situation in the best worlds.

5. Concluding remarks

This paper has made a semantic case for the modal adjective *possibile* in predicative modal superlatives as a mixed category. The adjective plays the two roles of i) setting up an accessibility relation with a modal base coding a modal colour (circumstantial, deontic, etc.), and ii) projecting a predicate *Q* that captures the type of situation involving individuals through the accessible worlds, with some possible homogeneity constraint on the individuals and the worlds. This yields two restrictions of different nature.

The modal base is argued not to suffice to select the alternatives used in the construction of the comparison class; the ordering source does not do it either, for the same reasons. The predicate *Q,* which selects the relevant type of situation, is a relation between possible worlds, individuals and amounts, which allows us to select world-individual pairs to be compared. This selection is computed by the set S defined as $\lambda x' \lambda w'[\exists q'[w' \in Acc(w) \wedge Q(w')(x')(q')]]$, i.e. the pairs (w', x') such that x'manifests a certain amount q'in an accessible world $w'$and in the situation expressed via *Q*. On the one hand, the pairs (w', x') determine the plurality of the

elements to be compared. They constitute the domain of variability of the modal superlative. In that sense, the modal superlative is anchored to world-individual pairs. Furthermore, the right truth conditions of the modal superlative are obtained by partitioning the world-individual pairs with respect to their associated amount and applying a generic superlative operator to this partition, which is a function that extracts the elements of the partition associated with the biggest amount. On the other hand, the modality expressed by the sentence results not only from the modal base and possibly an ordering source, both determined by the context, but also from the relevant type of situation for the comparison. This analysis gives us some clues for the anchoring of the modality, in the sense of Kratzer (2013). The anchoring of plurality for the superlative and the anchoring of modality are two distinct but very similar things for modal superlatives, because in both cases we are browsing possible worlds.

The right class of comparison for modal superlatives is a set of equivalence classes of pairs of individuals and worlds identified according to their amount, not a set of individuals nor a set of degree predicates. This leads us to assume that the classes of comparison vary as the readings of superlatives vary, at least from the semantic viewpoint. This position is not so new on closer inspection; remember, for example, the difference between entities directly displaying a gradable property in the absolute reading, or showing a derived gradable property in the relative readings. But above all, the variation in classes of comparison is compatible with the superlative operator remaining unchanged, modulo semantic type adjustments.

Indeed, despite their differences, the types of superlatives have the same meaning insofar as they express a selector of a unique *c* in a *C* on the basis of some measurement property. In the case of the modal superlative, the largest element *c* is an equivalence class potentially containing several pairs of individual-worlds. No unicity constraint applies to the individuals, thus no true equative reading relatively to the compared entities on the modal superlative.

Finally, although the adjective *possibile* suggests an existential quantification, the quantification at work in a modal superlative is not a simple quantification but a nested one, where the selection of possible worlds interacts with the selection of individuals. The role of the traditional modality here is essentially to select a modal colour and pre-select a set of possible worlds that are candidates that will be sorted by *Q*. But *Q* performs its sorting task on worlds and individuals at the same time.

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Quaderni di Linguistica e Studi Orientali- QULSO
Working papers in Linguistics and Oriental Studies

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https://oajournals.fupress.net/index.php/bsfm-qulso

Citation: M. Cerullo, P. Izzo (2023) Analisi comparata del fenomeno dell'intransitività scissa nelle varietà campane. *Qulso* 9: pp. 215-240. doi: http://dx.doi.org/10.13128/QULSO-2421-7220-15164

Data Availability Statement: All relevant data are within the paper and its Supporting Information files.

Competing Interests: The Author(s) declare(s) no conflict of interest.

Analisi comparata del fenomeno dell'intransitività scissa nelle varietà campane

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Abstract

This paper presents the results of an intensive research on the phenomenon of split intransitivity in Campanian varieties. In the first part it presents the phenomenon according to the different theoretical approaches considered, in order to analyse the considerable amount of data presented in the following sections. The second part is devoted to the central Campanian varieties, in which the data from the metropolitan area of Naples, Salerno and the hinterland are exposed. The peculiarity of the Acerno variety, which is more isolated than the others, leads to present the data of this variety separately. The last part presents the data from the south of the region, the Cilento, divided into two different areas, which are very different from a sociolinguistic point of view. For each dialectal area, an attempt is made to identify the internal parameters that characterise the variation in the choice of the auxiliary and, where necessary, the authors recourse to sociolinguistic variation or contact among different varieties that may have had an influence on the phenomenon.

Keywords: *Auxiliary Selection, Campania Varieties, SIH, Split Intransitivity, Syntax-Semantics Interface*

1. Obiettivo del contributo

In questo lavoro si vogliono illustrare i risultati di una inchiesta sul campo concernente la descrizione della selezione dell'ausiliare, e delle scelte parametriche che la determinano, nel panorama sincronico della Campania dialettale. Come è noto l'area in oggetto non è omogenea (cfr. De Blasi 2006), ma è contraddistinta arealmente tra le varietà campane propriamente dette e quelle periferiche meridionali (cfr. Rohlfs 1988).

Questo studio si propone, attraverso dati raccolti di prima mano in un'area diversa rispetto al nucleo del "napoletano" centrale, su cui la letteratura si è più volte espressa (Cennamo 2001 e relativa bibliografia, Ledgeway 2000, 2004, 2019, ecc.),

di contribuire ad una descrizione e comprensione più profonda del territorio linguistico, da una parte, e del fenomeno in generale dall'altra. Nello specifico in questo studio verrà utilizzato, come sistema di classificazione dei verbi monoargomentali, la suddivisione operata da Cennamo (2001) che si basa sulle componenti semantiche del verbo lessicale. Si cercherà altresì di individuare dei *pattern* di variazione comuni e le tendenze generali rispetto alla variazione diastratica e diatopica.

Nell'introduzione si discuterà brevemente il *background* teorico e i maggiori approcci analitici al complesso fenomeno dell'intransitività scissa. Nella parte strutturale del lavoro si esporranno i dati sulle varietà campane centrali, già noti alla letteratura, integrandoli con quelli di altre realtà periferiche. Successivamente si passerà alla caratterizzazione dei dati della periferia meridionale più estrema e alla comparazione dei dati campani propriamente detti e dei dati meridionali. In conclusione si troverà il metodo più appropriato per l'analisi dei nuovi dati e si trarranno le conseguenti considerazioni i cui risvolti potranno essere applicati ad altre varietà (italoromanze, ma non solo) per l'analisi del fenomeno in una nuova prospettiva.

2. L'intransitività scissa-inaccusatività verbale

In una prospettiva teorico-descrittiva, e molto generale, si può osservare che le lingue romanze, con alcune differenze particolari, distinguono due classi di verbi intransitivi; tale distinzione si basa, principalmente, sul comportamento sintattico del soggetto che per i verbi inaccusativi è un soggetto paziente, *undergoer* (S_O), mentre per i verbi inergativi è un soggetto agentivo, *actor* (S_A). Il soggetto di un verbo inergativo mostra le stesse caratteristiche sintattiche e morfosintattiche del soggetto di un verbo transitivo, mentre un (S_O), unico argomento di un verbo inaccusativo, ha le caratteristiche morfosintattiche dell'oggetto di un verbo transitivo.

Indipendentemente dalla prospettiva teorica adottata (inaccusatività/intransitività scissa), il fenomeno è di frequente al centro del dibattito scientifico a causa dell'estrema variazione dello stesso in area romanza (Cennamo 1999a, 1999b, 2001; Grimshaw 1990; Levin e Rappaport Hovav 1995; Mithun 1991; Sorace 2000, 2011).

In lingue come l'italiano, in cui è presente la distinzione di due sottoclassi di intransitivi, il fenomeno si manifesta principalmente attraverso tre prove morfosintattiche: i. la selezione dell'ausiliare perfettivo (*essere* o *avere*), ii. la possibilità di cliticizzazione di un soggetto quantificato postverbale, ovvero la cliticizzazione attraverso il *ne,* iii. la possibilità di costrutti participiali assoluti.

La selezione dell'ausiliare viene considerata come marcatore dello *status* inergativo o inaccusativo del verbo; la scelta dell'ausiliare *essere*, piuttosto che *avere,* si riflette anche in una differenza morfologica, ovvero *essere* determina l'accordo del participio passato con il soggetto, di genere e numero in modo binario (m/f, sg/pl). La selezione dell'ausiliare e l'accordo participiale, almeno per le varietà standard, sono proprietà in stretta relazione (Cennamo 1999, 2001). In alcune aree mediane approcci puramente formali non sono in grado di rendere conto della diffrazione e della specializzazione dei due ausiliari perfettivi; pertanto, in questo studio, si è ritenuto opportuno analizzare il fenomeno utilizzando l'interfaccia sintassi/semantica. Infatti, gli approcci puramente sintattici o semantici (Burzio 1986; Levin e Rappaport Hovav 1995; Van Valin 1990) non sono in grado di rendere conto dell'effettiva variazione nella selezione degli ausiliari. Come anticipato, in questo lavoro si vaglia la proposta di riclassificazione "multiprospettica" di Sorace (2000), la quale si approccia al problema descrittivo del fenomeno proponendo un modello che integra in sé i precedenti (intermedio tra l'approccio formale e quello funzionale). Tale approccio guarda al verbo da un punto di vista lessico-concettuale, semantico e della sua struttura argomentale, in linea anche con l'analisi avanzata da Levin e Rappaport Hovav (1995)

in cui si esamina la struttura argomentale del verbo. Si può affermare infatti, che un *inergativo* possiede un argomento esterno (soggetto) e nessun argomento interno (oggetto) a differenza del verbo *inaccusativo* che possiede solo un argomento interno diretto (soggetto *undergoer*). Ovvero, il soggetto *inaccusativo* nella struttura profonda di frase è un oggetto diretto.

In sintesi, il modello di Sorace analizza il comportamento sintattico dei verbi intransitivi come strettamente relazionato alle caratteristiche lessico-semantiche e aspettuali del verbo che confluiscono nel cosiddetto 'gradiente di intransitività scissa', *Split Intransitivity Hierarchy* (da ora in poi SIH). In questo modello lineare e graduale ai due poli vengono posizionate le diverse classi verbali classificate in base a fattori semantici quali la telicità, la transizione (nello spazio, ma non solo), il movimento, il grado di agentività del soggetto, ecc. Proponendo un'opposizione graduale che va da un polo di inergatività e uno di inaccusatività in cui i verbi dimostrano caratteristiche sintattiche determinate dal convergere di relazioni semantiche stabili, verso il centro del gradiente in cui si posizionano i verbi più instabili e che quindi a primo impatto generano incertezza nella selezione dell'ausiliare, si andrebbe contro all'ipotesi dell'inaccusatività che vedeva una rigida distinzione sintattica e binaria tra inaccusativi e inergativi, propendendo per approcci più esclusivamente sintattici che non tengono in considerazione i fenomeni sintattici (Bentley e Eythórsson 2003; Bentley 2006). Il SIH, però vuole essere una generalizzazione che tenga in considerazione ad un livello di interfaccia semantico-sintattica sia i fondamenti dell'ipotesi dell'inaccusatività sia il concetto di intransitività scissa basato su fattori semantici. È proprio qui l'innovazione dell'approccio che cerca di unire un modello multidimensionale e flessibile ad uno rigido e binario.

Nella tabella 1 sono rappresentate le classi verbali caratterizzate da fattori semantici e disposte sul SIH in base alla realizzazione sintattica, in particolare in base alla selezione dell'ausiliare in italiano:

	Inaccusativo categorico						Inergativo categorico
	Nucleo			***Periferia***			***Nucleo***
1)	Cambiamento di luogo	Cambiamento di stato	Continuazione di uno stato	Esistenza di uno stato	Processo incontrollato	Processo controllato dinamico	Processo controllato statico
2)	*Andare*	*Aumentare*	*Rimanere*	*Appartenere*	*Tremare*	*Correre*	*Parlare*
3)	*Essere*	Ausiliare incerto propendente per *essere*	Ausiliare incerto propendente per *essere*	Ausiliare incerto	Ausiliare incerto	Ausiliare incerto propendente per *avere*	Avere

Tabella 1. SIH dei verbi italiani secondo Sorace (2000, 2004).

Come si può vedere in tabella (1), i verbi che si posizionano ai due nuclei sembrano essere stabili e inducono certezza da parte dei parlanti sull'ausiliare da selezionare; invece, muovendosi verso la periferia la selezione di *essere* o *avere* viene condizionata da altri elementi semantici quali

la telicità, il grado di agentività o l'animatezza del soggetto (per citarne solo alcuni).[1] Al centro del gradiente si potrebbero posizionare i verbi meteorologici per i quali l'assenza di argomenti e di materiale semantico rendono la selezione dell'ausiliare completamente arbitraria (almeno in italiano). Il SIH è stato ideato prendendo in considerazione principalmente lingue standard che presentano la distinzione nella selezione dell'ausiliare (italiano, tedesco, olandese, ecc.) sia in sincronia che in diacronia. Eppure non si conclude con una generalizzazione, dato che a seconda della lingua o varietà studiata ci si è accorti che alcuni fattori incidono maggiormente sulla selezione dell'ausiliare. In tedesco, ad esempio, la dinamicità è un fattore decisivo per la selezione dell'ausiliare *essere* anche in relazione ai verbi che denotano un processo, quindi *correre* o *nuotare*, che in italiano selezionerebbero (maggiormente) *avere*, e andrebbero spostati verso il polo dell'inaccusatività. Viceversa, nelle varietà campane i *corpora* dati hanno dimostrato come i verbi posizionati in italiano al nucleo dell'inaccusatività, quelli di cambiamento di luogo, selezionano maggiormente l'ausiliare *avere* e quindi si posizionerebbero nella periferia verso il nucleo dell'inergatività (cfr. Cennamo 2001 e relativa bibliografia). Il gradiente di Cennamo per la selezione dell'ausiliare perfettivo nelle varietà campane è riportato nella Tabella 2:

	Polo dell'inaccusatività					**Polo dell'inergatività**
1)	Cambio di stato definito	Cambio di stato indefinito	Stato/Continuazione di uno stato	Cambio di luogo telico	Attività dinamica telica/ atelica	Attività non dinamica
2)	'morì' *morire*	'partì' *partire*	'rimané' *rimanere*	'turnà' *tornare*	'curre' *correre*	'faticà' *lavorare*
3)	*essere /avere*	*essere / avere*	*essere / avere*	Maggiormente *avere,* ma con variazione diatopica e diastratica	*avere*	avere

Tabella 2. SIH usato da Cennamo (2001, 2008) per le varietà campane.

3. Varietà a confronto: Campania centrale e Cilento

La variazione diatopica in Campania, relativamente al fenomeno oggetto di esame, è molto differenziata, in quanto la regione si compone di aree linguistiche altamente differenziate; tuttavia, per quanto riguarda il fenomeno, già Cennamo (2001) nota che alcune varietà selezionano *avere* (*avé*) come unico ausiliare perfettivo. Dunque, in questa sede verrà analizzato lo *status* di altre varietà campane rispetto al fenomeno. I dati verranno discussi separatamente nelle sezioni seguenti, a conclusione si proporrà una comparazione dei dati in esame anche rispetto alle teorie vagliate dalla letteratura, cercando di stabilire se ci siano per queste varietà dei *pattern* ricorsivi.

[1] Si veda Sorace 2004 per una discussione puntuale.

I dati discussi provengono da una ricerca congiunta, da parte di chi scrive, e sono stati raccolti seguendo i suggerimenti della letteratura (principalmente Cennamo 2001) per le varietà campane, essi sono ordinati seguendo il gradiente esposto in tabella (2). I dati dell'area campana provengono dai punti di rilievo di Acerno, Napoli e Salerno, mentre i punti di rilievo del Cilento provengono dall'area della Valle del Calore Lucano e da alcuni punti costieri (Omignano, Agropoli e Castellabate).[2] Si analizzeranno esclusivamente le costruzioni analitiche del perfetto. Oltre alla semantica del verbo lessicale, verranno tenuti in considerazione i seguenti parametri rilevanti: (i) selezione di *essere* o di *avere* (ii) accordo del participio passato al So (iii) *status* del RF.

Carta 1. I punti di inchiesta

3.1 I dati delle varietà campane centrali

Negli ultimi decenni numerose inchieste sul campo hanno dimostrato l'elevato grado di variazione diatopica per quanto riguarda la selezione dell'ausiliare nelle varietà campane.

In questa sezione si cercherà di schematizzare ed elucidare i dati di alcune varietà centrali in un'ottica comparativa; si parte, infatti, dalle varietà già approfonditamente studiate dalla letteratura: Pompei, Portici e Sorrento (da Cennamo 2001) e a questi tre punti della provincia napoletana si aggiungerà l'analisi di nuovi dati provenienti dal contesto metropolitano di Napoli e dalla provincia salernitana (Salerno e Acerno). I dati vengono suddivisi in base alle maggiori variabili sociolinguistiche analizzabili, quali la variazione diastratica, diatopica e diagenerazionale.

Considerando la distinzione in mesoparametri e microparamentri sintattici seguendo Ledgeway (2019), si inizierà con l'analisi delle varietà in cui si rileva variazione dell'ausiliare al participio passato, condizionata da modo e tempo verbale, ma senza variazione microparametrica sensibile alla persona:

[2] I punti di inchiesta sono illustrati nella carta (1) e contrassegnati da cerchio rosso.

Classe medio bassa e classe medio alta, Napoli e Portici:

	CAMBIO DI STATO DEFINITO	CAMBIO DI STATO INDEFINITO	STATO/CONTINUAZIONE DI UNO STATO	CAMBIO DI LUOGO TELICO	ATTIVITÀ DINAMICA TELICA / ATELICA	ATTIVITÀ NON DINAMICA
NAPOLI	E	E	E	E	A	A
PORTICI	E	E	E	A/E	A	A

Tabella 3. Dati Napoli e Portici

In entrambe le classi di questa varietà l'ausiliare selezionato *essere* o *avere*, sembra essere distribuito in base alla classe semantica dei verbi. I verbi di stato selezionano principalmente *essere*, mentre quelli di attività selezionano *avere*. Si rileva quindi una situazione adattata sul modello dell'italiano: i verbi inaccusativi selezionano *essere* e gli inergativi selezionano *avere*.

L'unica differenza si rileva in relazione ai verbi denotanti cambiamento di luogo telico per cui la selezione dell'ausiliare a Napoli segue il modello dell'italiano, mentre a Portici mantiene la variante locale con la selezione di *avere* per la classe medio-bassa.

Per la classe medio bassa di Pompei e di Sorrento si riscontra un primo grado di variazione sensibile alla persona grammaticale nei verbi denotanti cambiamento di stato:[3]

	1sg	2sg	3sg	1pl	2pl	3pl
POMPEI^{I}	A	E	A	A	A	A
POMPEI^{II}	A	A	E	A	A	A
POMPEI^{III}	A	E	E	A	A	A
POMPEI^{IV}	A~E	A~E	A~E	A~E	A~E	A~E
SORRENTO^{I}	A	A	A	A	A	A
SORRENTO^{II}	A	A	E	A	A	A

Tabella 4. Split di persona con i verbi di stato, Pompei e Sorrento_Classe medio bassa

Sempre nella classe bassa e per tutte le fasce di età non si rileva variazione nelle altre classi verbali, con la selezione esclusiva dell'ausiliare *avere* sia a Pompei che a Sorrento. Si noti quindi che lo *split* di persona investe solo i verbi denotanti cambiamento di stato e riguarda sempre la seconda o terza persona singolare. Non influiscono parametri come il grado di coinvolgimento del soggetto, dato che la terza plurale non segue lo stesso comportamento della singolare. Nemmeno si può imputare il cambiamento al numero, dato che non tutte le persone singolari dimostrano alternanza. La spiegazione più plausibile davanti a questi paradigmi è quella fonologica, come già suggerito da Bentley e Eythórsson (2001). Di fatti nelle varietà napoletane le forme atone di *avere* alla seconda e terza persona singolare sono omofone e innescano diversi

[3] Pompei^{I}: gruppo di anziani della classe bassa, Pompei^{II}: altri anziani della classe bassa, Pompei^{III}: mezza età classe bassa, Pompei^{IV}: Giovani della classe bassa, con generalizzazione di *essere* o di *avere* in tutto il paradigma; Sorrento^{I}: anziani e mezza età della classe bassa, Sorrento^{II}: tutte le fasce d'età della classe bassa.

sistemi di disambiguazione irregolari di varietà in varietà e di parlante in parlante. Schematizziamo in seguito i vari *pattern* testati per i parlanti di Napoli e Salerno:

(1) a. Omofonia di *avere* e disambiguazione tramite RF:

	fa 'fare'	magnà 'mangiare'
1sg	['addʒə 'fattə]	['addʒə maɲ'ɲa:tə]
2sg	[a'fattə]	[amaɲ'ɲa:tə]
3sg	[af'fattə]	[ammaɲ'ɲa:tə]

b. Omofonia di *avere* e disambiguazione tramite chiusura vocalica:

	fa 'fare'	magnà 'mangiare'
1sg	[eddʒə 'fattə]	['eddʒə maɲ'ɲa:tə]
2sg	[e'fattə]	[emaɲ'ɲa:tə]
3sg	[a'fattə]	[amaɲ'ɲa:tə]

c. Omofonia di *avere*, disambiguazione tramite chiusura vocalica e RF:

	fa 'fare'	magnà 'mangiare'
1sg	[eddʒə 'fattə]	['addʒə maɲ'ɲa:tə]
2sg	[a'fattə]	[amaɲ'ɲa:tə]
3sg	[ɛf›fattə]	[ɛmmaɲ›ɲa:tə]

d. Omofonia di *essere* e *avere* (3sg) senza sistemi di disambiguazione

	fa 'fare'	caré 'cadere'
1sg	[eddʒə 'fattə]	[sokka'ru:tə]
2sg	[e'fattə]	[sikka'ru:tə]
3sg	[ɛf›fattə]	[ɛkka›ru:tə]

Nei primi tre modelli il RF e la chiusura vocalica distinguono esclusivamente la seconda dalla terza persona singolare. In nessun caso il RF segnala la presenza dell'ausiliare *essere*, dato che i paradigmi sono stati estratti da costruzioni transitive del tipo [af'fattə 'tuttə ik'kart] 'ha fatto tutti i documenti'. Quindi sebbene [ɛ] sia una forma che talvolta può rappresentare omofonia tra la terza singolare di *essere* e di *avere*, non necessariamente viene disambiguata da RF. Quando si riscontra variazione all'interno del paradigma che riguarda solo la 2sg o la 3sg o entrambe, si potrebbe ricondurre il fenomeno ad una disambiguazione di persona verbale e non a un vero e proprio *split* di persona. Ci sono tuttavia casi in cui la selezione dell'ausiliare sembra essere sensibile al parametro della persona verbale: tra i parlanti di classe media di Pompei e Sorrento si riscontra più variazione all'interno dei paradigmi dei verbi designanti cambiamento di stato o continuazione di stato:[4]

	1sg	**2sg**	**3sg**	**1pl**	**2pl**	**3pl**
POMPEI^{I}	E	E	E	A	A	A
POMPEI^{II}	A~E	A~E	A~E	A~E	A~E	A~E
SORRENTO^{I}	A	E	A	E	E	E

[4] Pompei^{i}: gruppo di anziani della classe alta, Pompei^{ii}: altri anziani della classe alta; Sorrento^{I}: anziani e mezza età della classe alta, Sorrento^{II}: Alcuni anziani classe alta, Sorrento^{III}: alcuni giovani della classe alta, Sorrento^{IV} e Sorrento^{V}: altri giovani della classe alta.

SORRENTO^{II}	A	A	A~E	A	A	A
SORRENTO^{III}	A~E	E	E	E	E	E
SORRENTO^{IV}	A	E	E	A	A	A
SORRENTO^{V}	A~E	E	E	E	E	A~E

Tabella 5. Split di persona con i verbi di stato, Pompei e Sorrento_Classe medio alta.

Mentre per alcuni parlanti anziani di Pompei lo *split* di persona è abbastanza regolare e vede un'estensione di *essere* solo alle persone singolari (e quindi condizionato dal numero), per altri parlanti viene selezionato o solo *avere* o solo *essere* in tutto il paradigma. Per i parlanti di Sorrento la situazione è più variegata. Da un'estensione di *essere* a tutto il paradigma tranne alla 1sg e 3sg, si passa all'alternanza di *essere* e *avere* solo alla 3sg, mentre *avere* rimane in tutte le altre persone. Quando l'alternanza si riscontra solo alla prima singolare tutte le altre persone selezionano essere. Per alcuni parlanti c'è alternanza solo alla 1sg e alla 3pl. Quest'ultimo tipo induce a pensare che il cambiamento possa seguire uno schema già rilevato in altre varietà in uno studio recente da Ledgeway (2019): il morfoma-U. Ovvero l'estensione di un ausiliare sull'altro coinvolge primariamente le terze persone (essendo quelle semanticamente più deboli perché esterne al discorso) poi vi è un'estensione analogica alla prima persona. Infine l'ausiliare originario si riappropria dei propri domini alla terza singolare lasciando alternanza solo alla 1sg e 3pl. Si può riconoscere, tuttavia, un certo grado di cambiamento in atto che vede un ristabilirsi dell'intransitività scissa probabilmente sul modello dell'italiano, e quindi un'estensione dell'ausiliare *essere* che si manifesta principalmente nei verbi denotanti uno stato, cambiamento o continuazione di stato (Cennamo 2001).

Venendo ai dati di prima mano, anche nella varietà cittadina di Salerno *avere* è l'ausiliare dominante. Questo si riscontra nei suoi domini prototipici (verbi denotanti attività: *rorme* 'dormire', *fatià* 'lavorare', *corre* 'correre', *nuotà* 'nuotare') nei parlanti di tutte le età sia della classe media che della classe bassa. Anche con i verbi denotanti cambiamento di luogo i parlanti anziani di entrambi le classi selezionano *avere* (considerando la [ɛ] 3sg di [ɛj›jutə] come allomorfo di [e]). I parlanti di mezza età selezionano o *avere* o *essere* in tutto il paradigma, rispettivamente nella classe medio bassa e in quella medio alta. I parlanti più giovani si possono dividere in due gruppi: quello che seleziona *essere* solo alle persone singolari e quello che seleziona *avere* in tutte le persone. Bisogna sottolineare che per i parlanti giovani non si è fatta una vera e propria distinzione diastratica, essendo questo livello basato principalmente sul grado d'istruzione che per gli informatori giovani non è al di sotto dell'istruzione secondaria. Ancora una volta sono i verbi denotanti "stato" a creare maggiore incertezza nei parlanti. Mentre per i parlanti anziani e di mezza età della classe alta l'ausiliare selezionato è sempre *avere*, per i parlanti più giovani c'è un'alternanza in tutto il paradigma tra i due ausiliari. Per gli anziani e una minoranza di parlanti di mezza età della classe bassa l'ausiliare è *avere*, con alcuni parlanti che selezionano *essere* alla 1sg e 3sg. I parlanti di mezza età si dividono in parlanti che selezionano solo *essere* e parlanti che selezionano *avere* solo alle persone plurali. I parlanti più giovani sono orientati verso un paradigma di solo *essere* o solo *avere*, senza *split* di persona, ma insicuri sull'ausiliare da utilizzare (per la maggior parte entrambi gli ausiliari sono corretti).

La tabella 6 riassume i dati di Salerno:[5]

	1sg	2sg	3sg	1pl	2pl	3pl
ATTIVITÀ (STATICA O DINAMICA)						
SALERNO	A	A	A	A	A	A
CAMBIAMENTO DI LUOGO (TELICO O ATELICO)						
SALERNO^{I}	A	A	A	A	A	A
SALERNO^{II}	A~E	A~E	A~E	A~E	A~E	A~E
SALERNO^{III}	E	E	E	A	A	A
SALERNO^{IV}	A	A	A	A	A	A
CAMBIAMENTO DI STATO (DEFINITO/INDEFINITO) E STATO E CONTINUAZIONE DI STATO						
SALERNO^{V}	A	A	A	A	A	A
SALERNO^{VI}	A~E	A~E	A~E	A~E	A~E	A~E
SALERNO^{VII}	A~E	A	A~E	A	A	A
SALERNO^{VIII}	E	E	E	E	E	E
SALERNO^{IX}	E	E	E	A	A	A

Tabella 6. Pattern di variazione nei parlanti di Salerno

Seppur con *pattern* di variazione differenti, la varietà di Salerno mostra una tendenza simile a quella riscontrata per le varietà della provincia napoletana, ovvero un sistema originario di ausiliazione perfettiva che prevedeva l'unico ausiliare *avere* per tutte le classi verbali al quale lentamente si va a imporre un'intransitività scissa sul modello, e sotto l'influsso, dell'italiano.

Del resto, geolinguisticamente, Salerno si trova agli estremi, ma ancora all'interno dell'area centrale campana improntata sul napoletano (cfr. Loporcaro 2004, 2007, 2010, 2014 e 2016; Barbato 2002: 34). Per il secondo punto di indagine si è quindi deciso di analizzare il fenomeno dell'intransitività scissa in un'area altrettanto centrale e non distante dal capoluogo di provincia preso in analisi, ma appena fuori dalla linea Eboli-Lucera, che delimita la zona centrale da quella meridionale dei dialetti campani: Acerno (cfr. Avolio 1989). Situata nella zona montuosa tra la provincia di Salerno e l'entroterra irpino, Acerno rappresenta un punto linguistico conservativo, ma ideale per l'individuazione della penetrazione della variante regionale basata sul modello napoletano.

I dati provenienti da Acerno risultano abbastanza omogenei (cfr. tabella 7). Per i verbi denotanti cambiamento di stato definitivo alcuni parlanti di mezza età e giovani della classe bassa selezionano *essere* solo alla 3sg e alla 1pl e *avere* in tutte le altre persone. Si tratta di un gruppo molto ristretto, ma rilevante data la ricorsività del *pattern*. Gli anziani e gli adulti di entrambe le classi sociali, e alcuni giovani della classe media selezionano solo *essere*, mentre i

[5] Salerno: Tutte le fasce d'età di entrambe le classi. Salerno^{I}: anziani di entrambe le classi, Salerno^{II}: informatori di mezza età, medio-bassa A e medio alta E; Salerno^{III} e Salerno^{IV}: giovani; Salerno^{V}: anziani e mezza età classe medio alta, Salerno^{VI}: giovani, Salerno^{VII}: anziani e mezza età classe medio-bassa, Salerno^{VIII} e Salerno^{IX}: gruppi di parlanti di mezza età classe medio-bassa.

giovani della classe bassa selezionano *avere*. Con i verbi che denotano cambiamento di stato indefinito, stato e continuazione di uno stato l'ausiliare selezionato è sempre *essere*. Con i verbi di cambiamento di luogo telico e atelico l'ausiliare selezionato è *avere*, senza variazione diastratica o diagenerazionale, che si riscontra invece per i verbi denotanti attività, sia statica (*rorme* 'dormire') che dinamica (*faticà* 'lavorare'), in quanto gli anziani di entrambe le classi selezionano *essere*, mentre i giovani e gli adulti di mezza età, di entrambe le classi, selezionano *avere*. L'ausiliare *essere*, quindi, oltre ad essere selezionato maggioritariamente nelle classi verbali proprie dell'inaccusatività sembra essere il default locale anche nei domini funzionali di *avere* (con i verbi prototipicamente inergativi, denotanti attività con scarsa telicità e forte agentività) (2a-b). A riprova di ciò sono state testate anche alcune costruzioni transitive e l'ausiliare selezionato era *essere*, come esemplificato in (2c) almeno per i parlanti più anziani e meno influenzati dall'italiano (o dal napoletano):

(2) a. ɔi so fati'kætə 'su:l
oggi essere.1s lavorato solo
'oggi ho solo lavorato'

b. aŋgo:rə nu sso maɲ'ɲætə
ancora non essere.1s mangiato
'ancora non ho mangiato'

c. so maɲ'ɲætə nu pokə i 'lattə
essere.1s mangiato un poco di latte
'ho bevuto un po' di latte'
(Acerno, anziano classe bassa)

Il fatto che solo i parlanti giovani e della classe più bassa selezionino l'ausiliare *avere* con i verbi denotanti cambiamento di luogo, potrebbe indicare che questo gruppo di parlanti non faccia una vera distinzione tra varietà locale e napoletano, risultando in una confusione tra sistema locale autoctono e la varietà regionale dominante. I parlanti più consapevoli selezionano senza dubbi *essere* con questi verbi e non per influenza dell'italiano. La tabella 7 riassume i dati provenienti da Acerno.[6]

	1sg	2sg	3sg	1pl	2pl	3pl
ATTIVITÀ (STATICA O DINAMICA)						
ACERNO^{I}:	E	E	E	E	E	E
ACERNO^{II}:	A	A	A	A	A	A
CAMBIAMENTO DI LUOGO (TELICO O ATELICO)						
ACERNO^{III}:	A	A	A	A	A	A
CAMBIAMENTO DI STATO DEFINITIVO						
ACERNO^{IV}:	A	A	E	E	A	A

[6] Acerno^{I}: parlanti anziani di entrambe le classi; Acerno^{II}: mezza età e giovani di entrambe le classi; Acerno^{III}: tutti i parlanti; Acerno^{IV}: Alcuni parlanti di mezza età e giovani della classe bassa; Acerno^{V} e Acerno^{VI}: tutte le età e classi.

	1sg	2sg	3sg	1pl	2pl	3pl
ACERNO[V]:	E	E	E	E	E	E
CAMBIAMENTO DI STATO INDEFINITO, STATO E CONTINUAZIONE DI STATO						
ACERNO[IV]: ALTRI	E	E	E	E	E	E

Tabella 7. Dati di Acerno

Il sistema di selezione dell'ausiliare ad Acerno differisce considerevolmente da quello delle varietà più centrali e il ristabilirsi dell'intransitività scissa, sembra partire da una base in cui *essere* è l'ausiliare dominante e *avere* si impone lentamente sui propri domini prototipici. *Avere* si è già esteso completamente ai verbi denotanti cambiamento di luogo (telico e atelico), che in italiano selezionano *essere*, ma, come già visto, nelle varietà campane protendono per *avere*.

3.2 La status linguistico e sociolinguistico del Cilento

La discussione dei dati cilentani pone alcuni problemi metodologici dovuti alle profonde divergenze diatopiche e diastratiche dell'area. I meccanismi che determinano la selezione degli ausiliari perfettivi sono molteplici.

Nella sezione presente si esamina la selezione dell'ausiliare nei costrutti perifrastici (o analitici) del perfetto nelle varietà di Castel San Lorenzo, Felitto, Magliano Vetere, Gorga (frazione di Stio Cilento), Laurino, Valle dell'Angelo, Piaggine, Campora, Rofrano, Torre Orsaia, Sessa Cilento, Stella Cilento, Novi Velia, Cannalonga, Omignano, Montano Antilia, Castellabate, Agropoli, Camerota e Licusati (frazione di Camerota). I dati sono stati organizzati seguendo il criterio diatopico, data l'eterogeneità territoriale, e differenziando i punti di indagine in due macroaree: zona costiera-mediana ed entroterra (corrispondente alla Valle del Calore Lucano). Inoltre, mediana/costiera si compone di tre aree geografiche distinte secondo i parametri areali di morfologia territoriale: (i) Area della Valle di Novi, (ii) Area del Cilento storico e (iii) l'area costiera (nord e sud). L'area in cui sono stati raccolti il numero maggiore di dati è la Valle del Calore Lucano, dal punto di vista linguistico la più conservativa delle aree studiate.

Come anticipato, anche rispetto al fenomeno in esame, il Cilento mostra una netta differenziazione areale; da una parte l'area della Valle del Calore Lucano[7] si presenta come estremamente conservativa, in una visione in cui la selezione del solo ausiliare *avere* rappresenti una fase molto più antica del fenomeno, dall'altra sussistono fenomeni di estrema e differenziata variazione nelle altre aree considerate. Generalmente nelle varietà caratterizzate dall'unico ausiliare perfettivo *avere*, con valore *eventivo*,[8] l'accordo participiale può rappresentare un valido test diagnostico di inaccusatività verbale e permette di individuare due sottoclassi di verbi intransitivi, corrispondenti alla distinzione tra verbi inaccusativi, caratterizzati dalla presenza di accordo tra (So) e participio passato; e verbi inergativi in relazione ai quali, di norma, il participio passato occorre nella forma non accordata, il maschile singolare alla 3sg.

[7] Va considerato, in prima istanza, che nelle varietà afferenti alla Valle del Calore Lucano (Castel San Lorenzo, Felitto, Magliano Vetere, Gorga (frazione di Stio Cilento), Laurino, Valle dell'Angelo, Piaggine e Campora) il sistema di ausiliazione identifica due costrutti differenti: quello *eventivo* e quello s*tativo*; caratterizzati, rispettivamente, dalla presenza dell'ausiliare *avere* ed *essere*.

[8] Nel senso di Comrie 1976 e 1985.

I dati riguardanti i costrutti eventivi sono illustrati nelle tabelle (8) e (9), i cui dati sono ordinati in base al criterio diatopico e alla classe semantica di appartenenza del verbo lessicale.

	1sg	2sg	3sg	1pl	2pl	3pl
CLASSE BASSA						
	CAMBIAMENTO DI STATO (DEFINITO/INDEFINITO) E STATO E CONTINUAZIONE DI STATO					
VALLE DEL CALORE	A	A	A	A	A	A
AREA DI TRANSITO	A	E/A	E/A	A	A	A
ZONA MISTA	A/E	A/E	E	A	A	A
COSTA	E/A	E/A	E/A	E/A	E/A	E/A
	CAMBIAMENTO DI LUOGO (TELICO O ATELICO)					
VALLE DEL CALORE	A	A	A	A	A	A
AREA DI TRANSITO	E/A	E/A	E/A	E/A	E/A	E/A
ZONA MISTA	E/A	E/A	E/A	E/A	E/A	E/A
COSTA	E/A	E/A	E/A	E/A	E/A	E/A
	ATTIVITÀ DINAMICA / ATTIVITÀ NON DINAMICA					
VALLE DEL CALORE	A	A	A	A	A	A
AREA DI TRANSITO	A	A	A	A	A	A
ZONA MISTA	A	A	A	A	A	A
COSTA	A	A	A	A	A	A
CLASSE MEDIA						
	CAMBIAMENTO DI STATO (DEFINITO/INDEFINITO) E STATO E CONTINUAZIONE DI STATO					
VALLE DEL CALORE (più Rofano)	E/A	E/A	E/A	E/A	E/A	E/A
SESSA, STELLA, CASTELLABATE, AGROPOLI, TORRE ORSAIA, CAMEROTA LICUSATI	E	E	E	E	E	E
	CAMBIAMENTO DI STATO (DEFINITO/INDEFINITO)					
NOVI VELIA, CANNALONGA, OMIGNANO PAESE, MONTANO ANTILIA	E	E	E	E	E	E
	CONTINUAZIONE DI STATO					
	E/A	E/A	E/A	E/A	E/A	E/A

	CAMBIAMENTO DI LUOGO (TELICO O ATELICO)					
VALLE DEL CALORE (più Rofano)	E/A	E/A	E/A	E/A	E/A	E/A
SESSA, STELLA, CASTELLABATE, AGROPOLI, TORRE ORSAIA, CAMEROTA LICUSATI	E	E	E	E	E	E
NOVI VELIA, CANNALONGA, OMIGNANO PAESE, MONTANO ANTILIA	E/A	E/A	E/A	E/A	E/A	E/A
	ATTIVITÀ DINAMICA / ATTIVITÀ NON DINAMICA					
VALLE DEL CALORE (più Rofano)	A	A	A	A	A	A
SESSA, STELLA, CASTELLABATE, AGROPOLI, TORRE ORSAIA, CAMEROTA LICUSATI	A	A	A	A	A	A
NOVI VELIA, CANNALONGA, OMIGNANO PAESE, MONTANO ANTILIA	A	A	A	A	A	A

Tabella 8. Dati classe bassa Cilento.

I dati, data la complessità del fenomeno e la quantità numerica dei punti di rilievo, verranno discussi separatamente.

3.2.1 Classe bassa Valle del Calore

I dati della Valle del Calore mostrano una situazione molto conservativa, in cui l'unico ausiliare del costrutto eventivo è *avere*. Gli informatori della classe bassa identificano due sottoclassi di verbi intransitivi, corrispondenti alla distinzione tra verbi inaccusativi ed inergativi, mediante l'accordo del participio passato con il soggetto presente solo con i verbi inaccusativi e in determinati contesti pragmatici (per ragioni strutturali del lavoro non possono essere qui discussi). Gli informatori di questa area non mostrano mai incertezza nella selezione dell'ausiliare, come testimoniato sia dai questionari che dal parlato spontaneo registrato. A tal proposito si osservino gli esempi riportati e suddivisi in base alle classi semantiche individuate mediante Cennamo (2001) e Sorace (2000).

Per i verbi denotanti cambiamento di luogo sono stati considerati gli intransitivi denotanti uno spostamento del soggetto da un punto all'altro dello spazio sia di cambiamento di stato telico (che codificano il punto finale dell'evento), sia di cambiamento atelico (che non codificano il punto finale dell'evento), sia i sottotipi descritti in Sorace (2000) e Cennamo e Sorace (2007), ovvero sia verbi che lessicalizzano il punto finale (+/-puntuali), sia quelli che denotato un movimento non diretto come ad esempio *salire*:

(3) a. amu tra'suti ɖ'ɖa e nu: a'viaˌ 'nɛndi 'prɔpriu
abbiamo entrati là e non aveva niente proprio
'siamo entrati là e non c'era niente proprio!'

b. a bbi'nuta d'ʤa m'briaka a mmjenʣi^{ə}'jwornu
ha venuta già ubriaca a mezzogiorno
'A mezzogiorno era già ubriaca (è venuta ubriaca)'

c. ma iuˌ nu: 'adʤu s'suta ka 'faʧi 'friɖɖu d'ʤa
ma io non ho uscita che fa freddo già
'ma io non sono uscita che fa già freddo!'

Per quanto riguarda i verbi denotanti cambiamento di stato sono stati identificati tre sottotipi: (i) verbi denotanti cambiamento di stato definito, inerentemente telici e puntuali (es. *nascere*, *morire*), (ii) verbi denotanti cambiamento di stato indefinito o a completamento graduale (Bertinetto and Squartini 1995), definiti nella letteratura anche *degree achievements* (Hay, Kennedy e Levin 1999 e discussione in Cennamo and Sorace 2007: 76-80 per il dialetto padovano; es. *succedere*, *seccare*, *marcire*, *maturare*, *seccare*); l'ausiliare selezionato, anche in questo caso, è sempre *avere*:

(4) a. 'kiri anu 'mwɔrti la d'ʤɛndi
quelli hanno morti la gente
'Ne è morta di gente!'

b. tə'nia ut'tanda'ʧiɡu 'anni 'kwannu a m'mwortu
teneva ottantacinque anni quando ha morto
'È morto all'età di ottantacinque anni'

c. m a: m'mwɔrtu lu 'pɛ:ri
mi ha morto il piede
'Ho il piede intorpidito'

d. nu: 'satʧu niʃ'ʃunu 'kwannu anu 'na:ti
non so nessuno quando hanno nati
'Non ricordo le date dei compleanni (non so quando sono nati)'

e. anu 'na:te d'ʤa?
hanno nate già?
'Sono già nati? (i pomodori a luglio)'

f. anu kuŋ'ɡjute mo li ffiku'riniˌa
hanno maturate ora le fico d'India
'Sono maturate ora le fico d'india'

g. ɔr'mai anu sik'kati li 'ju:ri
ormai hanno seccati i fiori
'I fiori sono ormai secchi!'

h. tu a mˈmaŋgu nu ˈkwartu ˈriʧi k‿a: sutˈʧjessu?
tu a manca un quarto dici che ha successo?
ˈʃɔrta ˈmiạ k a: sutˈʧjessu?
sorte mia che ha successo
'Tu alle cinque meno un quarto mi dici (per finta) che è successo?
Dici oh mio Dio che è successo?'

Andando verso il polo dell'inergatività, si riscontrano i verbi denotanti attività dinamica e non dinamica, suddivisi in verbi denotanti funzioni/reazioni fisiche involontarie, verbi meteorologici, verbi di attività non denotanti movimento e verbi denotanti la maniera del movimento, atelici.

Per quanto riguarda i verbi denotanti funzioni/reazioni fisiche involontarie, occorre sempre l'ausiliare *avere* nel valore eventivo del costrutto. Tuttavia, con un verbo quale *tremare*, nel senso di *tremare dalla paura*, può presentare proprietà d'accordo participiale col soggetto, come non presentare affatto l'accordo. Questo dipende dalla codifica del predicato, se l'interpretazione è orientata verso il soggetto o verso la causa della reazione fisica:

(5) ˈaddʒa trummuˈla:ta ˈtutta ˈkwanta
ho tremata tutta quanta
'sono tremata tutta (per la paura…)'

3.2.2 Classe bassa- zona costiera e intermedia

I dati provenienti dalla classe bassa della zona costiera sono discussi separatamente, in quanto in queste varietà è presente estrema variazione. Rofrano, Sessa Cilento, Stella Cilento, Novi Velia e Cannalonga presentano schemi di variazione abbastanza stabili in cui alla 2sg e 3sg si alternano gli ausiliari *essere* e *avere* in relazione agli inaccusativi prototipici. Per cui vi è una gerarchia che è sensibile ai tratti di persona, e come si vedrà al tempo verbale.

Nei punti di Omignano, Montano Antilia, Castellabate, Agropoli e Torre Orsaia, al perfetto dei verbi inaccusativi prototipici, tranne nei verbi denotanti cambiamento di luogo (telico e atelico), la gerarchia, sensibile ai tratti di persona e al tempo verbale, presenta molta più variazione in quanto le persone che presentano variazione libera tra i due ausiliari sono la 1sg e la 3sg, mentre nella 2sg è presente il solo ausiliare *essere*, e nelle persone plurali (1, 2, 3) è presente il solo ausiliare *avere*. Questo ultimo schema di selezione dell'ausiliare è simile a quanto osservato da Manzini e Savoia (2005 vol. II: 723-728, 732; vol. III: 372; 368) per il punto linguistico di Padula situato nel Vallo di Diano, zona contigua al Cilento. Per quanto concerne, invece, i punti linguistici della costa meridionale il sistema di selezione degli ausiliari in relazione agli inaccusativi (per tutte le classi di inaccusativi) alterna entrambi gli ausiliari *essere* e *avere*, per tutte le persone grammaticali.

I dati della zona intermedia (Rofrano, Sessa Cilento, Stella Cilento, Novi Velia e Cannalonga) ripropongono paradigmi verbali in cui ad *avere* vengono assegnate tutte le persone grammaticali, ma alla 2sg *avere* alterna con *essere* e, probabilmente, per motivi fonologici (di cui discusso in relazione a Bentley e Eythórsson 2001 per cui le forme atone di *avere* alla 2sg e 3sg sono 'omofone' e innescando diversi sistemi di disambiguazione irregolari di varietà in varietà e di parlante in parlante),[9] *essere* si estende anche alla 3sg.

[9] Chiarito nelle tabelle 9 e 10.

È difficile identificare il motivo dell'estensione di *essere* anche alla 3sg, perché spesso tale variazione è idiosincratica e idiolettale, come in altre zone della Campania. In queste varietà costiere e centrali è presente una scissione orientata sulla persona grammaticale e la selezione dell'ausiliare è condizionata dalla presenza del tratto [+Persona] e dai tratti semantici [±Agente] e [±Paziente].

Quando è presente variazione all'interno del paradigma che riguarda solo la 2sg o la 3sg o entrambe, si potrebbe ricondurre il fenomeno ad una disambiguazione di persona verbale e non a un vero e proprio *split* di persona. Tuttavia, è interessante osservare come in una zona più esposta alle influenze linguistiche esterne, in particolar modo dell'adstrato campano e da una frequenza d'uso maggiore della lingua italiana,[10] sia possibile individuare un gradiente lessico-aspettuale nella selezione dell'ausiliare perfettivo nel passato prossimo. Pertanto, i dati sembrano in parte confermare quanto osservato da Cennamo (2001, 2008 e 2010) per altre varietà campane, nelle quali il polo degli inergativi seleziona *avere*, mentre per gli inaccusativi, in particolare i verbi denotanti cambiamento di stato definito (es. *morire* e *nascere*), *essere* si alterna ad *avere*, con notevole incertezza degli informatori, anche nella classe bassa. Soprattutto in relazione al verbo *morire*, gli informatori prediligono l'ausiliare *essere* in relazione alla 3sg. Per quanto riguarda i verbi inaccusativi denotanti cambiamento di luogo telico, gli informatori di questa classe tendono a selezionare *essere* se viene specificato il punto finale dell'evento, *avere* se invece il verbo denota direzione del movimento (es. *salire*) o attività che implica movimento (es. *correre*).

La selezione dell'ausiliare nei verbi denotanti cambiamento di luogo (telico o atelico), mostra che essi andrebbero posti verso il centro del gradiente.

I dati degli informatori della classe bassa della zona costiera rivelano forte variazione nella selezione degli ausiliari perfettivi, sensibile alle caratteristiche lessico-aspettuali dei verbi, unitamente a fattori sociolinguistici, tra cui il livello di mobilità, maggiore per questi parlanti rispetto a quelli della zona centrale del Cilento, che vivono in uno stato di forte isolamento.

È proprio dai dati degli informatori della classe bassa della zona costiera che si può osservare come vi sia una forte variazione nella codifica della transitività e come essa sia sensibile alla semantica dell'aspetto lessicale del verbo, ma soprattutto a fattori sociolinguistici per cui il livello di mobilità è una delle variabili sociolinguistiche maggiormente influenti. I dati di questi informatori, inoltre, sembrano riproporre una situazione simile a quella osservata da Cennamo per la classe bassa di Pompei, dove si alternano *essere* e *avere* per la 1sg, 2sg e 3pl, *essere* 2sg e 3sg e *avere* 1pl, in cui è evidente un lento, ma costante, ristabilirsi di un sistema di intransitività scissa che parte dagli inaccusativi prototipici individuati nella classe dei verbi denotanti cambiamento di stato definito.

A livello diatopico, per questa classe di informatori, si nota che nei punti di Licusati e Camerota, zona costiera ma nell'estremo sud della regione (Cilento), i dati mostrano una suddivisione abbastanza netta tra gli inaccusativi e gli inergativi; tuttavia, in relazione agli inaccusativi gli informatori giudicano grammaticali entrambi gli ausiliari e li utilizzano indifferentemente senza prediligere l'uno all'altro. Probabilmente vi è stata una forte influenza da parte della lingua tetto (l'italiano), che a partire dagli anni Sessanta del secolo scorso, è entrata nella realtà degli informatori attraverso la radio e la televisione.

[10] Questi punti linguistici, trovandosi nei pressi di luoghi turistici, sono frequentati da italofoni a differenza delle zone dell'entroterra, in cui anche i parlanti della classe media utilizzano generalmente il dialetto nella interazione quotidiana. La zona costiera del Cilento, invece, è esposta a maggiori scambi culturali con altre zone della regione e fuori dalla regione e per motivi prettamente economici e di facilità nella comunicazione il dialetto viene sostituito dall'italiano.

3.2.3 Classe media-Area del Calore Lucano

I dati presentati in (tab.8-9), evidenziano una situazione molto compatta in cui sono immediatamente individuabili le due sottoclassi di intransitivi: gli inaccusativi e gli inergativi. Come per la classe bassa della stessa area, la classe degli inergativi presenta il solo ausiliare *avere*; per quanto riguarda la classe degli inaccusativi i paradigmi dei verbi analizzati sono costruiti con l'ausiliare *avere* quando gli informatori ritengono di parlare le rispettive varietà dialettali, mentre l'uso dell'ausiliare *essere* attiene al registro più formale di ciascun informatore. Gli informatori della classe media della Valle del Calore Lucano sono parlanti bilingui, e padroneggiano pertanto sia il repertorio dialettale che quello dell'italiano regionale. Di fatto, essi sono parlanti la cui L1 è costituita dal dialetto locale, che rappresenta la lingua di riferimento dell'area. La frequenza d'uso dell'italiano è limitata a pochi domini d'uso, ovvero con estranei al territorio o fuori dal territorio.[11] L'italiano ha, dunque, una frequenza d'uso molto bassa all'interno del territorio; ciò si traduce in competenze linguistiche idiosincratiche altamente differenziate, si potrebbe pensare ad una situazione di dilalia (cfr. Berruto 2005; Berruto e Cerruti 2015).

Gli informatori della classe media della Valle del Calore Lucano sono in grado di utilizzare senza interferenza sia il registro dialettale che quello italiano; di conseguenza essi giudicano grammaticali entrambi gli ausiliari rispetto, però, alle lingue utilizzate, perfettamente in linea sia con i risultati della classe bassa che con le risposte attese per l'italiano. Come ricorda Berruto (2005: 21) "in linea di principio tutte le strutture effettive prodotte dalla grammatica sono suscettibili di assumere significato sociolinguistico", dunque se da un lato la selezione di *essere* in contesti formali assume un significato sociale e riflette la tendenza a separare la comunicazione orientandola fuori dalla comunità, dall'altro lato la selezione dell'ausiliare *avere* veicola la necessità di mantenere invariabile il sistema linguistico di provenienza come volontà di espressione della propria identità. L'ausiliare *avere* per questi informatori è l'unico ausiliare del sistema linguistico dialettale, come chiariscono diversi informatori in sede di intervista. Difatti, la scelta da parte di questi parlanti dell'ausiliare *essere* non solo è consapevole, ma è chiaramente orientata ad un registro formale e verso il dominio dell'italiano regionale.

Ciò risulta anche dagli studi di Ledgeway (2009: 619) in cui si evince che i parlanti più conservativi di una varietà siano proprio quelli in grado di riflettere unitamente sui domini di una o dell'altra lingua. Il ruolo della consapevolezza è fondamentale nello stabilire il valore di prestigio e marcatezza alle varianti linguistiche, secondo Labov (2001) gli informatori tenderebbero ad essere più consapevoli delle varianti fonologiche e non di quelle grammaticali; tuttavia, grazie agli informatori della classe media si può affermare che il concetto controverso di variabile sociolinguistica possa essere applicato anche a fenomeni morfosintattici e sintattici e dunque:

> A livello sintattico costrutti diversi possono essere considerati varianti di una variabile nei contesti in cui tali costruzioni siano equivalenti sul piano del significato contestuale pragmatico e benché non identica sul piano strutturale svolgano la stessa funzione (Berruto e Cerruti 2015: 123).

Tuttavia, gli informatori della classe media della Valle del Calore, a differenza di quelli della classa bassa, mostrano dati diversi rispetto alla selezione dell'ausiliare in relazione ai verbi meteorologici. Precedentemente è stato chiarito che *essere* e *avere* sono per la classe bassa gli ausiliari

[11] In uno studio precedente sulle comunità della Valle del Calore Lucano (Cerullo 2018b), si è potuto verificare come i membri di queste comunità, anche giovanissimi, usino il dialetto in funzione criptolalica e si è osservata una controtendenza rispetto al modello nazionale, ovvero gli informatori dichiarano di "avere vergogna di parlare in italiano" [citazione?].

di due costrutti diversi: eventivo e stativo. Gli informatori della classe media in relazione ai verbi denotanti processi incontrollati (solo in relazione ai *meteorologici*) non riconoscono l'ausiliare *essere* nemmeno in relazione ad un costrutto stativo per questa categoria; mentre tale costrutto è ampiamente realizzato dagli informatori della classe bassa che, pur avendo generalizzato l'ausiliare *avere* nel costrutto eventivo in relazione ai meteorologici, ammettono il costrutto stativo con la selezione, giustappunto, dell'ausiliare *essere*. Ovvero per gli informatori della classe bassa è del tutto grammaticale un costrutto come è *chiuoppeto* 'è piovuto', con valore stativo, essi non concepiscono i meteorologici come del tutto privi di struttura argomentale e individuano un soggetto nel *tempo* (il tempo piove, il tempo è uscito, ecc.).

3.2.4 Classe media-Area Valle di Novi (intermedia), zona di transito e costiera

Per i parlanti della fascia costiera si può osservare come la selezione dell'ausiliare sia profondamente veicolata da una dall' interferenza della lingua italiana. Il quadro si discosta molto dalla zona interna più isolata e resistente al contatto con la lingua tetto. Per una sintesi si osservino in tabella i dati della classe media di queste aree, che si discostano anche dai risultati della classe bassa delle stesse:

	1sg	**2sg**	**3sg**	**1pl**	**2pl**	**3pl**
CLASSE MEDIA						
	CAMBIAMENTO DI STATO (DEFINITO/INDEFINITO) E STATO E CONTINUAZIONE DI STATO					
ROFRANO	E/A	E/A	E/A	E/A	E/A	E/A
SESSA, STELLA, CASTELLABATE, AGROPOLI, TORRE ORSAIA, CAMEROTA LICUSATI	E	E	E	E	E	E
	CAMBIAMENTO DI STATO (DEFINITO/INDEFINITO)					
NOVI VELIA, CANNALONGA, OMIGNANO PAESE, MONANO ANTILIA	E	E	E	E	E	E
	CONTINAZIONE DI STATO					
	E/A	E/A	E/A	E/A	E/A	E/A
	CAMBIAMENTO DI LUOGO (TELICO O ATELICO)					
ROFRANO	E/A	E/A	E/A	E/A	E/A	E/A
SESSA, STELLA, CASTELLABATE, AGROPOLI, TORRE ORSAIA, CAMEROTA LICUSATI	E	E	E	E	E	E
NOVI VELIA, CANNALONGA, OMIGNANO PAESE, MONTANO ANTILIA	E/A	E/A	E/A	E/A	E/A	E/A

	ATTIVITÀ DINAMICA / ATTIVITÀ NON DINAMICA					
ROFRANO	A	A	A	A	A	A
SESSA, STELLA, CASTELLABATE, AGROPOLI, TORRE ORSAIA, CAMEROTA LICUSATI	A	A	A	A	A	A
NOVI VELIA, CANNALONGA, OMIGNANO PAESE, MONTANO ANTILIA	A	A	A	A	A	A

Tabella 9. Selezione dell'ausiliare classe media zone intermedie.

Tra i dati presentati in tabella (9), il punto linguistico di Rofrano rappresenta un *unicum* rispetto all'area di appartenenza, forse perché a livello areale prossimo alle comunità di Piaggine e Laurino (nella Valle del Calore), in quanto giudica grammaticali entrambi gli ausiliari in relazione agli inaccusativi prototipici fino ai verbi denotanti cambiamento di luogo telico/atelico, mentre in relazione ai verbi denotanti attività selezionano l'unico ausiliare *avere* in linea con la maggiore agentività del soggetto per questa classe di verbi. I punti linguistici di Sessa Cilento, Stella Cilento, Castellabate, Agropoli Torre Orsaia, Camerota e Licusati in relazione ai verbi denotanti cambiamento di stato (definito/non definito) e ai verbi denotanti cambiamento di luogo (telico/atelico) presentano il solo ausiliare *essere* senza shift di persona e senza variazione libera dei due ausiliari. Mentre con i verbi denotanti attività vi è l'unico ausiliare *avere*; segno della stabilità della categoria degli inergativi, e della netta distinzione per questa area tra inaccusativi e inergativi, perfettamente in linea con la distinzione presente anche nella lingua italiana. Si può sostenere che le loro risposte siano state orientate dal ruolo centrale esercitato dall'italiano, lingua che essi praticano con più frequenza. Non possiedono le medesime competenze dialettali degli informatori della Valle del Calore Lucano, inoltre questi punti linguistici diatopicamente sono collocati nei pressi di grandi centri del Cilento, e talvolta sono essi stessi centri molto più grandi rispetto ai punti dell'area del Calore, in cui l'identità è un fattore fondamentale. Lo stigma e la connotazione negativa del repertorio dialettale ha determinato la codifica dell'uso degli ausiliari *essere* e *avere*, l'assegnazione di un valore di marcatezza sociolinguistica verso l'uso di *avere* non è inerente alle manifestazioni del sistema linguistico ma è mediata dal gruppo sociale e dai valori che esso veicola in senso assoluto e relativo e in cui, poi, *essere* viene definito l'ausiliare di prestigio in relazione agli inaccusativi seguendo il modello dell'italiano.

Nei punti di Novi Velia, Cannalonga, Omignano e Montano Antilia, come accade anche in altre zone della regione Campania, si può osservare come la selezione dell'ausiliare perfettivo segua una gerarchia di Inaccusatività/Inergatività che rispecchia il gradiente riformulato da Cennamo (2001), per le varietà della Campania settentrionale, in cui i verbi denotanti cambiamento di stato definitivo, telici e puntuali (es. *nascere* e *morire*), risultano essere più inaccusativi dei verbi denotanti cambiamento di luogo, in quanto essendo denotati principalmente da fattori semantici che hanno parametri e valori diversi e non universali, devono disporsi secondo un gradiente che ha una struttura generale, ai cui poli si posizionano i verbi prototipicamente inergativi e quelli prototipicamente inaccusativi, e per ogni lingua può cambiare la disposizione delle varie classi semantiche del predicato.

Il punto di rottura nella gerarchia degli intransitivi è rappresentato dai verbi periferici (continuazione di uno stato preesistente e cambiamento di luogo telico/atelico), in relazione ai quali gli informatori di questo gruppo suggeriscono di reputare accettabili entrambi gli ausiliari nell'intero paradigma morfologico. I verbi denotanti attività controllata indicanti un movimento in sé, o un movimento nello spazio, come *correre*, *camminare* o *passeggiare*, rappresentano la classe verbale che ha indotto maggiormente in dubbio gli informatori. Sebbene gli informatori giudichino entrambi gli ausiliari grammaticali, essi mostrano una predilezione per l'ausiliare *essere* quando viene specificato il punto telico finale dell'evento come in frasi: *sono arrivato a casa*/ *sono corso a casa*. Mentre se il punto finale dell'evento non viene specificato, gli informatori selezionano l'ausiliare *avere*; dunque tale fenomeno è riconducibile a caratteristiche lessico-aspettuali dei verbi. Anche se questi informatori hanno maggiori competenze d'uso della lingua italiana, si può notare una difficoltà nel riconoscere quale sia l'ausiliare di questi verbi e ad individuare il contesto sintattico preciso in cui inserire uno o l'altro ausiliare. Tali verbi occupano una posizione periferica in seno alla gerarchia presentata dalla stessa Sorace (2000), e nella periferia i verbi sono appunto caratterizzati da differenti fattori composizionali.

Seppur con *pattern* di variazione differenti, la varietà del Cilento (almeno per le aree intermedia, transito e costiere) mostrano tendenze simili a quelle riscontrata per le varietà della provincia napoletana (studiate da Cennamo, principalmente 2001), ovvero un sistema originario di ausiliazione perfettiva che prevedeva l'unico ausiliare *avere* per tutte le classi verbali al quale lentamente si va a imporre un'intransitività scissa sul modello, e sotto l'influsso, dell'italiano.

Per una sintesi dei dati della classe bassa e media, rispetto al punto di rilievo e alla classe semantica del verbo si osservi la tabella (10), ovviamente i dati riportati in tabella non possono tenere conto della differenziazione idiosincratica e idiolettale di ciascun informatore, pertanto rappresentano esclusivamente le tendenze generali delle varietà oggetto di questa analisi. Si è ritenuto opportuno, a questo punto del lavoro, mostrare i *pattern* di variazione suddivisi per macroaree, classi più o meno omogenee di verbo e in base allo *split* di persona.

	1sg	2sg	3sg	1pl	2pl	3pl
CLASSE BASSA						
	CAMBIAMENTO DI STATO (DEFINITO/INDEFINITO) E STATO E CONTINUAZIONE DI STATO					
VALLE DEL CALORE	A	A	A	A	A	A
AREA DI TRANSITO	A	E/A	E/A	A	A	A
ZONA MISTA	A/E	A/E	E	A	A	A
COSTA	E/A	E/A	E/A	E/A	E/A	E/A
	CAMBIAMENTO DI LUOGO (TELICO O ATELICO)					
VALLE DEL CALORE	A	A	A	A	A	A
AREA DI TRANSITO	E/A	E/A	E/A	E/A	E/A	E/A
ZONA MISTA	E/A	E/A	E/A	E/A	E/A	E/A
COSTA	E/A	E/A	E/A	E/A	E/A	E/A
	ATTIVITÀ DINAMICA / ATTIVITÀ NON DINAMICA					
VALLE DEL CALORE	A	A	A	A	A	A

AREA DI TRANSITO	A	A	A	A	A	A
ZONA MISTA	A	A	A	A	A	A
COSTA	A	A	A	A	A	A
CLASSE MEDIA						
	CAMBIAMENTO DI STATO (DEFINITO/INDEFINITO) E STATO E CONTINUAZIONE DI STATO					
VALLE DEL CALORE (più Rofrano)	E/A	E/A	E/A	E/A	E/A	E/A
SESSA, STELLA, CASTELLABATE, AGROPOLI, TORRE ORSAIA, CAMEROTA LICUSATI	E	E	E	E	E	E
	CAMBIAMENTO DI LUOGO (TELICO O ATELICO)					
NOVI VELIA, CANALONGA, OMIGNANO PAESE, MONTANO ANTILIA	E	E	E	E	E	E
	CONTINUAZIONE DI STATO					
	E/A	E/A	E/A	E/A	E/A	E/A
	CAMBIAMENTO DI LUOGO (TELICO O ATELICO)					
VALLE DEL CALORE (Più Rofrano)	E/A	E/A	E/A	E/A	E/A	E/A
SESSA, STELLA, CASTELLABATE, AGROPOLI, TORRE ORSAIA, CAMEROTA LICUSATI	E	E	E	E	E	E
NOVI VELIA, CANALONGA, OMIGNANO PAESE, MONTANO ANTILIA	E/A	E/A	E/A	E/A	E/A	E/A
	ATTIVITÀ DINAMICA / ATTIVITÀ NON DINAMICA					
VALLE DEL CALORE (più Rofrano)	A	A	A	A	A	A
SESSA, STELLA, CASTELLABATE, AGROPOLI, TORRE ORSAIA, CAMEROTA LICUSATI	A	A	A	A	A	A
NOVI VELIA, CANALONGA, OMIGNANO PAESE, MONTANO ANTILIA	A	A	A	A	A	A

Tabella 10. Dati del Cilento in sintesi.

Dalla tabella (10) e dai dati discussi si evidenzia forte variazione nella selezione dell'ausiliare in relazione agli inaccusativi prototipici per le aree di transito, intermedia e costiera, di entrambe le classi. Mentre la Valle del Calore presenta un unico ausiliare perfettivo dal valore eventivo *avere*. Per quanto riguarda una sintesi globale del fenomeno c'è da dire che il polo dell'inergatività è stabile in tutte le aree, dunque l'unico ausiliare selezionato è *avere*. Date le traiettorie generali di queste varietà si può confermare che l'ausiliare *avere*, quindi, oltre ad essere selezionato maggioritariamente nelle classi verbali proprie dell'inaccusatività verbale, sembra essere quello autoctono dell'intero Cilento. Difatti, nelle aree in cui è presente, lo *split* di persona è abbastanza regolare e vede un'estensione di *essere* solo alle persone singolari (e quindi condizionato dal numero), per altri parlanti viene selezionato o solo *avere* o solo *essere* in tutto il paradigma. Per i parlanti della zona di transito e della zona intermedia la situazione è più variegata e complessa. Probabilmente vi è stata una fase antecedente in cui a una prima estensione di *essere* a tutto il paradigma tranne alla 1sg e 3sg, si passa all'alternanza di *essere* e *avere* solo alla 3sg, mentre *avere* rimane in tutte le altre persone.

Per le varietà che presentano stabilmente variazione dell'ausiliare in relazione alla 1sg, come ad esempio l'area di transito, quest'ultimo tipo induce a pensare che il cambiamento possa seguire uno schema già rilevato in altre varietà in uno studio recente di Ledgeway (2019): il morfoma-U. Ovvero l'estensione di un ausiliare sull'altro coinvolge primariamente le terze persone (essendo quelle semanticamente più deboli perché esterne al discorso) poi vi è un'estensione analogica alla prima persona. Infine l'ausiliare originario si riappropria dei propri domini alla terza singolare lasciando alternanza solo alla 1sg e 3pl, caso però non rilevato nei dati del Cilento. Ad ogni modo si può riconoscere un certo grado di cambiamento in atto che vede un ristabilirsi dell'intransitività scissa probabilmente sul modello dell'italiano, e quindi un'estensione dell'ausiliare *essere* che si manifesta principalmente nei verbi denotanti uno stato, cambiamento o continuazione di stato (Cennamo 2001).

4. Conclusioni

In questo contributo è stato presentato il fenomeno della selezione dell'ausiliare nelle varietà campane. La Campania risulta essere un'area linguistica molto complessa in cui il sopraddetto fenomeno sembra essere influenzato da fattori semantici e sintattici non in modo omogeneo. In diverse varietà si riscontrano *pattern* di variazione differenti condizionati da parametri differenti. In generale si possono definire almeno quattro aree differenti. La prima è rappresentata dall'area metropolitana di Napoli in cui il sistema di selezione dell'ausiliare è regolato principalmente da fattori semantico-aspettuali del verbo e degli attanti. La distribuzione degli ausiliari selezionati, simile a quella dell'italiano, prelude una situazione basata su un sistema di doppia ausiliazione stabile e accettato da tutti i parlanti indipendentemente da fattori sociolinguistici. Questa stabilità non si è ancora raggiunta nelle zone più periferiche, Pompei, Sorrento, Acerno e Cilento costiero, in cui il sistema centrale del napoletano sembra concorrere con i sistemi locali. In queste zone si riscontra variazione nel paradigma verbale che parte principalmente da fattori interni, fonologici e/o morfologici per poi estendersi a diverse graduazioni in alcuni gruppi di parlanti. La terza e ultima macroarea è quella del Cilento interno (valle del Calore) in cui si possono ancora osservare i pattern di variazione che seguono parametri non individuati nelle varietà centrali. Prima del parametro della persona, infatti, l'elemento decisivo per la selezione dell'ausiliare in queste varietà è la caratteristica [+eventivo] che irrimediabilmente comporta la selezione di *avere*, mentre [-eventivo] porta alla selezione di *essere*. L'estensione di *essere* su *avere* parte proprio dal parametro dell'"eventività", in quanto i parlanti riconoscono

all'unanimità *avere* come ausiliare di *default*. Lo studio sulle varietà campane si presenta quindi molto complesso e apre la strada ad altre linee d'investigazione come l'integrazione di parametri ulteriori che potrebbero influenzare la scelta dell'ausiliare (prima di tutti il modo e il tempo), oppure l'individuazione puntuale di altre aree isolate meno investigate su cui testare i parametri di variazione riscontrati nelle varietà della valle del Calore. In conclusione, l'alto livello di variazione induce a pensare che non si possa applicare un modello unico per tutte le varietà campane, la variazione scaturisce a livelli diversi partendo da parametri più o meno influenti per una determinata varietà. Ridurre questo fenomeno ad un modello generale che possa valere per tutte le zone dialettali campane risulterebbe poco efficace e basato più sulle eccezioni che sulla regolarità del sistema linguistico.

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Quaderni di Linguistica e Studi Orientali- QULSO
Working papers in Linguistics and Oriental Studies

Firenze University Press
https://oajournals.fupress.net/index.php/bsfm-qulso

Citation: L.M. Savoia, B. Baldi (2023) Variation in Partitives and Indefinite DPs in the Peripheral Gallo-Italic and Romansh Varieties. *Qulso* 9: pp. 241-262. doi: http://dx.doi.org/10.13128/QULSO-2421-7220-15150

Data Availability Statement: All relevant data are within the paper and its Supporting Information files.

Competing Interests: The Author(s) declare(s) no conflict of interest.

Indefinite DPs in the Gallo-Romance of Piedmont, in some Marginal Northern Italian Varieties and in Romansh*

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Abstract:

This article investigates indefinite DPs in some Romance varieties spoken in border contexts between linguistic groups. Specifically, we will consider Occitan and Franco-Provençal varieties of western Piedmont, the western Ligurian dialects, the Lombard-Alpine dialects, and Romansh, also in comparison with other North-Italian systems. The central issue is the nature of the construcs *DE + article/Bare Noun* of Italian varieties, where the preposition *de/di* (DE) 'of' does not introduce the usual possessive or partitive PPs, but DPs with indefinite reading. In negative contexts, such phrases mostly require the narrow scope interpretation. We argue that *DE + bare noun* constructs, as generally bare partitives, are based on the lexical properties of the preposition DE.

Keywords: *Di-complements, Indefinite DPs, Negative Markers, Partitives, Romance Varieties*

* A first short and reduced version of this work was presented in the final Workshop of the DiFuPaRo Project (Distribution and Function of 'Partitive Articles' in Romance, Stark and Poletto 2017) held at the University of Zürich on 24.06.2022. The data we discuss has been collected through field research with native speakers, who were informed of the type of inquiry and agreed to be interviewed. We are grateful for their kind, generous and intelligent collaboration. So, in particular, among others, we would like to thank M. Luisa Leoni, Mariuccia Perone and Silvia Colla (Trecate), Bruna and Maria Ravicchio (Cantoira), Maura Tonda (Coazze), Olga Bleynat (Pomaretto), Menga Negrini (Casaccia), Cristoforo Allavena (Pigna), Lorenzo Rossi (Airole), Mario Gastaldi (Olivetta S. Michele) and the anonymous lady of Semione. Finally, the Romansh data have been supplied and discussed by the friend Bartolomé Tscharner. Author contributions: Conceptualization, both authors; methodology, B.B. and L.M.S.; analysis, L.M.S. and B.B.; field research, L.M.S.; data curation, B.B. All authors have read and agreed to the published version of the manuscript.

1. Introduction[1]

In this contribution, we will focus on indefinite DPs introduced by the preposition DE 'of' in dialects spoken in marginal areas of the Romance domain. We will investigate the constructs corresponding to the Partitive Articles (PAs) in which the preposition DE is followed by the definite article in Italian *(ho visto) dei ragazzi*, or in French *(j'ai vu) des garçons*. In these contexts, the preposition *de/di* is not preceded by the noun designing the possessum (genitive) or the part of a whole (partitive) and introduces DPs giving rise to the indefinite reading (Pinzin and Poletto 2022). In negative contexts, these sequences can be generally associated with the wide vs narrow scope of negation. More specifically, we will examine constructs where DE precedes bare plural count nouns or bare singular mass nouns (DEBN) or PAs, possibly in alternation with bare nouns. In all varieties a generic interpretation can be also obtained using definite plural count nouns or singular mass nouns (cf. Pinzin and Poletto 2022), as in standard Italian, a solution that we will give as always available. We have two main objectives, namely to analyze the properties of constructs with DE and bare names in expressing indefinite reference and clarify the relationship between negative markers and indefinite partitive structures *de + bare nouns*. The varieties we will examine, are spoken in peripheral or contact contexts in the continuum with the northern Italian dialects:

✓ Lombard-Alpine varieties (Semione and Casaccia)
✓ The dialects of Coazze and Cantoira (Franc-Provençal, Piedmont)
✓ The dialect of Pomaretto (Occitan, Piedmont)
✓ The western Ligurian dialects (Airole, Olivetta S. Michele, Pigna)
✓ The Romansh varieties of Donat and Disentis

2. Some key points

In the PAs in Italian, illustrated in (1), the definite article precedes the count noun in (1a) and the mass nouns in (1b). (2a) and (2b) provide the corresponding negative forms. We note that PA + mass nouns in the scope of negation are not natural for some speakers (cf. also Cardinaletti and Giusti 2016):

(1)	a.	hanno	visto	dei	ragazzi
		'They.have	seen	(some)	boys'
	b.	hanno	comprato	del	vino
		'They.have	bought	some	wine'
(2)	a.	non hanno	visto	dei	ragazzi
		Neg they.have	seen	(some)	boys
		'They did not see boys'			
	b.	non hanno	comprato	del	vino
		Neg they.have	bought	(some) wine	
		'They did not buy wine'			

[1] For the sake of clarity, we list here some of the main abbreviations used in the glosses: ART = Article, F = Feminine, M = Masculine, NM = Negative Marker, Part = Partitive clitic, PL = Plural, PP = Past Participle, SCl = Subject Clitic, SG = Singular.

Chierchia (1997), Storto (2003), Cardinaletti and Giusti (2016) note that in Italian, PAs admit two possible interpretations, (3a) and (3b), according to the indefinite quantifier *de-i* is out of the scope of negation, wide scope reading, in (3a), or it is in the scope of negation, narrow scope reading, in (3b).

(3) a. there are some boys that they have not seen
[∃x [⌐ [$_{I}$ hanno visto [$_{PP}$ [$_{DP}$ x

(3) b. they haven't seen any boys
[⌐ [**∃x** [$_{I}$ hanno visto [$_{PP}$ [$_{DP}$ x

This double possibility is excluded with mass nouns, as in (4), that systematically trigger the narrow scope reading.

(4) Non beve del vino (che è) troppo forte
Neg (s)he.drinks some wine (that is) too strong
'(S)he doesn't drink too strong wine'

In the place of DA constructions, we can find bare nouns in Italian, which trigger the narrow scope reading, as in (5a, b).

(5) a. non hanno visto ragazzi [¬ [**∃x** ...
'They didn't see boys'
b. non ha bevuto vino
'(S)he didn't drink wine'

An important difference separates Italian from French, insofar as French excludes bare nouns and selects only "obligatory narrow scope with respect to other operators" (Storto 2003: 317), as in negative contexts. In the latter, French resorts to the use of the negative marker (NM) *pas* followed by the bare noun introduced by *de*, as in (6), with narrow scope reading.

(6) il ne voit pas de garçons
'He does not see (of) boys'

Finally, definite plurals with generic or kind content, largely used in spoken Italian and in dialects, on a par with lexical indefinite like *alcuni* and *qualche*, in negative contexts combine with the wide scope reading over negation (Beghelli and Stowell 1997), as in (7):

(7) non ho visto i ragazzi/alcuni ragazzi [∃x [⌐ ...
'I didn't see the boys/some boys'
Non ho bevuto il vino/un po' di vino
'I didn't drink the wine/some wine'

The scope properties of *di* + *article* + *noun* can derive from the reading associated with generic plurals, which, as we saw, only admit the narrow scope with negation. In Italian, *di* also makes the wide scope reading available, by the relational content of *di*, introducing a partitive reading. The latter, lacking the quantifier expressing the first argument of the relation, the 'part',

gives rise to a double possibility: the interpretation associated with the definite plural or the one associated with a part. In other words, the interpretation depends on the lexical properties of *di* and those of the other elements it combines with.

3. Indefinite DPs in diverse types of dialects: the data

Our data focus on a set of dialects encompassing various types of constructs. More precisely, we will consider the following occurrences of indefinite DPs:

✓ Dialects with PAs in positive contexts and *DE* + *Bare Nouns* (DEBN)
✓ Dialects with PAs in positive contexts and, in negative contexts, bare nouns
✓ Dialects with DEBNs in all contexts, positive and negative

It is of note that in all the dialects that we will examine, except for those of Liguria, the negation is realized by a minimizer of the type of *mia/pa*. This NM can precede bare nouns introduced by DE providing a narrow scope reading of the indefinite.

3.1 Semione (Blenio Valley, Canton Ticino)

The Lombard-Alpine dialect of Semione (Canton Ticino) admits PAs only with count nouns in positive sentences, as in (8a, a'). In the case of mass nouns a quantifier like *um pou* 'a little' is required, which introduces a partitive with a bare noun, as in (8b).

(8) a. u vest d i dɔn (k i tʃitʃarava)
have.1SG seen of ART.PL women that SCl chatted
'I have seen some women chatting'
a'. u vest d i oman (im pjatsa)
have.1SG seen of ART.PL men (in the square)
'I have seen some men (in the square)'
b. u bu ˈvy *(um pu) ad viŋ/d akwa
have.1SG drunk some of wine/of water
'I have drunk some wine/water'

In negative contexts, we find bare nouns, as in (9a, b), or partitive structures with *DE* + *bare noun*, where the NM introduces the partitive both with count and mass nouns in (9a', b') usually doubled by the partitive clitic *n* 'of it/them', Part.

(9) a. u mia veʃt dɔn /ɔmaŋ
have.1SG NM seen women/men
'I did not see women/men'
a'. a n ved-ja mia (a)d dɔn
SCl Part see-1SG NM of women
'I have not seen women'
b. a bev-ja mia viŋ
SCl.1SG drink-1sg NM wine
'I do not drink wine'

b'. a n bev-ja mia ad viŋ
SCl.1SG Part drink-1SG NM of wine
'I do not drink wine'

We see that:

✓ The preferred interpretation of PAs is specific and presuppositional
✓ With the NM *mia*, the indefinite is realized as a bare noun in the scope of negation
✓ The occurrence of the partitive quantifier *n* triggers *(a)d* 'of' followed by the bare noun with narrow reading in the negation scope

3.2 Piedmontese dialects: Trecate

In some Piedmontese dialects, such as that of Trecate (Novara), negation is introduced by a NM that selects a DE phrase including a bare plural count noun or a bare mass noun. In these varieties we find a distribution similar to that of French, where PAs introduce indefinite forms in positive contexts, in (10a, b), whereas in negative contexts indefinite forms are bare nouns selected by the preposition DE, in (11a, b). In the glosses PP indicates the Past Participle, and is associated with the Thematic Vowel, its specialized exponent, in analytic forms.

(10) a. ɔ vist d-i dɔn / d-i ɔm
have.1SG see.PP of-ART.PL women / of-ART.PL men
'I have seen (some) women/men'
b. ɔ bi′v-y d a vvik
have.1SG drink-PP of-ART.SG wine
'I have drunk (some) wine'

(11) a. ɔ vist mia ad dɔn /d ɔm
have.1SG see.PP NM of women /of men
'I have not seen women/men'
b. i bev-a mia ad vik
SCl drink-1SG NM of wine
'I don't drink wine'

In negative contexts, the reading of the indefinite is within the scope of negation, as illustrated in (12). We can think that the mechanism that obliges the narrow interpretation is the bare/indefinite nature of nouns, which makes free definite reading impossible.

(12) [⌐ [∃x [$_{I}$ beva [$_{vP}$ [$_{VP}$ [$_{N}$ mia (x) [$_{\subseteq P}$ ad [$_{NP}$ vik]]]
'I do not drink wine'

We also find indefinite subjects introduced by DE, at least in existential clauses such as (13a, b). Since in these dialects also post-verbal subjects trigger a complete agreement (cf. Manzini and Savoia 2005), in (13) the verb agrees with the indefinite plural DP introduced by DE.

(13) a. in-j-u mia ad dɔn / d ɔm
aux-there-3PL NM of women / of men
'There are no women/men'

b. in-u ɲ-y mia d dɔn / ad ɔm
aux-3PL come.PP NM of women / of men
'No women/men have come'

We note that, in the examples in (13), the 3pl inflection *–u* is regularly realized in contexts where the subject is introduced by the preposition *(a)d* (Baldi and Savoia 2022).

3.3 Piedmontese Franco-Provençal (Coazze and Cantoira) and Occitan (Pomaretto)

A different distribution characterizes Franco-Provençal and Occitan varieties, such as those of Coazze (Sangone Valley), and Pomaretto (Germanasca Valley), where the indefinite (non-presuppositional) is realized by the sequence *de* + *bare nouns* in any context, where DE is followed by bare plurals in the case of count nouns and bare singulars with mass nouns. Thus, these dialects, unlike French, also use *de* + *bare nouns* in positive contexts. Like French and Trecate, they select the partitive with bare nouns in contexts of the negative marker. In other words, these dialects exclude PAs, occurring instead in French, Italian and several Northern Italian dialects (cf. Baldi and Savoia 2022, Pinzin and Poletto 2022). The data for Coazze illustrate this distribution, in (14a, b) for objects and (16) for subjects in positive sentences, and in (15a) and (15b) for negative sentences, where the NM is *pa*.

(14) a. i ɛi v-y d dɔn-e / d ɔm
SCl have.1SG see.PP of woman-FPL / of man.MPL
'I have seen women/men'

b. i ɛi b-y d viŋ
SCl have.1SG drink-PP of wine
'I have drunk wine'

(15) a. i ɛi pa v-y d dɔn-e / d ɔm
SCl have.1SG NM see-PP of woman-FPL / of man.MPL
'I have not seen women/men'

b. i ɛi pa b-y d viŋ
SCl have.1SG NM drink-PP of wine
'I have not drunk wine'

(16) a j ø d dɔn-e k i drøm-unt
SCl has of woman-FPL that SCl.PL sleep-3PL
'there are women that are sleeping'

(Coazze)

The Franco-Provençal dialect of Cantoira (Lanzo Valley) shows a similar distribution, as illustrated by the data in (17a, b) for positive contexts, (18a, b) for negative contexts, with the NM *ɲiŋ*, and (19) for the subject.

(17) a. dʒ e vy′-u ət fymɛll-əs / d ɔm
SCl have.1SG see-PP of woman-FPL / of man.MPL
'I have seen women/men'

b. dʒ e b-y ət viŋ
SCl have.1SG drink-PP of wine
'I have drunk wine'

(18) a. dʒ e ɲiŋ vy′-u ət fymɛll-əs / d ɔm
SCl have.1SG NM see-PP of woman-FPL / of man.MPL
'I have not seen women/men'

b. dʒ e ɲiŋ b-y ət viŋ
SCl have.1SG NM drink-PP of wine
'I have not drunk wine'

(19) ət fymɛll-əs u dyərm-unt
of woman-FPL SCl.PL sleep-3PL
'women are sleeping'

(Cantoira)

Stark and Davatz (2022) distinguish between Franco-Provençal A, with PAs, and Franco-Provençal B (Southern area of Franco-Provençal) including Swiss and Aosta Valley varieties. Their experimental investigation showed that also these speakers can variably present fully-fledged PAs. This is also in the case of negative contexts, where bare nouns would be however expected. Stark and Davatz refer to the analysis of Ihsane (2008), in turn assuming the cartographic representation of DPs proposed by Borer (2005), where the #P (Number Phrase) embeds the Div(ider)P, the phrase of the classifier, and the NP. The analysis of Stark and Davatz assumes that the definite article is inserted in the position # and then lowered to the position of the partitive element *de* identified with a type of Divider.

Occitan dialects are in turn characterized by the use of *DE + bare nouns*, as exemplified by the data from Pomaretto (Germanasca Valley), both in the positive sentences in (20a, b) and in the negative ones in (21a, b). In negative contexts, the partitive is introduced by the NM *pa*. Finally, (22a) and (22b) illustrate the occurrence of the bare partitives as indefinite subjects.

(20) a. ai vi:t də dɔnn-a / d ɔm
have.1SG see.PP of women-FPL / of men
'I have seen women/men'

b. ai bə′g-y də viŋ
have.1SG drink-PP of wine
'I have drunk wine'

(21) a. ai pa vi:t də dɔnn-a / d ɔm
have.1SG NM see.PP of women-FPL / of men
'I have not seen women/men'

b. ai pa bə′g-y də viŋ
have.1SG NM drunk-PP of wine
'I have not drunk wine'

(22) a. də dɔnn-a a dørm-əŋ də d lai
of women-FPL SCl.FPL sleep-3PL there
'Women are sleeping'

b. ʎ a bjɛn də dɔnn-a
SCl have.3SG a.lot of woman-PL
'There are many women'

(Pomaretto)

(22a) illustrates the pre-verbal occurrence of the indefinite, like in (19). In these cases, not particularly frequent, the indefinite is interpreted as partially/contextually given, as observed by Ihsane (2022: 254), which traces back these subjects to "a degree of *referential* givenness that allows them to function as preverbal subjects". In (22b) the canonic existential structure with the postverbal subject and partial agreement is exemplified. In these dialects, the postverbal position characterizes focalized subjects (cf. the discussion in Section 3.6).

3.4 Casaccia (Lombard-Alpine, Bregaglia Valley)

The Lombard-Alpine variety of Casaccia presents only bare nouns, as in (23a, b). In negative contexts either the normal NM *mia* combines with bare nouns, as in (24a, b), or the specialized NM *brik-at* is inserted, immediately before the bare noun, as in (25a, b).

(23) a. j(e) a avˈd-y don-a-ŋ / omaŋ
SCl have.1SG see-PP woman-F-PL / man.PL
'I have seen women/men'

b. j a baˈv-y viŋ
SCl have.1SG drink-PP wine
'I have drunk wine'

(24) a. j(e) a mia avˈd-y don-a-ŋ / omaŋ
SCl have.1SG NM see-PP women-F-PL / man.PL
'I have not seen women/men'

b. j a mia baˊv-y viŋ
SCl have.1SG NM drink-PP wine
'I have not drunk wine'

(25) a. j(e) a avˈdy brik-at don-a
SCl have.1sg seen NM-DE women-F
'I have seen no women'

b. j a baˈvy brik-at viŋ
SCl have.1SG drunk NM-DE wine
'I have drunk no wine'

According to a possible analysis, *brik-at* includes the minimizer *brik* 'little piece' and the preposition DE, as suggested in the glosses of (25). (26) provides examples of indefinite DPs as subjects. (26a, b) show the structures where the subject, in Topic, is doubled by the partitive clitic *n*. In the context of a post-verbal 3rd person subject, we find partial agreement, in the 3rd singular, with the verb and the SCl, as typically in northern Italian dialects (Manzini and Savoia 2005).

(26) a. (da) don-a-ŋ a nn e rivɛd-a brik(-at)
of women-F-PL SCl Part be.3PS arrived-f NM
'no women have arrived'

a'. l e ɲ-i brik-at don-a
SCl be.3PS come-PP.MSG NM-DE woman-F
'no woman has come'

b. da viŋ a nn e kroˈd-a dʒo brik
of wine SCl of-it be.3PS fall-PP down NM
'no wine has fallen'

We remind that *bri(k)* is the minimizer in negative scope in some of these Alpine dialects, as in (27).

(27) so bri ki tʃá m-ɛ
know.1SG NM who call-PP
'I don't know who to call'

(Campodolcino)

Meyer-Lübke (1935) connects *bri* to a French form with the sense of 'little thing'.

3.5. Romansh varieties: neither PAs nor DE

Romansh varieties do not show PAs but introduce indefinite DPs as bare plurals, similar in this to the Friulian dialects, as documented in Baldi and Savoia (2022: Section 6). The relevant distribution is illustrated for Donat (Sutsilvan) and Disentis (Sursilvan). (28a, b) exemplify indefinite objects with and without the NM and (28c) the occurrence of an indefinite subject in Topic position. In any case the polar element *niɲ* 'none' can be used. The data from Disentis are comparable. (29a, b) illustrate count and mass nouns in object position; (29c, c') illustrate indefinite post-verbal subjects.

(28) a. jau vets (bɪtʃ / niɲ-as) don-as
I see.1SG NM / no-FPL woman-FPL
'I (do not) see women/I see no women'

b. jau bef (bɪtʃ / niɲ) vɪɲ
I drink.1SG (NM / no) wine
'I (do not) drink wine/I drink no wine'

c. don-as e-ʎ niɲ-as
woman-FPL is-SCl none-FPL
'there are no women'

(Donat (Sutsilvan))

(29) a. jau ai (bu) viˈ-u dun-a-s / umaŋ-s
I have.1SG NM see-PP woman-F-PL / man-PL
'I did not see women/men'

b. jau bib-əl (bu) vɪŋ
I drink-1SG NM wine
'I do not drink wine/I drink no wine'

c. iʎ a (bu) dun-a-s / umaŋ-s
SCl have.3SG (NM) woman-F-PL / man-PL
'there are no women/men'

(Disentis (Sursilvan))

3.6. A summary table

We can schematize the different types of distribution that we have observed in table (30), in which BN = Bare (Count/Mass) Noun, NM + di + BN in negative sentences, NS = narrow scope ¬∃, PA = Partitive Article, WS = wide scope, ∃¬.

(30)	Positive sentences		Negative sentences	
	BN	PA	BN	PA
Italian	+	+	+NS	+NS/WS
Semione	-	+	+ NS	-
Casaccia	+	-	(*brik-at*) + NS	-
Trecate	+	-	DBN	-
Fr.-Pr./Occ.	DBN	-	DBN	-
Romansh	+	-	+ NS	-

A generalization shows up, whereby the availability of DE + BN excludes DA, both in positive and in negative sentences. BNs and PAs are generally in complementary distribution, even if their coexistence is attested, for instance in Italian. Italian PAs are characterized by introducing both narrow and wide-scope readings in negative contexts. This possibility is however excluded by the other constructs with BNs and DE + BN.

4. Partitives in negative contexts

According to the literature, the negation is an operator that takes in its scope the arguments or the event introduced by the verb. The interaction between negation and arguments is proved by the many instances of the interplay between negative elements and (pro)nouns. A typical case is provided by the phenomena concerning reordering and specialized forms of object clitics in negative contexts in many Romance languages (cf. Manzini and Savoia 2005, 2007, 2017). A classic syntactic approach to negation in Romance assumes that negation adverbs such as *pas* in French fill the Spec position of a NegP projection generated below the I position targeted by the verb (Pollock 1989). The head of NegP can in turn be filled by a negative clitic like *ne* in French, whose higher inflectional position depends on cliticization. In other languages, no negative head is present, as, for instance, in Romansh or in Occitan and Franco-Provençal. Belletti (1990) applies the same theory to Italian, by moving the negative head, originating in the Neg position, to a higher clitic position. In this line, Poletto (2017: 82) concludes that "all negative markers occurring in languages with discontinuous negation start out as a unit, […] first merged inside the vP, […] definitely in an argumental one", i.e. the category NegP, as in (31).

(31) [FocusP NO [MinimizerP mica [ScalarP non [ExistentialP (ni)ente]]]]

The movement from this position should explain the different distribution with respect to other adverbials. A more complex set of data, involving Northern Italian dialects, is considered

by Zanuttini (1997) who proposes that there are several Neg positions. Specifically, a Neg position is generated above I, while below I there are other Neg positions. The inflectional Neg position hosts negative clitics in languages like Italian which do not require a sentential negation adverb. On the contrary languages which require a sentential negation adverb generate it in one of the lower Neg positions; if a clitic combines with the adverb, it is generated in the head of the relevant Neg position and moves to the inflectional domain by cliticization.

In a Romance language such as Italian, the negative clitic combines with a negative argument or adverb (*niente* 'nothing', *mai* 'never', etc.) to yield a single logical negation. Haegeman and Zanuttini (1991) explain this phenomenon on the basis of a Neg Criterion, whereby the negative clitic in the head position of a NegP requires a Neg operator in its Spec and vice versa. The head-Spec configuration is, in turn, read as an agreement relation, yielding a single negation *interpretation*. This analysis presupposes that *niente, mai* and generally *n*-words, including minimizers like *mia*, are negative quantifiers. A large body of literature on Romance languages argues for a different conclusion whereby Romance *n*-words are negative polarity items (Rizzi 1982; Laka 1990; Longobardi 1992; Acquaviva 1994; Garzonio and Poletto 2008).

In other words, *n*-words have no intrinsically negative properties but are simply existential as in Poletto 2017, or free variables in the terms of Heim (1982), interpreted in the scope of the negation. More precisely the more reasonable conclusion is that the negative lexical elements, both clitic heads, and NMs, are not the lexical exponent of the negation operator but express its scope.

Based on the preceding discussion we assume that:

- *n*-words are *indefinite nouns* and not negative quantifiers;
- NMs either coincide with negative arguments such as 'nothing' or are bare nouns;
- Treating them as nominal elements, connected to the internal argument of the predicate, explains their ability to introduce the partitive, or their sensitivity to the person ($1^{st}/2^{nd}$ vs. 3^{rd}) of IA itself;
- We assign sentential negation adverbs to a nominal, argument-related category, tentatively an indefinite quantifier.

In keeping with these assumptions, the so-called negative concord is in fact the expected state of affairs. Thus there is a single instance of the negation at the interpretive level, as in the example in (32a), from a Piedmontese dialect where the negative clitic and the negation marker are combined; the latter is also the negative argument 'nothing'. The variables introduced by the negative clitic and by the NM are interpreted in the scope of the same Neg (and existential closure) operator, as in (32b).

(32) a. a n t drɔm-i næinta
SCl Neg SCl sleep-2SG NM
'You do not sleep'

b. [⌐ [∃x,y [$_{Cl}$ a [$_{Neg}$ n (x) [$_{Cl}$ t [$_{I}$ drɔmi [$_{N}$ næinta (y)
'You do not sleep'

(Oviglio)

As shown by (32a, b), NMs may coincide with the negative argument 'nothing', as in many Northern Italian dialects, especially in Piedmontese varieties (cf. Zanuttini 1997; Manzini and Savoia 2005; Baldi and Savoia 2022). Another major class of sentential negations derives from

bare nouns, including minimizers: *mi(c)a* or *briza* 'crumb', *bu(ka)* 'piece', *pa* 'step', as in the cases of *mia* of the Trecatese, *pa* of the Occitan, *bitʃa* or *bu* of Romansh, etc. As well-known, already Meyer-Lübke (1899: 693-694) proposes that sentential negation adverbs originate in a partitive construction: Old French examples such as (33) show the 'negative adverb' *mie*, a bare noun 'minimizer', overtly co-occurring with the partitive. Similar data are documented for Old North Italian varieties (Poletto and Garzonio 2009).

(33) de s'espee ne volt mie guerpir
of his sword not he.wanted not to abandon
'He didn't want to abandon his sword'

(Chanson de Roland 465)

The interaction between the negation and the case assignment to the internal argument of the verb is found in Northern Italian dialects. In the Piedmontese variety of Trecate, in (34), the negation triggers the partitive even in the presence of a definite interpretation. As we see, the partitive enclitic *–na* introduces the IA as a partitive construct selected by the NM *mia*.

(34) (a mmarju) tʃam-um -na mija
the Mario call-1PL of.him not
'We are not calling Mario'

(Trecate)

In French, negative environments require indefinite DPs to be introduced as bare count plurals and bare mass singulars preceded by *de*, otherwise excluded in the absence of negation, as in (35) (Kayne 1984). We have seen the same distribution in Sections 3.2 and 3.3 for north-eastern Piedmontese dialects and Occitan and Franco-Provençal dialects.

(35) Je *(ne) veux pas de cadeaux
I not want not of gifts
'I (don't) want gifts'

Kayne (1984) proposes a structure including a non-lexicalized negative quantifier Q followed by the partitive *de cadeaux*, yielding a structure of the type in (36).

(36) *je ne veux pas* [Q [*de cadeaux*]].

In our analysis, NMs such as *mia, pa* are specialized minimizers co-occurring with the negative operator. Thus, in the case of a sentence like *i beva mia ad vik* 'I don't drink wine' from (11b) for Trecate, we can assign to the NM the lexical entry in (37a), where *x* is the variable, without recourse to silent Q elements, implying the negation operator as in (37b).

(37) a. $[_{N}$ mia/pa (x)]
b. [⌐ [∃x $[_{I}$ i beva ... $[_{VP}$ $[_{N/Q}$ mia (x) $[_{pp}$ ad vik]]]... 'I doesn't drink wine'

(Trecate)

Bare nouns introduce existential readings in the scope of the negative operator, associated with a kind-level denotation (Chierchia 1997). The idea that n-words of the 'niente' type are

existential elements is discussed in Poletto (2017: 83), who proposes a theory of negation whereby negation asserts that "something exists, and that it is the minimal entity on a scale" defined by minimizers.

Summing up:

✓ the sentential negation marker is a nominal element related to the internal argument of the verb (with which it can lexically coincide);
✓ the NM can form a partitive structure with the internal argument.

5. Syntactic analysis

Needless to say, PAs raise the question of their relation with true partitives, i.e. *due/alcuni dei ragazzi* 'two/some if the boys'. Chierchia (1997: 88) analyses partitives as DPs in which the quantifier in D combines with a silent N [parts] selecting the PP introduced by *di* 'of', as in (38).

(38) $[_{DP}$ three $[_{NP}$ [*parts*] $[_{PP}$ of $[_{DP}$ the boys]]…

In the bare partitives like '… dei ragazzi', *dei* absorbs the silent specification of the part-whole relation and moves to the D position of the DP. In other words, in these contexts *dei* ends by lexicalizing D, as in (39) (*ibidem*, 90).

(39) $[_{DP}$ dei $_{[parts]}[_{NP}$ [parts] $[_{PP}$ de $[_{DP}$ i ragazzi]]…

This analysis involves a silent syntactic category that provides *dei* with a derived interpretation, to the effect that *dei* is no longer the usual preposition *of* + *article* with possessive or partitive reading as in (40a, b), but realizes a different syntactic object.

(40) a. il libro della ragazza
'The book of the girl'
b. molti di quei libri…
'Many of those books…'

With a spirit not much different, Cardinaletti and Giusti (2016) propose that PAs are to be treated as neither a partitive preposition nor a quantifier but as a plural indefinite determiner. Cardinaletti and Giusti (2016: 59) differentiate bare nouns, quantifiers, partitives, and PA in structural terms, so contrasting (11a) and (11b):

(41) a. ho visto $[_{DP}$ dei $[_{NP}$ ragazzi]]
I.have seen de.art boys
b. ho visto $[[_{QP}$ alcuni $[_{DP}$ pro]] $[_{PP}$ de $[_{DP}$ $[_{D}$ i] $[_{NP}$ ragazzi]]]]
I.have seen some of the boys

In (41a) the indefinite *dei* realizes quantificational properties occurring in the complementary distribution with quantifiers. Cardinaletti and Giusti support a structural difference between the indefinite *dei*, treated as a PA, and the genitive/partitive *dei*, treated as a true preposition (+ article). For instance, PAs may be embedded by another preposition, like in

con dei libri/con del vino 'with some books/with some wine', a possibility excluded for genitives and partitives.[2]

Another proposal concerning pseudopartitives introduced by the preposition *di/de* 'of' in Italian and French, is formulated in Manzini (2019), whereby in these contexts the preposition does not embed the DP, as in usual PPs, but it is inserted inside the DP and the probe is the case feature K of DP. Zamparelli (2008: 319) characterizes the partitive *di* 'of' as an operator selecting two arguments, the specifier [a copy of NP inside DP] and the complement [a full DP], that "returns the denotation of its specifier minus the denotation of its complement". Substantially, *di/of* identifies the residue from the whole *specifier* + *complement*. A point that must be stressed, is that the relation between the complement of the preposition *di/de* 'of' and its head can involve the agreement, as in the cases in (42).

(42) … molt-i_{MPL}/un pochin-i_{MPL} di (que-i_{MPL}) biscott-i_{MPL}
'… many/a little bit of (those) cookies'

In fact, a crucial point is the occurrence of the bare partitive form also as a subject, triggering the agreement with the verb even if introduced by DE, as in (43).

(43) dei ragazzi [*specific reading*] non studiano
'Some boys do not study'

In the current literature, as we have seen, the problem is (partially) solved by assuming that *de/di* + *Art* becomes an article or a quantifier, in turn. Actually, also the head of a true partitive can agree with the NP in the DE-phrase, as in (43). If we assume that *di/de* is the preposition also in *DE* + *Art* + *noun* constructs, the question of the agreement shows up.

Let us now consider the nature of *di/of*, the introducer of possessum-possessor/part-whole relation. We find a conceptual continuum from an occasional zonal possession in the sense of Belvin and Den Dikken (1997),[3] to an inalienable possession or to a part of a whole or a unit belonging to a set. In any case, the relation which holds is that of sub-set or part-whole, i.e. inclusion [⊆]. The relationship between possession (genitive/dative) and partitive – one element of a set – is intuitive; DE/inclusion encompasses partitives and genitives (Lorusso and Franco 2017). Our idea (cf. Baldi and Savoia 2022) is that the analysis of Chierchia whereby *di/of* externalizes a part-whole relation is able to account for the properties of PAs. Thus, we can treat *di/of* as the operator of inclusion, as in (44).

(44) DE (di/ of) = [⊆]

[2] Actually, the combination of *di* (or other prepositions) with another preposition is independently well attested, as in locatives such as *su di lui, sotto di lui* 'on him, below him', *in sulla cima* 'on the top', etc. generally involving lexical/interpretive constraints (Franco, Manzini, and Savoia 2021; Savoia, Baldi, and Manzini 2020).

[3] Belvin and den Dikken (1997:170) observe that "entities have various zones associated with them, such that an object or eventuality may be included in a zone associated with an entity without being physically contained in that entity […] The type of zones which may be associated with an entity will vary with the entity". Hence, possession – on a par with location – can be understood as a type of 'zonal' inclusion (Manzini and Savoia 2011).

If we assume that PAs are nothing but an occurrence of DE, PA constructs, in comparison with typical possessives or partitives, appear to preserve only the including argument, as in (45) for '…dei libri'.

(45) PA: [$_{p}$ di [⊆] [[$_{Art}$ i$_{MPL}$] libr-i$_{MPL\textit{whole}}$]]

We conclude that *di/de* introduces a sort of part from a whole reading, corresponding to the generic interpretation of the definite plural. As for the agreement with an element outside the DP, we conclude that the agreement can skip over the prepositional barrier, in the sense that Minimal Search is sufficient to determine the agreement between the head and the complement of *di/de* in partitive reading. In PA readings, we must admit that the indefinite can be identified as the semantically natural goal of an argument introduced by the verb.

Resuming the analysis in Baldi and Savoia (2022), PAs introduce a subset of a set of individuals or parts of a mass as the preposition DE normally does. The definite article, in itself, is in turn able to support a generic reading, as evidenced by its occurrence as a possible instantiation of the indefinite interpretation. This proposal is supported also by the fact that in many of these dialects, DE introduces a bare noun, thus excluding the problem represented by the definite determiner. In other words, there is not even a formal reason for changing DE into a type of determiner.

5.1. DE + bare noun

Differently from the dialect of Trecate in Section 3.2, in Franco-Provençal and Occitan dialects in 3.3, indefinite forms are expressed by bare plural/mass nouns, excluding the definite article: (i) indefinite forms are partitive constructs excluding a presuppositional reading; (ii) the sequence DE + *bare noun* determines the agreement of the verb, as in (16)-(19)-(22), suggesting that the plural inflection of the noun is somehow read by T/v. The lack of a definite article entails a narrow scope. Generic definite articles are otherwise usual.

It is interesting to dwell on the distribution attested in the Casaccia dialect. Indeed, we have supposed that *brik-at* in (25) combines the minimizer *brik* with the phonetic outcome *–at* from an original *de*. This analysis is supported by the fact that *brik-at* selects bare nouns, exactly as the sequence NM + DE in Trecate dialect in Section 3.2. A special and separate problem is that in this dialect in the context *brik-at don-a* 'no women' in (25a), the noun apparently lacks the feminine plural exponent *–ŋ*, realized in *don-a-ŋ* 'women' in the sentence *j a av'dy don-a-ŋ* 'I have seen women' in (23a). We know that in this dialect *–ŋ* occurs only on a nominal element in DP, on D if it is present, otherwise on the noun. The idea discussed in Manzini, Savoia, and Baldi (2020, 2021) is that *–a* is in turn a specialized realization of the plural. However, our idea is that *brik-at*, insofar as it selects bare plurals, admits in this case the most elementary form of plural of feminines, similar to what happens in dialects in Section 3 where the bare plural is introduced in the contexts with DE and the non-presuppositional/indefinite reading is triggered.

Coming back to the syntactic nature of the partitive structures, we wonder how a partitive subject, a PA or DE + BN indefinite DPs can occur as subjects and legitimize the agreement, as already noted in the discussion around (43) in Section 5. In all these varieties indefinite subjects occur in postverbal position, like in Italian, and generally imply a partial agreement with the verb, which is in the 3rd singular. Moreover, in all these varieties, in the contexts with postverbal subjects, an SCl of 3rd singular person is inserted. This picture matches that of Franco-Provençal provided in Ihsane (2022), where the preverbal indefinite subject introduced by DE is generally excluded, except for particular contexts associated with a certain degree of givenness, where bare

partitives are specific. Substantially the same distribution is shown by all of our varieties. Some examples emerge in the existential contexts of Trecate in (13a, b), where the postverbal subject systematically agrees with the verb. Other cases are provided in (19) for Cantoira and (22a) for Pomaretto, where the discourse context favored the quasi-topical nature of the indefinite, and in (16) for Coazze, where the agreement is introduced by means of a relative element. Thus, the conclusions of Ihsane are substantially supported by our data.

Let us consider the agreement between a DP introduced by a preposition and the verb, independently of the type of subject. We remind that in the traditional approach to the subject in cartographic/GB models, EPP is associated with a DP that overtly or abstractly moves to the Spec of TP where its φ-features check the features of T. But, in the case of indefinite DPs introduced by PA or DE, i.e. prepositional structures, are involved. Naturally, if these occurrences of *di/de* are interpreted as articles or something similar, as proposed by Cardinaletti and Giusti (2016) there is no problem. Our idea is, on the contrary, that *de/di* is the true preposition and that agreement implies a different structural approach (cf. Pinzin and Poletto 2022: 52).

As to agreement, we retain the analysis of Manzini and Savoia (2018), and Baldi and Savoia (2022), in which:

✓ The agreement is treated as the result of the identification of phi-feature bundles specifying the same argument, i.e. denoting a single referent;
✓ A solution based on the Minimal Search mechanism is perfectly in line with the recent revision of the model proposed by Chomsky (2020, 2021).

We base on the insight of Lorusso and Franco (2017), whereby in quantified NPs of the type *un centinaio di persone*, P may or may not behave like a phase boundary. In this line, we maintain the idea that indefinite, partitive, and genitive constructs are based on the same elementary predicate [⊆], expressed by *de* 'of', which introduces the super-set of individuals or parts to which the head noun belongs. The operation Merge gives rise to the amalgam (Chomsky 2020, 2021) where *DE* gives rise to the indefinite reading, as in (46) for the indefinite ət fymɛll-əs 'of women' in (18a) and (19) for Cantoira.

(46) $< d_{\subseteq}, [\text{fyməll-əs}_{\text{FPL}}] > \rightarrow [_{\subseteq}\ d_{\subseteq}\ [_{\text{FPL}}\ \text{fyməll-əs}]]$

In (46), the inflection *-əs*, the simple plural, merged to the noun, preserves its generic interpretation, while *d/ət* 'of' introduces the part of this whole. We are induced to conclude that the properties of the embedded noun, the whole, are available to provide the interpretation of an argument of the verb, the object or the subject. In the latter case, we can think that Minimal Search is sufficient to allow features realized on T to agree with the features of the noun embedded under DE, as in the sentence in (19) ət fymɛll-əs u dyərm-unt 'some women sleep' for the Franco-Provençal of Cantoira.

In keeping with Chomsky (2019, 2021), there is no *v* movement and the subject can be interpreted at the phase of T by Minimal Search. Specifically, 'head raising' is seen as problematic insofar as it does not entail semantic effects and, structurally, it is counter-cyclic. In this sense, the approach to the agreement that we adopt is inspired by the idea of Chomsky, Gallego and Ott (2019: 238) that raising to the subject is an unnecessary operation, whereby "The features invoked in the technical literature to license applications of MERGE are typically *ad hoc* and without independent justification, 'EPP features' and equivalent devices being only the most obvious case". Chomsky (2019: 268) concludes that "The easy answer, which is in my recent

papers, is simply to drop the condition that Internal Merge (Movement) has to be triggered, so it's free, like External Merge". In this line, Chomsky (2021: 30 and 36 ff.), assumes that Merge operation can create the combination of morphemes in complex words:

> The first step in a derivation must select two items from the lexicon, presumably a root R and a categorizer CT, forming {CT, R}, which undergoes amalgamation under externalization, possibly inducing ordering effects […]. With head-movement eliminated, *v* need no longer be at the edge of the *v*P phase, but can be within the domains of PIC and Transfer, which can be unified. E[xternal]A[rgumernt] is interpreted at the next phase. (*Ibidem*: 36)

The inflected forms [INFL [v, Root]] created by amalgamation is interpreted at Phase T, and *v* is not involved in the procedure. Following Chomsky (2019, 2021) in eliminating the need for head movement, ət fymɛll-əs realizes the φ-feature referring to the EA associated with the verb in the Phase C-T, as in (47).

(47) CP T_{ϕ} v_{ϕ} V
u_{PL} dyərm-unt_{PL} $[_{\subseteq}$ d $[_{FPL}$ fyməll-əs]]

In the sentence in (47), the elementary predicate ət fymɛll-əs provides the agreement properties between the N/whole and a member of the whole, here realized by the plural features of the inflected verb, associated with T. In other words, in the absence of a quantifier or a noun that introduces DE + N, the features of N can agree with the nominal features realized by the verbal head in T.

Before concluding this section, consider briefly the varieties lacking partitive articles, such as those of Romansh in Section 3.5. We see that:

- Generic existential is introduced by some quantifier (mostly an evaluative) combining with the plural of count nouns or the singular of mass nouns;
- In negative contexts, negation can license bare nouns;
- In some dialects, bare forms are admitted only or preferentially for mass nouns;
- Definite articles admit the indefinite interpretation.

Romance varieties use a lexical element of the type of Italian *certi* as a quantifier: a determiner with specific reference, as in (48).

(48) tʃɛrt-a-s dun-a-s en (bɪtʃ) vaŋid-a-s
certain-F-PL women-F-PL are NM come-F-PL
'certain women have (not) come'

(Donat)

As a consequence, *certi* gives rise to a wide scope interpretation ∃¬.

6. Western Ligurian dialects: Bare partitives with bare nouns without NMs

Referring to the schema in (30), negation generally imposes a nonspecific and indefinite reading, selecting bare nouns, which preserve their generic reading, both in plural count nouns and in mass nouns, independently of negation. As a consequence, in some dialects, bare nouns are inserted in negative contexts, as in Semione, thus excluding PAs, which instead occur in

positive sentences. In Trecate the negative marker triggers the *partitive* + *bare noun*, while in Occitan e Franco-Provençal this same construct occurs in positive and negative sentences.

Based on the data summarized in (30), we conclude that the NM does not necessarily requires DE + BN, as the data of Romansh and Casaccia varieties demonstrate, where the minimizers *buka/betʃ* and *mia* do not introduce partitive constructs but bare nouns. Many elements would seem to suggest that, on the contrary, DE + BN implies the NM, whereby bare partitives require to be introduced by NMs. This relation, actually, is also excluded. In fact, there are some Western Ligurian dialects that introduce DE + BN, even if they lack a negative marker.[4] In these dialects, as in general in Ligurian dialects, negation is introduced by the clitic element *nu*. In (49) and (50) we show the data of the extreme-western dialects of Airole and Olivetta S. Michele. In these varieties, the indefinite constructs DE + BN are introduced both in positive and negative contexts, whereas the PAs including the definite article are excluded. (49a)-(50a) and (49b)-(50b) illustrate the occurrence of bare partitives with count and mass nouns respectively; (49c) and (49d) provide examples in which the indefinite preceded by *de* is the subject. In no case, the inflected PA is inserted.

(49) a. (nu) ɔŋ vist-u de fiʎø-i / don-e
Neg have.1SG seen-PP.MSG of boy-MPL/ woman-FPL
'I have (not) seen boys/ women'

b. (nu) ɔŋ beˈv-y-u de viŋ
Neg have.1SG drunk-PP-MSG of wine
'I have (not) drunk wine'

c. (nu) ɛ ariv-a-u (de) fiʎø-i / dɔn-e
Neg be.3sg arrived-PP-MSG of boy-MPL / woman-FPL
'Some boys/ women have arrived'

d. s ɛ vers-a-u de viŋ
Rifl be.3SG shed-PP-MSG of wine
'Some wine fell'

(Airole)

(50) a. (nu) veg-i də frem-e / dʒuv-i
Neg see-1SG of woman-FPL / boy-MPL
'I (do not) see boys/ women'

b. (nu) bev-i də viŋ
Neg drink-1SG of wine
'I (do not) drink wine'

(Olivetta S. Michele)

The data from Pigna in (51) illustrate an intermediate situation, where only negative contexts select DE + BN, while positive contexts introduce PAs. (51a) and (51b) illustrate PAs in positive sentences; (51a') and (51b') illustrate the negative contexts where the negative clitic combines with the bare partitive. In (51c) the occurrence of the indefinite subject introduced by *de* is exemplified in existential contexts with partial agreement with the postverbal subject.

[4] Cecilia Poletto and Francesco Pinzin have drawn our attention to this aspect during the DiFuPaRo Project workshop at the University of Zürich on 24 June 2022.

(51) a. e veg-u de-e ˈfemuɾ-e / de-i garsu-i
SCl see-1SG of the woman-FPL / of the boy-MPL
'I see boys/ women'

a'. e nu veg-u de ˈfemuɾ-e / de garsu-i
SCl Neg see-1SG of woman-FPL / of boy-MPL
'I do not see boys/ women'

b. e bev-u de- ɾ viŋ
SCl drink-1SG of the wine
'I drink some wine'

b'. e nu bev-u de viŋ
SCl Neg drink-1SG of wine
'I do not drink wine'

u nu l ɛ ariva-u de ˈfemu ɾ-e / de garsu-i
SCl Neg SCl be.3SG arrived-MSG of woman-FPL / boy-MPL
'no women/ boys have arrived'

(Pigna)

These data can contribute to clarifying the nature of DE + BN constructs, as they are independent both from negation, in (49a, b) and (50a, b), and from NMs. The data of Airole in (49) and Olivetta in (50) coincides with those of Occitan varieties in (14)-(16) for Coazze. (17)-(19) for Cantoira, and (20)-(22) for Pomaretto, whereby DE + BN realizes the indefinite reading independently from the contexts. The difference involves the type of negation, a NM in Occitan and the clitic *nu* in Ligurian. The distribution of Pigna in (51) corresponds to that of Trecate in (10)-(11), with the difference that in the dialect of Trecate negation is introduced by the NM *mia*, while in Pigna the negation is realized by the negative clitic *nu*. Therefore, we are led to consider the DE + BNs as a specialized way of realizing the indefinite interpretation of nouns, relying on the generic reading of the bare noun and the properties of the preposition *de*. The latter introduces a part-whole interpretation that in itself creates the reference to an indefinite, unexpressed, whole. This reading is systematically in the scope of negation. In the case of Pigna, positive sentences admit the occurrence of PAs; however, in the scope of the negation is selected the indefinite form. At least the link between DE + BN partitives and negation can be observed: if in a dialect the bare partitive is admitted, it is selected in negative contexts.

It is interesting to compare our Ligurian (and Occitan) data with the realizations of indefinite objects provided in Pinzin and Poletto (2022). We see that these systems are only partially similar to those documented for western Liguria. More precisely, only the data of Pigna agree with those of Arenzano 1 (*ibidem*: 42), the informant of Arenzano that alternates PAs in positive sentences with DE + BN in negative sentences. The sentences produced by this informant, characterized as 'archaizing', and by our informant of Pigna highlight a continuum from the DE + BN constructs generalized (Occitan type) to the PA systems.

7. Conclusions

We must accept the idea that variation is in many cases not strictly governed by implicational relations due to semantic or morphosyntactic mechanisms. The occurrence of DE + BN can be favored by the existence of NMs but it is a structural possibility independently associated with the expression of the indefinite reference in negative contexts.

We have seen that the variation concerning the expression of indefinite nouns involves a set of syntactic constructs that in Romance varieties typically involve partitive structures intro-

duced by DE and bare nouns. The constructs introduced by DE lack the head noun that in the usual genitive/partitive introduces the possessum or the part of the zone of inclusion expressed by the noun embedded under DE. Despite this, we propose to consider these structures as genuine partitives and DE as the usual preposition 'of'. This means that in many languages indefinite DPs must or can be realized as partitive objects, or possibly subjects, introduced by the inclusion operator DE.

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Quaderni di Linguistica e Studi Orientali- QULSO
Working papers in Linguistics and Oriental Studies

Firenze University Press
https://oajournals.fupress.net/index.php/bsfm-qulso

Citation: L. Tamponi (2023) Spazialità e cecità: un'analisi sui verbi di moto in non vedenti italiani. *Qulso* 9: pp. 263-281. doi: http://dx.doi.org/10.13128/QULSO-2421-7220-14687

Data Availability Statement: All relevant data are within the paper and its Supporting Information files.

Competing Interests: The Author(s) declare(s) no conflict of interest.

Spazialità e cecità: un'analisi sui verbi di moto in non vedenti italiani*

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Abstract:

In the last few years, the strategies of spatial representation adopted by blind and sighted subjects have been extensively studied. In particular, there is evidence that early deprivation of vision encourages the adoption of egocentric spatial representations. In order to shed light on this matter, we analysed the motion verbs used by blind and sighted Italian speakers while describing small-scale and large-scale environments. The two groups adopted different spatial representations for small-scale environments, coherently with the basic assumptions of the Embodied Cognition Hypothesis. However, such a difference was not found for larger-scale environments, thus supporting a more symbolist approach to cognition.

Keywords: *cognitive linguistics, spatial representation, corpus linguistics, blindness*

1. Rappresentazioni spaziali e cecità

Fra le modalità sensoriali di cui l'essere umano è dotato, la vista ricopre un ruolo fondamentale: la nostra percezione del mondo si basa infatti principalmente su di essa, tanto che in letteratura si parla di "tirannia della vista" (Cattaneo e Vecchi 2011: 3), in quanto – almeno nella cultura occidentale – i mezzi attraverso i quali ci è possibile acquisire informazioni si basano principalmente su immagini di tipo visivo, in aggiunta all'input acustico necessario per l'acquisizione di informazioni, soprattutto linguistiche.

La predominanza della vista rispetto alle altre modalità sensoriali è motivata dal fatto che, in primo luogo, permette di

* Sono grata alla prof.ssa Giovanna Marotta per aver discusso con me una versione preliminare di questo lavoro. Sono inoltre grata ai due anonimi revisori, i cui suggerimenti hanno contribuito a migliorare il lavoro, fornendo spunti per ulteriori approfondimenti.

immagazzinare simultaneamente un alto numero di informazioni dettagliate; inoltre, permette di percepire oggetti lontani e fuori dallo spazio peri-personale, mentre ciò non è possibile attraverso le altre modalità sensoriali: la superficie esplorabile attraverso il tatto, ad esempio, è limitata alla distanza fisicamente raggiungibile dal nostro corpo. La vista ci permette di acquisire simultaneamente informazioni circa la posizione e l'aspetto degli oggetti che ci circondano, mentre tali dati non possono essere acquisiti simultaneamente attraverso gli altri sensi, come l'udito. La predominanza della vista è rilevata soprattutto nella cognizione spaziale, ossia la capacità di acquisire informazioni sullo spazio tramite le modalità sensoriali a disposizione, utilizzandole per varie abilità, dinamiche (capacità di spostarsi e di orientarsi nello spazio, rappresentandolo ed aggiornandolo durante i nostri movimenti) o statiche (localizzazione di oggetti e comprensione di mappe; Cattaneo e Vecchi 2011; Hersh 2020). Nei compiti che prevedono l'identificazione di oggetti e la risposta alla percezione di stimoli afferenti a diverse modalità sensoriali, infatti, l'informazione ottenuta attraverso altre modalità risulta secondaria. Ad esempio, se durante l'identificazione di oggetti tridimensionali le informazioni ottenute attraverso il tatto sono in contrasto con quelle visive (a causa, ad esempio, di una distorsione ottica dell'oggetto), è l'informazione visiva ad essere sfruttata per l'identificazione (Rock e Victor 1964). Un'analoga predominanza dell'informazione visiva si riscontra anche nel caso di informazioni contrastanti di tipo uditivo. Ciò è osservabile nello studio sperimentale di Colavita (1974), in cui i partecipanti erano sottoposti a stimoli visivi (la vista di una luce) e/o uditivi (la percezione di un suono); era quindi chiesto loro di premere un pulsante differente in base al tipo di stimolo ricevuto (uditivo vs. visivo). Quando furono sottoposti contemporaneamente ad uno stimolo visivo (luce) e ad uno uditivo (suono), i partecipanti non hanno quasi mai risposto allo stimolo uditivo: anzi, in alcuni casi essi affermarono di non aver udito alcun suono, nonostante la maggior parte dei soggetti avesse risposto in maniera corretta quando gli stimoli erano stati presentati separatamente.

Ciononostante, è ormai opinione diffusa che sia possibile acquisire informazioni sullo spazio circostante anche in assenza dell'input visivo. Com'è noto, i non vedenti riescono ad apprendere azioni e comportamenti altrui, anche attraverso l'attivazione di un 'sistema specchio' – fondamentale per la comprensione delle azioni, per l'imitazione, per la comprensione delle emozioni e delle intenzioni altrui (Rizzolatti e Sinigaglia 2006). Come evidenziato dall'esperimento di *neuroimaging* di Ricciardi *et al.* (2009), la presenza di tale sistema è rilevata anche in individui non vedenti, per i quali si osserva l'attivazione di circuiti neuronali sovrapponibili durante lo svolgimento di azioni familiari (ad esempio, tagliare la carta con le forbici) e l'ascolto della riproduzione di tali azioni da parte di altri individui.

Più in generale, i non vedenti risultano essere in possesso della capacità cognitiva denominata *mental imagery*, che permette di generare rappresentazioni mentali interne che possono contenere dettagli visivi (Hersh 2020; Ruggiero *et al.* 2021; cfr. *ultra*). Infatti, è possibile acquisire attraverso gli altri sensi informazioni sufficienti a generare una rappresentazione del mondo circostante. Attraverso l'udito, ad esempio, è possibile localizzare oggetti, ma in maniera meno precisa rispetto alla vista (Eimer 2004; Huber *et al.* 2019; Battal *et al.* 2020). Attraverso il tatto, possiamo identificare la forma di un oggetto. Anche l'olfatto può fornirci informazioni importanti sullo spazio che ci circonda, permettendoci di localizzare gli oggetti in esso presenti. Un ruolo importante può essere svolto dalle informazioni linguistiche circa il mondo esterno, la cui importanza risulta evidente nelle similarità riscontrate nella struttura delle rappresentazioni semantiche in soggetti vedenti e non vedenti congeniti. Alcuni studi effettuati in merito mostrano una sostanziale omogeneità in compiti quali la produzione delle proprietà semantiche di lessemi (Baroni *et al.* 2013; Lenci *et al.* 2013) o giudizi di similarità semantica (Bedny *et al.* 2019), nonché nella comprensione dei concetti relativi ai colori (Kim *et al.* 2021), rilevando il cruciale apporto dato dall'informazione

linguistica per la strutturazione dei relativi concetti. In particolare, Baroni *et al.* (2013) e Lenci *et al.* (2013) hanno mostrato come non sia possibile rilevare differenze statisticamente significative, sia a livello quantitativo che qualitativo, nella produzione di proprietà per nomi (concreti, come *banana* o *cane*, o astratti, come *amicizia* e *dolore*) e verbi italiani (concernenti sia eventi o stati astratti, come *credere* o *odiare*, che eventi che esprimono modi di percezione visiva, uditiva e tattile, come *ascoltare*, *scorgere*, *accarezzare*). Un'analisi più dettagliata dei dati, tuttavia, ha rivelato alcune sostanziali differenze fra vedenti e non vedenti per alcune categorie di nomi. In particolare, anche se le proprietà sensoriali relative al colore per gli oggetti concreti (come verdura o frutta) sono state sempre prodotte correttamente da entrambi i gruppi, la produzione di attributi relativi al colore risulta inferiore per i non vedenti. Nello studio di Bedny *et al.* (2019), si rileva una sostanziale omogeneità fra i giudizi di vedenti e non vedenti relativi ai verbi riguardanti eventi esperibili attraverso la vista (es. *to peek*), segno che la conoscenza dettagliata del significato di parole relative alla vista è acquisita anche in assenza dell'input visivo. Si riscontrano tuttavia alcune differenze nei giudizi di similarità semantica fra i due gruppi per coppie di verbi relativi a eventi esperibili tramite le diverse modalità sensoriali (ad esempio *to peek*, *to feel*, *to boom*): i soggetti non vedenti mostrano infatti una più alta omogeneità nei giudizi relativi a verbi riguardanti eventi esperibili tramite il tatto e l'udito rispetto al gruppo dei vedenti. Infine, Kim *et al.* (2021) hanno mostrato che è possibile avere una ricca conoscenza dei concetti relativi ai colori anche in assenza di input visivo, sia per gli oggetti naturali (come la frutta) che per gli artefatti (come cartelli stradali o automobili). Ad esempio, soggetti vedenti e non vedenti sono in grado di determinare, senza differenze significative fra i gruppi, che due oggetti naturali (come due banane) hanno una probabilità più elevata di avere la stessa colorazione rispetto a due artefatti (ad esempio, due automobili), specialmente nel caso in cui il colore non sia una proprietà legata al funzionamento dell'artefatto (come è invece nel caso dei cartelli stradali). Sembra quindi che l'informazione linguistica possa fornire importanti informazioni relative alla conoscenza dei colori. Tuttavia, i soggetti vedenti mostrano una più elevata omogeneità nell'associazione fra colori e oggetti nel caso in cui venga chiesto esplicitamente quale sia il colore più comunemente associato a un determinato oggetto (ad esempio, il colore più comunemente associato alle banane), segno dell'importanza dell'informazione visiva nello stabilire l'associazione fra colore e oggetto. In base a questi studi, quindi, sembra lecito ipotizzare che, nonostante la rilevanza dell'informazione linguistica, la rappresentazione semantica e concettuale non sia completamente indipendente dall'input sensoriale.

Per queste ragioni, negli ultimi decenni è stata posta grande attenzione allo studio delle rappresentazioni spaziali di non vedenti congeniti e del linguaggio spaziale ad esse collegato, da parte di neuroscienziati, linguisti e psicologi cognitivi. Lo studio delle diverse strategie utilizzate da questi soggetti per creare rappresentazioni mentali dello spazio in assenza di input visivo può fornire infatti importanti informazioni circa il ruolo svolto dai sensi diversi dalla vista, come pure da altri aspetti cognitivi, nella rappresentazione concettuale.

Infatti, tali rappresentazioni possono differire da quelle di soggetti vedenti a causa delle differenti modalità sensoriali di acquisizione dell'informazione. A tale proposito, sono state recentemente esaminate le differenti strategie di rappresentazione dello spazio (sia peri-personale che a scala più ampia) messe in atto da vedenti e non vedenti. In particolare, gli studi effettuati in merito si sono focalizzati sul punto di vista assunto per rappresentare l'ambiente circostante (*frame of reference*; Millar 1994; Thinus-Blanc e Gaunet 1997), distinguendo due tipi principali di prospettiva, denominati egocentrico (o *route-like*) e allocentrico (o *survey-like*).[2]

[2] Il modello che vede l'opposizione fra *survey* e *route perspective*, accettato nell'ambito delle neuroscienze soprattutto in relazione ai sistemi di riferimento adottati nei compiti di orientamento spaziale, si sovrappone almeno

Nelle rappresentazioni di tipo egocentrico, gli oggetti sono rappresentati in relazione al punto di vista dell'individuo che li percepisce (attraverso le varie modalità sensoriali a disposizione; Volcic e Kappers 2008). Analogamente, nel caso di spazi di grandi dimensioni, nella prospettiva cosiddetta *route-like* il punto di vista adottato per descrivere l'ambiente è quello dell'individuo che si muove nello spazio: lo spazio è rappresentato in maniera sequenziale, rispecchiando l'esperienza dinamica del soggetto che compie un percorso.

Le prospettive di tipo allocentrico, invece, prevedono la rappresentazione degli oggetti secondo coordinate relative all'ambiente circostante, ovvero esterne all'individuo. Per gli spazi più ampi, si parla di prospettive *survey-like*, che prevedono una visione d'insieme dello spazio, non sequenziale, solitamente dall'alto, con frequente riferimento ai punti cardinali. È noto che quest'ultimo tipo di prospettiva, allocentrica, sia vantaggiosa in compiti che prevedono l'orientamento dell'individuo, pur richiedendo un maggiore sforzo cognitivo. Da un lato, infatti, permette di ottenere una visione d'insieme dello spazio, visualizzando allo stesso tempo la propria posizione, e risulta dunque indispensabile nel caso in cui siano presenti ostacoli lungo il percorso, che rendono necessario individuare percorsi alternativi per raggiungere la mèta, oppure nell'individuazione di scorciatoie. D'altra parte, tuttavia, lo sforzo cognitivo necessario per formare una rappresentazione di questo tipo è notevole, in quanto una prospettiva *survey-like* richiede la creazione di una 'mappa mentale' del luogo in cui l'individuo si trova e il calcolo di percorsi e distanze sulla base delle informazioni acquisite in precedenza (Cattaneo e Vecchi 2011; Chiesa *et al.* 2017).

Alcuni studi effettuati in merito (Gaunet e Rossetti 2006; Pasqualotto e Newell 2007; Postma *et al*. 2008; Iachini *et al.* 2014; Ruggiero *et al*. 2021; Meini 2013; Donati 2013; cfr. *ultra*) mostrano come, sia per quanto riguarda lo spazio peri-personale che per ambienti di scala più ampia, i non vedenti sembrano prediligere una prospettiva di tipo egocentrico e *route-like*, mentre i vedenti sembrano preferire rappresentazioni allocentriche e *survey-like*, oppure mostrano una capacità più marcata di passare da una rappresentazione di tipo egocentrico ad una di tipo allocentrico. Per quanto riguarda lo spazio peri-personale, risultano interessanti alcuni esperimenti di *parallel-setting task* e *pointing-task* condotti su soggetti vedenti, non vedenti congeniti, non vedenti precoci e non vedenti tardivi. Nei *parallel-setting tasks*, i soggetti devono posizionare due sbarre in modo che esse risultino parallele l'una all'altra (cfr. Postma *et al.* 2008): questo tipo di compito richiede l'adozione di una prospettiva di tipo allocentrico, in quanto è necessario adottare un punto di riferimento esterno al soggetto (la sbarra di riferimento) durante il posizionamento. Per questo, migliori risultati nei *parallel-setting tasks* sono generalmente ricondotti all'adozione di una prospettiva allocentrica (cfr. Kappers 2003). Nei compiti di tipo *pointing-task*, invece, i soggetti devono indicare con la mano la posizione di un punto *target* precedentemente memorizzato (cfr. ad es. Gaunet e Rossetti 2006). I risultati

parzialmente alla nozione di *Frame of Reference* (*FoR*; Levinson 2003), adottata in ambito linguistico in relazione ai principali sistemi di riferimento per la collocazione di oggetti nello spazio. In quest'ultimo modello, com'è noto, sono identificati tre principali *FoR*: il *FoR* assoluto (in cui le coordinate del sistema sono esterne al soggetto e stabilite su punti fissi o coordinate assolute, stabilite convenzionalmente, come in *l'uomo è a nord della casa*), quello relativo (in cui il punto di vista è distinto sia dall'entità che si intende localizzare sia dallo sfondo, e coincide generalmente con quello del soggetto, come in *la casa è a destra dell'albero*) e quello intrinseco (in cui le coordinate del sistema sono stabilite in base alle caratteristiche dello sfondo coinvolto nella relazione spaziale, ad es. *l'albero è davanti alla casa* o *dietro la macchina*). Generalmente, la prospettiva *survey* viene identificata con il *Frame of Reference* assoluto, mentre la prospettiva *route* è associata al *Frame of Reference* relativo o intrinseco (Donati 2013: 60-61). Ferma restando la sovrapposizione almeno parziale fra i due modelli, in questa sede abbiamo preferito fare riferimento all'opposizione fra prospettive *survey* e *route*, con riferimento esplicito al punto di vista adottato dal soggetto in compiti di orientamento (cfr. anche Taylor e Tversky 1992, 1996; Tversky 2001; Mosca 2010: 11).

ottenuti in questi due tipi di compiti hanno dimostrato che i soggetti non vedenti congeniti e precoci tendono a creare rappresentazioni di tipo egocentrico, mentre i soggetti vedenti e non vedenti tardivi mostrano la capacità di passare da una rappresentazione di tipo egocentrico ad una di tipo allocentrico.

Ciò è osservato, ad esempio, nell'esperimento di *parallel-setting task* messo a punto da Postma *et al.* (2008), in cui è stato chiesto a soggetti vedenti e non vedenti di esplorare attraverso il tatto una sbarra di riferimento, per poi posizionarne un'altra parallelamente ad essa. Il compito di posizionamento poteva essere svolto subito dopo la fase di esplorazione tattile oppure dopo alcuni secondi di ritardo. Sebbene i risultati dei due gruppi fossero sostanzialmente comparabili nel caso in cui il compito fosse eseguito immediatamente dopo la fase di esplorazione, con numerosi errori osservati in entrambi i gruppi, sono stati riscontrati risultati migliori per i vedenti nel caso in cui il compito di posizionamento fosse svolto dopo alcuni secondi. Si è ipotizzata dunque una capacità più marcata dei vedenti di passare da una prospettiva di tipo egocentrico – probabilmente favorita in un primo momento in compiti che prevedono la riproduzione motoria di uno stimolo percepito attraverso il tatto – ad una di tipo allocentrico, più funzionale al tipo di compito, che richiede la formazione di un'immagine mentale esplicita dell'orientamento dell'oggetto.

Anche nello studio di Gaunet e Rossetti (2006), si riscontra una discrepanza con il comportamento di vedenti e non vedenti, impegnati in compiti di *pointing-task*. In questo studio, ai soggetti era richiesto di posizionare l'indice su alcuni punti *target* situati su un piano all'interno del proprio spazio peri-personale. La posizione dei punti era stata precedentemente memorizzata attraverso il tatto, tramite il posizionamento dell'indice del soggetto sul punto bersaglio da parte dello sperimentatore. Anche in questo caso, il compito poteva essere svolto subito dopo la fase esplorativa oppure con un ritardo di alcuni secondi. I risultati mostrano che, per i non vedenti, i tentativi di indicazione seguivano la direzione del movimento della mano verso il punto *target*, indipendentemente dalla distanza temporale del compito rispetto alla fase di esplorazione. Questo tipo di risultato è generalmente interpretato come indice di una prospettiva di tipo egocentrico (cfr. Rossetti *et al.* 2000), centrata sulla mano dell'individuo che compie il movimento. Nei vedenti, invece, si assiste ad un mutamento della direzione del movimento effettuato dai soggetti, che segue l'asse del punto bersaglio – ortogonale rispetto alla direzione del movimento – se il compito veniva svolto con alcuni secondi di ritardo rispetto alla fase esplorativa. In questo caso, si ipotizza l'adozione di una prospettiva di tipo allocentrico, centrata sul punto bersaglio. Anche in questo caso, quindi, i risultati sembrano indicare un passaggio da una prospettiva di tipo egocentrico ad una di tipo allocentrico soltanto nei vedenti.

Da questi studi possono essere tratte due importanti conseguenze: da un lato, questi risultati costituiscono la conferma della possibilità di generare rappresentazioni spaziali anche in assenza di input visivo. D'altra parte, tuttavia, appare evidente come le strategie di rappresentazione spaziale siano influenzate dalla deprivazione visiva: in particolare, la capacità di generare rappresentazioni spaziali di tipo allocentrico sembra dipendere crucialmente dalla stimolazione visiva (Cattaneo e Vecchi 2011; Marotta *et al*. 2013, a cura di).

La tendenza a strutturare lo spazio secondo una prospettiva di tipo egocentrico è confermata anche dai risultati di alcuni recenti studi che prevedono l'identificazione o la memorizzazione della posizione di oggetti. Ad esempio, Pasqualotto e Newell (2007) hanno evidenziato come le prestazioni di soggetti non vedenti congeniti siano inferiori rispetto a quelli dei vedenti in compiti che richiedono l'identificazione di oggetti non familiari nel caso in cui il soggetto o l'oggetto vengano ruotati. I non vedenti mostrano difficoltà nel creare rappresentazioni spaziali di tipo allocentrico, centrate, ad esempio, sull'oggetto stesso. Simili risultati emergono dagli studi di Iachini *et al.* (2014) e Ruggiero *et al*. (2021). In entrambi gli esperimenti, i soggetti

non vedenti, dopo aver memorizzato la posizione di triadi di oggetti all'interno di una stanza (Iachini *et al.* 2014) o posti su un tavolo di fronte al soggetto (Ruggiero *et al*. 2021), sono risultati più lenti e meno accurati nell'effettuare compiti che richiedevano una prospettiva di tipo allocentrico, come ricordare quale fosse l'oggetto più vicino a un altro oggetto *target*. L'adozione di una rappresentazione egocentrica sembra invece essere facilitata per i non vedenti, che hanno ottenuto risultati migliori in compiti che richiedevano l'adozione di questa prospettiva, come ricordare quale fosse l'oggetto più vicino al soggetto.

Anche per quanto riguarda gli ambienti di scala più ampia sono stati effettuati numerosi studi. Va tuttavia osservato che i risultati per questo tipo di ambiente sono talvolta contrastanti. In particolare, sembra che si debba tenere conto anche di altri fattori, quali l'autonomia di movimento dei soggetti e la difficoltà del compito (Schinazi *et al.* 2016; Chiesa *et al.* 2017; Hersh 2020). In generale, comunque, in letteratura si osserva una tendenza a prediligere rappresentazioni di tipo *route*, egocentriche, da parte dei non vedenti. Ad esempio, nello studio di Noordzij *et al.* (2006), i soggetti non vedenti precoci, non vedenti tardivi e vedenti hanno ascoltato due descrizioni verbali, una basata su una prospettiva *survey-like* ed una su una prospettiva *route-like*. In seguito, essi hanno svolto vari compiti, come il confronto di distanze in linea d'aria: i non vedenti hanno ottenuto risultati migliori, riuscendo ad esempio a calcolare con più precisione le distanze richieste, in seguito all'ascolto di una descrizione verbale basata su rappresentazioni di tipo *route*, mentre i soggetti vedenti hanno ottenuto un maggiore successo dopo aver ascoltato descrizioni di tipo *survey*. Similmente, nel più recente studio di Chiesa *et al.* (2017), soggetti vedenti e non vedenti hanno memorizzato una mappa tridimensionale della città di Torino; successivamente, veniva chiesto loro di immaginare di trovarsi in un luogo A, e indicare altri luoghi, ruotando mentalmente la propria posizione di 90° o 180°. Anche in questo caso, i non vedenti hanno ottenuto meno successo nell'esecuzione dei compiti, soprattutto nei casi in cui era necessaria una rotazione mentale di 180° (adottando quindi una prospettiva allocentrica, basata su coordinate esterne al soggetto). I risultati degli studi precedentemente illustrati mostrano quindi come le strategie di rappresentazione spaziale siano influenzate dalla deprivazione visiva: in particolare, si riscontra una maggiore difficoltà nel generare rappresentazioni di tipo allocentrico da parte di soggetti non vedenti (Cattaneo e Vecchi 2011; Donati 2013; Hersh 2020; cfr. anche gli studi illustrati ai §§ 3-4).

2. Linguaggio e spazialità

Data la rilevanza dell'informazione linguistica sulla strutturazione dei concetti (§ 1), appare importante verificare l'apporto che il linguaggio può offrire alla rappresentazione spaziale. Com'è noto, infatti, nell'ambito delle scienze cognitive sono presenti due linee teoriche principali e contrastanti fra loro, entrambe riguardanti il rapporto fra percezione sensoriale e linguaggio: una basata principalmente sul ruolo dell'informazione sensoriale (*Embodied Cognition Hypothesis*) e una linea di ricerca che vede i concetti come entità maggiormente simboliche e astratte. In particolare, secondo i sostenitori della *Embodied Cognition Hypothesis* (cfr., fra gli altri, Barsalou 2003; Gallese e Lakoff 2005), la rappresentazione concettuale sarebbe dipendente principalmente dall'informazione sensoriale e motoria e dall'esperienza che l'uomo fa del proprio corpo. Di conseguenza, le rappresentazioni mentali sono ritenute concrete in origine: i concetti astratti sarebbero derivati da quelli concreti tramite metafore basate sulla nostra esperienza sensoriale. In questa prospettiva teorica, dunque, l'informazione linguistica giocherebbe un ruolo marginale nella strutturazione dei concetti, in quanto la percezione guiderebbe i processi cognitivi superiori.

Di contro, i sostenitori di ipotesi simboliste (cfr. ad esempio Mahon e Caramazza 2008), affermano che il contenuto concettuale dipende in larga misura dal linguaggio: nonostante

i concetti siano legati alla nostra esperienza percettiva, essi sono in origine astratti ed il loro significato dipende primariamente dal linguaggio (Marotta 2010; De Felice in stampa). In questo impianto teorico, l'informazione sensoriale e motoria non risulta quindi strettamente necessaria per la strutturazione di concetti: il livello della rappresentazione concettuale è astratto e simbolico, mentre l'acquisizione di informazioni di tipo sensomotorio può complementare questo tipo di rappresentazione (Mahon e Caramazza 2008: 68).

Il dualismo antagonista tra modelli dei concetti come entità intrinsecamente *embodied* ed entità astratte sopra delineato è stato oggetto di dibattito negli ultimi decenni: sono state infatti recentemente proposte alcune teorie che prevedono una visione flessibile e multimodale del nostro sistema concettuale. In particolare, nella proposta di Dove (2014, 2022), il linguaggio stesso è visto come una fonte di *embodiment*, in virtù del suo utilizzo in concrete azioni comunicative e delle caratteristiche fisiche e sensoriali associate ai simboli linguistici (Dove 2022: 4). In questo impianto teorico, la strutturazione dei concetti si baserebbe quindi non solo sull'informazione sensoriale e motoria in senso stretto, ma anche sull'esperienza linguistica degli individui. La simulazione multimodale coinvolta nell'applicazione dei concetti in un determinato contesto includerebbe quindi la rappresentazione linguistica associata al concetto stesso, rendendo conto – ad esempio – della possibilità di strutturare concetti astratti, non direttamente legati all'esperienza non linguistica (Dove 2014) e degli effetti di facilitazione legati all'iconicità e al fonosimbolismo (Dove 2022).

Per queste ragioni l'analisi delle produzioni linguistiche di soggetti non vedenti si rivela estremamente importante al fine di comprendere il rapporto fra linguaggio, percezione e vista. Infatti, se le rappresentazioni semantiche di tali soggetti si rivelassero differenti da quelle dei vedenti, sarebbe ragionevole ipotizzare che la percezione (ed in particolar modo la vista) influenzi pesantemente la cognizione umana, in linea con gli assunti fondamentali della *Embodied Cognition Hypothesis* (cfr. ad es. Gallese e Lakoff 2005). Di contro, se la cognizione umana fosse almeno in parte indipendente dal nostro apparato percettivo, le rappresentazioni semantiche dei due gruppi dovrebbero essere soltanto marginalmente differenti, conformemente a quanto previsto dalle teorie simboliste e in generale ad una versione più debole o flessibile dell'*embodiment*, che chiami in causa rappresentazioni indipendenti dalla modalità sensoriale almeno per alcuni concetti (Mahon e Caramazza 2008; Dove 2014, 2022).

In questo contesto, risulta rilevante per l'analisi del rapporto fra percezione, cognizione e linguaggio l'analisi della codifica di situazioni dinamiche, ossia del cosiddetto 'Evento di Moto',[3] relative alla descrizione di luoghi di scala ridotta e di percorsi su vasta scala da parte di soggetti vedenti e non vedenti congeniti. Infatti, nell'analisi delle strategie linguistiche attraverso le quali l'uomo è in grado di descrivere lo spazio e le entità che in esso sono presenti, la nozione di 'Evento di Moto' assume un ruolo centrale. La rappresentazione concettuale che soggiace alla lessicalizzazione delle componenti concettuali dell'Evento di Moto (ad esempio, il percorso compiuto dal soggetto, l'origine o la destinazione del movimento, cfr. *ultra*) può quindi fornire utili indizi sulla tipologia di rappresentazione spaziale adottata dai soggetti.

Nell'ambito della linguistica cognitiva, un contributo essenziale è stato fornito dagli studi di Talmy (1985, 2000), il quale identifica due tipi di eventi di moto: l'Evento di Moto Basico (*Basic Motion Event*) e quello Complesso (*Complex Motion Event*).

[3] L'Evento di Moto (*Motion event*) può essere definito come una situazione di tipo esclusivamente dinamico, che comprende il solo moto dislocazionale (cfr. ad es. Spreafico 2009) può comprendere anche relazioni spaziali statiche e situazioni spaziali non relazionali (cfr. Talmy 2000: "a situation containing motion and the continuation of a stationary location alike"). In questa sede, e in particolare nell'analisi dei dati che verrà illustrata al § 4, adotteremo una nozione di Evento di Moto che include unicamente situazioni dinamiche.

L'Evento di Moto Basico è costituito da quattro componenti concettuali principali:[4] la Figura (*Figure*), ovvero l'entità che viene localizzata nello spazio e che si sposta; lo Sfondo (*Ground*), ovvero l'entità rispetto alla quale la Figura è collocata o si sposta nello spazio; il Percorso (*Path*), ovvero il percorso seguito dalla Figura durante il movimento o la sua collocazione rispetto allo Sfondo;[5] il Movimento (*Motion*), ossia il cambiamento di posizione dell'entità nello spazio. Nell'Evento di Moto complesso, si aggiungono anche la componente Maniera (*Manner*), che indica la modalità del movimento o la postura della Figura, e la Causa (*Cause*), che specifica l'atto che provoca il moto.

Nelle diverse lingue, le componenti concettuali sopra elencate possono essere lessicalizzate secondo diverse strategie. In particolare, Talmy (2000) sottolinea come le lingue tendano a presentare strategie diverse per la codifica del Percorso, del Moto e della Maniera rispetto alla radice verbale. Ad esempio, in lingue come l'italiano, il Percorso e il Moto tendono ad essere codificati nella radice verbale (es. *entrare*), mentre la Maniera è generalmente specificata attraverso un elemento separato (il cosiddetto 'satellite',[6] es. *correndo* in *entrare correndo*). In lingue come l'inglese, invece, il Moto e la Maniera tendono ad essere codificati nella radice verbale (es. *run*), mentre è il Percorso ad essere codificato tramite un elemento separato (es. *into* in *run into something*).

Com'è noto, questa distinzione ha condotto alla proposta di una classificazione tipologica basata sul luogo di lessicalizzazione del componente Percorso: da un lato, sarebbero identificate le cosiddette *Verb-framed languages* (come le lingue romanze: es. l'italiano *l'uomo entrò in casa correndo*), che codificherebbero tipicamente il Percorso e il Moto nella radice verbale; d'altra parte, sarebbero presenti le *Satellite-framed languages* (come le lingue germaniche, es. l'inglese *the man ran into the shop*), che codificano il Percorso tramite un satellite, mentre la Maniera e il Moto sono lessicalizzati nella radice verbale.[7] Questa classificazione è stata oggetto di dibattito in letteratura: infatti, la sua natura dicotomica la rende problematica. Da un lato, alcune lingue non sembrano rientrare del tutto nelle categorie tipologiche individuate: si pensi, ad esempio, alle lingue che prevedono l'utilizzo di verbi seriali, come il cinese mandarino, in cui l'Evento di Moto è codificato da due verbi aventi lo stesso valore morfosintattico, ma che codificano rispettivamente il Percorso e la Maniera (es. *fei chu* 'volare uscire', Slobin 2004: 8-9). D'altra parte, anche nelle lingue tradizionalmente considerate *Verb-framed* è possibile identificare costruzioni tipiche della tipologia *Satellite-framed*, e viceversa, sebbene risultino più marcate (si pensi ad esempio all'italiano *la ragazza corse in casa*; cfr. Iacobini 2010; Iacobini e Vergaro 2014).

Per questo motivo, in letteratura sono state proposte rivisitazioni della teoria (cfr. ad es. Wälchli 2001; Slobin 2004; Spreafico 2009; Beavers *et al.* 2010; Croft *et al.* 2010; Iacobini *et al.* 2020).[8] Ad esempio, Wälchli (2001) propone di ampliare l'indagine delle strategie di

[4] Le etichette qui impiegate fanno riferimento alla terminologia adottata nella più organica esposizione della teoria adottata in Talmy (2000).

[5] Si noti che il Percorso può essere concettualizzato in modo più o meno complesso (ad esempio, la traiettoria può avere un orientamento spaziale, o implicare il superamento di un confine), e l'espressione linguistica dell'Evento di Moto può prevedere, in aggiunta alla codifica del Percorso, uno o più elementi che esprimono la direzione e/o il punto di arrivo del movimento: cfr. Iacobini *et al.* (2020: 35-36) e § 3.3.

[6] La nozione di 'satellite' non è ben definita dallo stesso autore, e appare quindi piuttosto problematica. In generale, i 'satelliti' possono essere definiti come elementi morfologici dotati di scarsa autonomia semantica e morfosintattica (come i prefissi verbali e le *verb particles* inglesi). Per una trattazione più approfondita della nozione di 'satellite', che non può essere effettuata in questa sede, rimandiamo a Spreafico (2009: 50-51) e Iacobini *et al.* (2020: 29-31).

[7] La distinzione tipologica fra *Satellite-framed languages* e *Verb-framed languages* è stata applicata anche a studi di carattere diacronico: per il passaggio dal latino alle lingue romanze cfr., ad esempio, Iacobini e Fagard (2011); Iacobini (2012); Corona (2020). Per una proposta di schema di annotazione delle principali componenti semantiche e formali coinvolte nell'espressione linguistica dell'Evento di Moto, si veda Iacobini *et al.* (2020).

[8] Si veda anche Iacobini *et al.* (2020) per una panoramica di questa linea di ricerca.

lessicalizzazione del Percorso all'intera frase piuttosto che limitarlo alla coppia verbo-satellite, al fine di rendere la classificazione più flessibile. Sono quindi introdotti come parametri per la classificazione la classe della parola mediante la quale il Percorso è lessicalizzato (verbale, adnominale, adverbale) e le direzioni cardinali di movimento (distinguendo se la Figura si dirige o entra nello Sfondo, se si allontana o esce dallo Sfondo, se sale o scende).

La successiva proposta di Spreafico (2009), invece, propone di coniugare la proposta di Talmy con quella di Wälchli. Infatti, anche se le componenti concettuali dell'Evento di Moto analizzate coincidono con quelle identificate da Talmy, l'identificazione dei tre luoghi di lessicalizzazione del Percorso (verbale, adnominale e adverbale) in base ai quali operare la classificazione tipologica delle lingue riprende senza dubbio la proposta di Wälchli. Inoltre, Spreafico propone una classificazione tipologica flessibile, che prevede la possibilità, per ogni lingua, di possedere più di una possibilità di lessicalizzazione. In quest'ottica, ad esempio, l'italiano risulta essere caratterizzato dalla preferenza per il luogo verbale nella lessicalizzazione del Percorso; tuttavia, l'italiano mostra una inclinazione anche verso il luogo adverbale. Infine, una proposta originale è stata avanzata da Slobin (2004), che prevede, in aggiunta all'introduzione delle *equipollently-framed languages* (che lessicalizzano i componenti del Percorso e della Maniera tramite elementi con uguale status sintattico), una classificazione alternativa basata sul grado di salienza del componente Maniera. Le lingue sono quindi disposte secondo un *cline* di salienza della Maniera, avente per estremi le lingue ad alta salienza della Maniera (come l'inglese, in cui le informazioni riguardanti la Maniera sono fornite più frequentemente e in modo più regolare) e le lingue a bassa salienza della Maniera (come l'italiano, in cui la Maniera è lessicalizzata solo per ragioni specifiche).

Dalla breve rassegna di proposte qui illustrata, emerge chiaramente come l'Evento di Moto sia una nozione centrale per lo studio delle rappresentazioni spaziali. Anche se cercare di ricondurre le lingue a tipi discreti risulta difficile, resta valida l'identificazione delle componenti essenziali dell'Evento di Moto e delle loro strategie di lessicalizzazione. Infatti, sembra possibile adottare con successo una prospettiva volta ad evidenziare le tendenze riscontrate nelle lingue analizzate relativamente alla lessicalizzazione di tali componenti, facendo luce sulle strategie di rappresentazione spaziale soggiacenti alle produzioni linguistiche esaminate.

Per questo motivo, abbiamo deciso di esaminare i verbi di moto utilizzati da parte di individui vedenti e non vedenti congeniti impegnati in compiti di descrizione spaziale. Lo scopo dell'indagine è cercare di valutare quale sia l'effettiva importanza dell'input linguistico nella costruzione di rappresentazioni semantiche e spaziali in assenza di input visivo, evidenziando eventuali somiglianze e differenze nella creazione di tali rappresentazioni da parte di individui vedenti e non vedenti.

3. L'analisi empirica

3.1 I partecipanti

Il nostro studio si fonda sui dati raccolti ed annotati nel corpus BaSIS (*Blind and Sighted Italian Spatial language*), che costituisce la prima raccolta di dati sistematici relativi al linguaggio spaziale della lingua italiana (Meini 2013). BaSIS raccoglie le descrizioni spaziali di 48 volontari italiani di madrelingua italiana,[9] di cui 26 vedenti (13 di genere femminile e 13 di genere ma-

[9] I dati sono stati raccolti nell'ambito del progetto PRIN 2008, prot. 2008CM9MY3, *Rappresentazioni semantiche nel linguaggio dei non vedenti: studi linguistici e neurocognitivi*, coordinatore nazionale Giovanna Marotta, Università di Pisa (cfr. Marotta 2013: 31-32).

schile), fra cui un mancino, e 22 non vedenti congeniti (10 di genere femminile e 12 di genere maschile, reclutati tramite l'*Unione Italiana Ciechi*), fra cui due mancini. Nessuno di loro soffre o ha sofferto in passato di disturbi neurologici, cognitivi o linguistici; le principali cause della cecità sono il glaucoma congenito, la retinopatia del prematuro e l'atrofia congenita del nervo ottico. Il livello della memoria di lavoro dei soggetti è stato preliminarmente verificato tramite il test del *digit span* nelle due direzioni, evidenziando per entrambi i gruppi una memoria di lavoro nella norma.

I partecipanti non vedenti provenivano da tre zone principali: Toscana (dalle province di Firenze, Livorno, Lucca, Pisa e Massa, per un totale di 12 soggetti), Liguria (5 soggetti in totale, provenienti dalle provincie di Genova, Imperia e Savona) e Sardegna (dalle province di Cagliari e Nuoro, per un totale di 5 soggetti). La loro età era compresa fra i 20 e i 73 anni (età media femminile: 47 anni; età media maschile: 45 anni); il livello di istruzione variava dalla scuola secondaria di primo grado alla laurea magistrale, e il livello più comune era il diploma di scuola secondaria di secondo grado, conseguito da 11 soggetti. L'occupazione della maggior parte di essi (14 su 22) era quella di operatore telefonico; gli altri erano insegnanti, pensionati o studenti. Il livello di mobilità e di autonomia dei soggetti era vario, così come il livello di inserimento nella società: alcuni mostravano un bassissimo grado di autonomia, mentre altri presentavano un grado di mobilità vicino alla norma; alcuni partecipanti erano normalmente inseriti nel mondo del lavoro e avevano un elevato numero di scambi comunicativi, mentre altri conducevano una vita appartata e povera di scambi comunicativi con individui esterni alla famiglia.

Anche i partecipanti vedenti provenivano da tre zone principali: Toscana (16 soggetti, dalle province di Livorno, Lucca e Pisa), Liguria (5 soggetti, provenienti da Imperia o Genova) e Sardegna (5 soggetti, provenienti da Cagliari o Nuoro). La loro età era compresa fra i 18 e i 72 anni all'epoca del rilevamento dei dati (età media femminile: 41 anni; età media maschile: 49 anni), e il loro livello di istruzione variava dalla quinta elementare alla laurea magistrale. Il livello di istruzione più comune era il diploma di scuola media di secondo grado (conseguito da 10 soggetti). Varie erano le professioni svolte dai partecipanti vedenti: alcuni erano studenti, altri liberi professionisti, medici, infermieri, bibliotecari o pensionati.

3.2 Descrizioni spaziali

Al fine di analizzare il modo in cui i non vedenti congeniti rappresentano lo spazio, sono stati analizzati due tipi di descrizioni spaziali di tipo semi-spontaneo: la descrizione della propria camera da letto e quella di un percorso cittadino.

Nel primo caso, è stato chiesto ai soggetti di descrivere dettagliatamente la propria camera da letto, ottenendo una descrizione spontanea di un ambiente familiare e di piccole dimensioni. In seguito, l'intervistatore ha posto a ciascun volontario alcune domande riguardo alla stanza, concernenti ad esempio la posizione di vari oggetti precedentemente menzionati, ottenendo così una descrizione elicitata dell'ambiente, al fine di ottenere dati simili e comparabili fra soggetti diversi (Meini 2013: 122).

Nella descrizione del percorso cittadino, invece, l'intervistatore ha finto di essere un turista che incontra il volontario in un punto A di una città conosciuta dal partecipante: il soggetto deve quindi indicare all'intervistatore il percorso da seguire per raggiungere un punto B, ottenendo una descrizione spontanea di un ambiente abbastanza familiare e di media ampiezza. In seguito, l'intervistatore ha posto a ciascun volontario una serie di domande prestabilite riguardanti l'itinerario indicato, al fine di raccogliere dati comparabili tra diversi soggetti. L'itinerario è

stato poi controllato con *Google Maps* e *Google Earth* dagli intervistatori (Marotta *et al*. 2013: 195; Meini 2013: 122-123).

Tutti i compiti sono stati presentati e svolti oralmente e audioregistrati; dunque, trascritti utilizzando la tecnica di *re-speaking* e infine corretti manualmente. Il formato di trascrizione utilizzato è CHAT.

3.3 Criteri di annotazione e classificazione dei verbi

Al fine di analizzare le categorie linguistiche del linguaggio spaziale italiano, è stato utilizzato uno schema di annotazione morfosintattica e semantica in XML. Gli eventi di moto, in particolare, sono designati utilizzando l'attributo *motion_event*. I verbi di moto (in totale 607, identificati con l'etichetta *motion_verb*), oggetto di questo studio, sono stati lemmatizzati, distinguendo i vari significati di ogni verbo presenti nel corpus, al fine di analizzare l'uso delle diverse accezioni di ogni verbo da parte dei parlanti.[10]

È stata proposta inoltre un'ulteriore classificazione dei verbi di moto: in particolare, fra i vari tipi di classificazione possibili (come quelle basata sull'*Aktionsart* o sulla valenza verbale) abbiamo scelto di adottarne una basata sulla nozione di ruolo spaziale. Si è tenuto conto, in particolare, dell'importanza dei componenti concettuali dell'*Evento di Moto* individuati in ambito linguistico e della nozione di *Ruolo Spaziale* (cfr. Fillmore 1971), che fa riferimento alla funzione semantica di un sintagma nominale o preposizionale rispetto al processo espresso dal verbo. In particolare, seguendo Fillmore (1971) e Talmy (1985), sono state individuate tre categorie di verbi:

Path: il sintagma nominale o preposizionale dipendente dal verbo ricopre il ruolo semantico del *Percorso* (esempio: *percorrere* in *il ragazzo percorre la strada*);

Path + *Goal*: il sintagma ricopre il ruolo semantico della Destinazione (esempio: *raggiungere* in *il ragazzo raggiunge via Santa Maria*);

Path + *Source*: il sintagma ricopre il ruolo semantico della *Source* (esempio: *allontanarsi* in *il ragazzo si allontana dalla porta*).

È importante sottolineare che nell'analisi qui illustrata sono stati classificati come verbi di tipo *Path*+*Goal*/*Source* anche i rari casi in cui i componenti *Source* e *Goal* non sono argomentali (come in *facciamo un pezzo della via Grande fino a via della Madonna* o *dalla capitaneria di porto faccio il lungomare*) oltre ai più numerosi casi in cui i componenti sono argomenti del verbo (come in *si esce dalla stazione* o *entro in viale Regina Margherita*), al fine di ottenere un quadro completo delle possibilità di realizzazione delle componenti *Path*, *Goal* e *Source* da parte dei soggetti. La differenza fra queste costruzioni verrà comunque presa in esame nel § 4.

Questo tipo di classificazione preliminare permette, con le dovute cautele, di far luce sulla possibile strategia di rappresentazione spaziale adottata dai soggetti. Come verrà illustrato nel § 4, ipotizziamo che una rappresentazione spaziale di tipo sequenziale (*route-like*), avente come punto di riferimento l'osservatore che compie un percorso, preveda un maggiore utilizzo di verbi di tipo *Path*; di contro, una rappresentazione di tipo non sequenziale dovrebbe prevedere un maggiore utilizzo di verbi appartenenti alle altre categorie (che lessicalizzano cioè anche l'origine o la destinazione).

[10] Sono state distinte, ad esempio, le seguenti accezioni del verbo 'girare': 'cambiare direzione e svoltare verso un punto', come in *girare a destra*, e 'muoversi ruotando intorno a qualcosa', come in *girando il mio letto*.

4. Analisi dei dati

4.1 Ambiente 'Stanza'

Nel compito riguardante la descrizione della camera da letto il numero di verbi di moto utilizzati dai due gruppi è esiguo: i non vedenti hanno utilizzato in totale 59 verbi di moto, mentre i vedenti ne hanno utilizzati 28.[11] Ciò dipende ovviamente dal tipo di compito, ideato per elicitare una descrizione di tipo statico. Si riscontrano tuttavia alcune differenze nella produzione dei due gruppi. In primo luogo, a livello quantitativo, i non vedenti hanno utilizzato circa il doppio di *motion verbs* rispetto ai vedenti. In particolare, quasi la totalità dei non vedenti (19 su 22) ha utilizzato almeno un verbo di moto nelle proprie descrizioni della camera da letto (come in *si arriva alla finestra* e *proseguendo lungo questa parete*) mentre quasi la metà dei vedenti (10 su 22) non ha mai utilizzato verbi di moto nelle proprie descrizioni (come in *di fronte al letto c'è il comò […], due comodini*). Si riscontra inoltre una differenza a livello qualitativo, come illustrato nelle Tabelle 1 e 2.

	N.	%
entrare	18	64%
altri	10	36%
Totale	28	100%

Tabella 1. Distribuzione dei lemmi utilizzati dai soggetti vedenti nel *task* 'Stanza'

	N.	%
entrare	24	41%
altri	35	59%
Totale	59	100%

Tabella 2. Distribuzione dei lemmi utilizzati dai soggetti non vedenti nel *task* 'Stanza'

Nei vedenti, si nota una netta predominanza dell'utilizzo del verbo 'entrare' (utilizzato 18 volte, come in *appena si entra nella stanza*). Solo in una minoranza dei casi (10 in totale) sono stati utilizzati altri verbi di moto, di tipo *Path+Goal/Source* (§ 3.3; 6 lemmi: *arrivare*: 4 occorrenze; *accedere*: 2, in un contesto simile a quello riscontrato per il verbo *entrare*: *nella mia camera da letto si accede attraverso le scale* e *alla mia camera da letto ci si può accedere dall'interno*; *scendere*, *uscire*, *varcare*, *venire*: 1 occorrenza; es. *venendo dalla parete opposta*). Nelle descrizioni dei non vedenti, invece, si osserva una proporzione differente. Infatti, sebbene il verbo 'entrare' sia comunque utilizzato (in 24 occorrenze), la maggioranza dei verbi di moto utilizzati nelle descrizioni di questo gruppo è riconducibile ad altri lemmi, le cui occorrenze totali ammontano a 35 verbi, ossia al 59% del totale (15 lemmi, principalmente di tipo *Path*: *proseguire*: 7 occorrenze; *andare*: 6; *andare avanti*: 4; *arrivare*: 4; *superare*: 3; *seguire*: 2; si registrano inoltre, con una sola occorrenza, i lemmi *attraversare*, *continuare*, *girare*, *partire*, *percorrere*, *portare*, *procedere*, *ritornare*, *svoltare*, es. *vado avanti e trovo il letto* e *superato questo scaffale*).

[11] Non è stato possibile invece effettuare il test del χ^2 sui verbi del *task* Stanza a causa dell'esiguo numero di *tokens*.

L'analisi di questi risultati è interessante se confrontata con le più recenti teorie riguardanti le prospettive spaziali preferite da vedenti e non vedenti. Infatti, come illustrato nel § 1, la letteratura concernente l'argomento sembra indicare che i non vedenti prediligano rappresentazioni spaziali basate su una prospettiva di tipo *route*, mentre i vedenti prediligano rappresentazioni spaziali basate su una prospettiva di tipo *survey*. L'adozione di una prospettiva *route-like*, di tipo egocentrico, riflette l'esperienza del soggetto che compie un percorso: si ipotizza, perciò, che in una descrizione basata su questo tipo di prospettiva vengano impiegati verbi di moto. L'adozione di una prospettiva *survey-like* prevede invece una visione d'insieme dello spazio, di norma in corrispondenza con la linea dello sguardo: si può quindi ipotizzare che una descrizione basata su questo tipo di prospettiva preveda un numero esiguo di eventi di moto.

Il fatto che i non vedenti utilizzino più verbi di moto rispetto ai vedenti, sia a livello di occorrenze che di lemmi impiegati (Vedenti: 7 lemmi, Non Vedenti: 16 lemmi),[12] unitamente alla maggiore incidenza di verbi di tipo *Path* rispetto a quanto riscontrato per i vedenti, sembra confermare che i non vedenti prediligano una strategia di rappresentazione spaziale di tipo sequenziale, che riflette il percorso compiuto dall'individuo, ossia *route-like*, nel caso in cui si confrontino con un ambiente molto familiare e a scala ridotta. Ciò è dovuto probabilmente al fatto che hanno acquisito attraverso il tatto le informazioni riguardanti l'ambiente in questione, e che dunque hanno dovuto muoversi all'interno della stanza per acquisire tali informazioni.

D'altro lato, il fatto che due terzi dei verbi di moto utilizzati dai vedenti sia costituito dal verbo 'entrare', e che questi utilizzino nel complesso meno verbi di moto rispetto ai non vedenti, ci permette di ipotizzare che i vedenti prediligano una strategia di rappresentazione spaziale di tipo *survey*: i V cioè entrano nella stanza (di qui il grande numero di occorrenze del verbo 'entrare') e poi la descrivono dopo aver dato uno sguardo d'insieme all'ambiente (come in *entrando c'è un grande armadio bianco* e *entri dalla porta, davanti a te c'è una finestra*). La predominanza dell'utilizzo del verbo 'entrare' in entrambi i gruppi, infatti, non stupisce, dal momento che l'ingresso è il riferimento saliente da cui si avvia la descrizione.

L'analisi dell'utilizzo *fictive* dei verbi di moto (ossia associati ad un soggetto inanimato, come in *l'armadio segue la porta*)[13] da parte dei soggetti sembra rinforzare questa ipotesi. Infatti, esso è quantitativamente maggiore nei non vedenti (NV: 10 occorrenze; V: 5 occorrenze) e coinvolge più lessemi (NV: 8; V: 4). Ciò è dovuto al fatto che spesso, nel nostro corpus, i non vedenti utilizzano verbi di movimento per descrivere la posizione degli oggetti nella stanza, come in *una cyclette* […] *seguita dal guardaroba che poi prosegue con: diciamo il comò.* Nel descrivere la posizione degli oggetti inanimati presenti nella stanza, i non vedenti sembrerebbero quindi avere come riferimento il percorso compiuto, 'trasferendo' il proprio movimento sugli oggetti descritti (da cui l'uso di tipo *fictive* dei verbi di moto). Questo potrebbe essere dovuto al fatto che, in assenza della vista, è stato necessario muoversi all'interno della stanza per conoscere la posizione degli oggetti all'interno di essa – differentemente da quanto accade per i vedenti, che possono avere una visione d'insieme della stanza entrando dalla porta e osservando la camera da letto.

I dati raccolti sembrano confermare i risultati degli studi illustrati nel § 1: per un ambiente familiare e a scala ridotta i non vedenti prediligono una prospettiva di rappresentazione dello spazio di tipo *route*, a differenza dei vedenti; il movimento costituisce la strategia conoscitiva dello spazio preferita. Tale differenza nella rappresentazione dello spazio in assenza dell'input visivo potrebbe indicare che, per ambienti familiari e a scala ridotta, il contenuto concettuale

[12] D'ora in avanti, verranno utilizzate le diciture *V* per i vedenti e *NV* per i non vedenti.

[13] Seguendo Talmy (1996), sono definiti come *fictive motion* i casi di moto metaforico in cui ad un verbo di moto viene associato un soggetto incapace di spostarsi nel mondo fisico, come in *il fiume costeggia l'intera città*.

possa essere almeno in parte dipendente dall'esperienza che l'uomo fa del proprio corpo e in generale dall'informazione senso-motoria (in questo caso tattile vs. visiva), secondo quanto ipotizzato nelle teorie *embodied* (§ 2).

4.2 Ambiente 'Percorso'

Il numero di verbi di moto utilizzati dai due gruppi nelle descrizioni del percorso cittadino è sensibilmente maggiore rispetto a quanto riscontrato per il *task* 'Stanza': ovviamente, ciò è dovuto al tipo di compito, esplicitamente strutturato per elicitare descrizioni dinamiche. Come illustrato nella Tabella 3, i dati sembrano indicare una sostanziale omogeneità nei due gruppi a livello quantitativo: i vedenti hanno utilizzato 272 verbi di moto, mentre i non vedenti 248.

	V	NV
Percorso	272	248
Stanza	28	59

Tabella 3. Verbi di moto utilizzati nei *task* 'Stanza' e 'Percorso'; V = vedenti; NV = non vedenti

Dal punto di vista qualitativo, anche in questo caso è stata condotta un'analisi basata sulla classificazione incentrata sulla nozione di Ruolo Spaziale illustrata nel § 3.3. L'ipotesi alla base dell'analisi prevede un maggiore utilizzo di verbi che lessicalizzano il componente *Path* per una descrizione di tipo *route*, che riflette appunto l'esperienza del soggetto che compie un percorso. Invece, una descrizione di tipo *survey* potrebbe prevedere un maggiore utilizzo di verbi che lessicalizzano anche l'origine o la destinazione del movimento, in quanto non sequenziale (Marotta e Tamponi 2021: 108).

I dati mostrano una sostanziale omogeneità nei due gruppi. In particolare, come illustrato nella Tabella 4, i vedenti mostrano un utilizzo di verbi di tipo *Path+Goal* e *Path+Source* pari al 33% (90 occorrenze), di poco inferiore a quello osservato nelle descrizioni dei vedenti (40%, 98 occorrenze).[14] Il test del χ^2 effettuato sui dati conferma la non significatività della minima differenza osservata (χ^2 (1) 2.0519, *p-value* = 0.152).

	V		NV	
Path	182	67%	150	60%
Path + Goal/Source	90	33%	98	40%
Totale	272	100%	248	100%

Tabella 4. Categorie di verbi in base ai ruoli spaziali utilizzati dai due gruppi nel *task* 'Percorso'

[14] Come illustrato al § 3.3, sono stati inseriti nel computo generale dei verbi di tipo *Path+Goal/Source* sia i casi in cui i componenti *Source* e *Goal* siano argomentali sia le poche occorrenze in cui il componente sia un circostanziale. Tuttavia, i casi in cui i componenti analizzati non siano argomenti del verbo sono solo 11, impiegati sia dai soggetti vedenti che da quelli non vedenti e ristretti all'utilizzo di *fare* con *Goal* o *Source* non argomentale (3 occorrenze nei non vedenti e 5 nei non vedenti: es. *facciamo un pezzo della via Grande fino a via della Madonna* o *dalla capitaneria di porto faccio il lungomare*) o di *prendere* con *Source* non argomentale (utilizzato tre volte dai vedenti, come in *da piazza San Michele si prende la via Roma*). Anche escludendo queste occorrenze dal computo generale, pertanto, i risultati non cambiano il quadro generale qui delineato.

Anche l'analisi per lemmi mostra una certa omogeneità nei due gruppi. Per la categoria *Path* osserviamo per entrambi i gruppi una maggiore incidenza dei lemmi *attraversare* (NV: 16 occorrenze; V: 11, es. *ho attraversato via La Marmora*, *si attraversa la sede stradale*), *girare* (NV: 16; V: 25, es. *si gira a destra*), *percorrere* (NV: 16; V: 21, es. *ho percorso la strada*, *ho percorso la via Gramsci*), *prendere* (NV: 14; V: 14, es. *prendiamo il largo Carlo Felice*, *prendere la seconda a sinistra*), e *fare* (NV: 12; V: 25, es. *ho fatto la via Veneto*, *facciamo la strada principale*). Per la categoria *Path+Goal*, i lemmi impiegati più frequentemente sono *arrivare* (NV: 41 occorrenze; V: 50, es. *arrivati alla piazza Costituzione*, *si arriva alla stazione*), *andare* (NV: 15; V: 7, es. *si va in via Roma*, *andavo nell'orto*) ed *entrare* (NV: 10; V:5, es. *entro in viale Regina Margherita*, *entra in via Vittorio Veneto*). Infine, per la categoria *Path+Source*, i lemmi più frequenti sono *partire* (NV: 2; V: 6, es. *parto da via Fiumetto*, *partendo da piazza San Michele*) e *uscire* (NV: 2; V: 6, es. *esco da casa*, *si esce dalla stazione*).

Questi dati sembrano mostrare dunque che, per un ambiente familiare di ampiezza media come il percorso cittadino qui descritto, venga preferita un tipo di descrizione di tipo *survey*, non sequenziale, maggiormente funzionale al compito di descrivere un ambiente di questa grandezza. In particolare, l'alta percentuale di verbi di tipo *Path+Goal/Source* utilizzata dai non vedenti suggerisce che i non vedenti siano in grado di descrivere lo spazio in maniera non sequenziale, come del resto non è del tutto escluso negli studi presenti in letteratura (cfr. § 1). In questo caso, sebbene il percorso cittadino sia familiare per i soggetti, l'esperienza tattile della città non è paragonabile a quella che si può avere in un ambiente di scala ridotta come quello della camera da letto: si può quindi ipotizzare che per questo motivo anche i soggetti non vedenti presi in esame abbiano adottato una rappresentazione di tipo *survey*.[15]

I dati raccolti meritano un ulteriore commento. Un maggior utilizzo di verbi di tipo *Path + Goal/Source* da parte dei non vedenti potrebbe essere associato ad una maggiore autonomia di movimento da parte dei soggetti: i partecipanti non vedenti che utilizzano due o più verbi di questo tipo nelle loro descrizioni del percorso cittadino sono infatti caratterizzati da una buona, e in alcuni casi totale, autonomia di movimento. Solo quattro partecipanti con autonomia di movimento nulla o scarsa hanno utilizzato più verbi di tipo *Path+Goal/Source* nelle loro descrizioni. Tuttavia, questi soggetti si differenziano dagli altri in quanto presentano un livello di scolarità piuttosto alto (diploma o laurea) e/o sono maggiormente inseriti nella società: un'istruzione elevata e una maggiore esposizione al contatto sociale potrebbero aver determinato una differente esposizione all'input linguistico, influenzando le loro produzioni linguistiche (§ 1). Riteniamo quindi che siano necessari ulteriori studi volti ad approfondire questo aspetto e a verificare la rilevanza del fattore 'autonomia di movimento' nella rappresentazione degli spazi di vasta scala, come del resto già auspicato in studi recenti quali Schinazi *et al.* (2016), Chiesa *et al.* (2017), Hersh (2020).

[15] Si noti che la descrizione di ambienti di dimensioni più ampie da parte dei soggetti sembra essere in linea con i risultati qui esposti. Come illustrato in Donati e Meini (2013), infatti, gli stessi soggetti avevano svolto anche un compito che prevedeva la descrizione dall'alto della propria città di residenza. I risultati dello studio mostrano la tendenza, da parte di vedenti e non vedenti, a produrre un numero esiguo di eventi di moto rispetto agli eventi di localizzazione, che potrebbe indicare l'adozione di una prospettiva di tipo *survey* da parte di entrambi i gruppi. Anche se si osserva, da parte dei soggetti non vedenti, la produzione di un numero maggiore di eventi di moto rispetto ai vedenti, la differenza non è statisticamente significativa, almeno nel parlato semi-spontaneo (Donati e Meini 2013: 149-150). Si conferma quindi la possibilità, per i non vedenti, di adottare strategie di tipo *survey*, pur evidenziando talvolta una tendenza all'utilizzo di strategie di tipo *route* e dinamiche anche per ambienti ad ampia scala.

5. Alcune conclusioni

I dati raccolti sembrano indicare che le rappresentazioni concettuali di tipo spaziale possano essere in parte indipendenti dalla percezione sensoriale, anche se con sostanziali differenze dipendenti dalla tipologia di ambiente esaminato. Infatti, se per ambienti di scala ridotta il contenuto concettuale risulta dipendente dall'informazione senso-motoria,[16] per ambienti di scala più ampia le rappresentazioni sembrano invece dipendere in misura minore dalla percezione sensoriale, mentre il linguaggio risulta un'importante fonte di informazione per i non vedenti. Ciò emerge nell'omogeneità dell'utilizzo dei verbi riscontrata nel compito del 'Percorso' (§ 4), sia a livello quantitativo che qualitativo, coerentemente con gli assunti di base di teorie non strettamente *embodied*. Il linguaggio si configura quindi ancora una volta come un fondamentale strumento per la creazione di rappresentazioni concettuali.

Questi risultati sono coerenti con quanto evidenziato negli studi volti a indagare la struttura delle rappresentazioni semantiche in soggetti non vedenti congeniti (§ 1), che mostrano come la rappresentazione semantica e concettuale sia fortemente dipendente dall'apporto linguistico, oltre che parzialmente dall'input sensoriale.

È importante sottolineare tuttavia che, sebbene il linguaggio costituisca una spia del modo in cui gli individui rappresentano mentalmente lo spazio circostante, spesso le produzioni linguistiche dei parlanti possono essere influenzate anche da fattori esterni, quali il grado di scolarizzazione e l'inserimento nella società, o anche la capacità dei parlanti di muoversi in autonomia, come illustrato nel § 4. Ulteriori studi potranno indagare in modo più approfondito come le diverse variabili possano essere collegate con l'adozione di descrizioni dello spazio circostante.

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[16] Questo è visibile nei risultati del compito 'Stanza' (§ 4.1), in cui vedenti e non vedenti risultano adottare diverse strategie di rappresentazione spaziale – rispettivamente di tipo *survey* e *route*.

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Sociolinguistica
Sociolinguistics

Quaderni di Linguistica e Studi Orientali- QULSO
Working papers in Linguistics and Oriental Studies

Firenze University Press
https://oajournals.fupress.net/index.php/bsfm-qulso

OPEN ACCESS

Citation: I. Pata Kapo (2023) Pseudo-Anglicism in Albanian Language. *Qulso* 9: pp. 285-296. doi: http://dx.doi.org/10.13128/QULSO-2421-7220-15149

Data Availability Statement: All relevant data are within the paper and its Supporting Information files.

Competing Interests: The Author(s) declare(s) no conflict of interest.

Pseudo-Anglicism in Albanian Language

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Abstract:

Anglicisms in the Albanian language is a domain not much and sufficiently frequented by Albanian linguists; false anglicisms or Pseudo-anglicisms are much less. Therefore, the focus of this paper is primarily the identification of Anglicisms and Pseudo-anglicisms in the Albanian language, how we distinguish and provide the ground for drawing the line between these two different but interconnected categories, and then introducing and analyzing several examples of Pseudo-anglicisms in Albanian. Transformations of English loans or the native words (in terms of morphological, semantic, orthographic, phonetic, etc., features) or the coinage of new words in the Albanian language under the influence of English language (the resemblance to English being the only connection to English language) are processes that produce the so-called 'false loans' or 'Pseudo-anglicisms'. Pseudo-anglicisms in Albanian can not be studied separately from other European languages as they share most of their features with Pseudo-anglicisms in French, Italian, Spanish, German, etc.

Keywords: *Anglicisms, Language Contact, Loan Words, Pseudo-Anglicisms*

1. Methodology and introduction

The historical factors related to the impact of English language on Albanian (Kapo 2011: 43) are not based on any English/American presence in the country, neither in the form of invasion or any other kind of voluntary or nonvoluntary presence. Apart from some treaties or conferences held in Britain and the establishment of several British and American institutions at the beginning of the 20th century, the relations with the English-speaking-world have been much reduced due to the totalitarian regime established in Albania after 1945, with the end of the two World Wars. Afterwards, the lack of communication and contact with the 'outer world' did not affect at all the prestige the English language had among Albanians, as a very positive attitude existed towards English language. This was reflected in English being the first and the most important foreign language taught in Albanian schools at all levels. The other source of contact was the only public TV station

(TVSH) that broadcasted English or American movies which were quite strictly controlled, censored and in full compliance with the Communist Party requirements. With the establishment of the democratic system, year 1991 marked the beginning of an intense flow of foreign words in the Albanian press, mainly from the English language. Through the years many of them have been fully adapted, following the rules of written Albanian, yet, many others 'have left' Albanian , 'refused' to be adapted or are in the process of adaptation.

The Pseudo-anglicisms overview and their analysis is based on a corpus of 511 Anglicisms and Pseudo-anglicisms, which the author has collected mainly from Albanian newspapers and magazines published from 1990 to 2012 (Kapo 2016a: 22-126.[1]

The number of newspaper and magazine titles searched for Anglicisms and Pseudo-anglicisms is 31, together with the three Albanian Language Dictionaries published by the Academy of Science of Albania (the 1980, the 2002 and the 2006 dictionary). The dictionaries and the articles published in the newspapers were (manually) searched for Anglicisms. The corpus includes 511 Anglicism and Pseudo-anglicism lemmas and about 2019 tokens. This database does not include semantic loans and loan translations.

The collected corpus of Anglicisms and Pseudo-anglicisms in Albanian are subject to a comparative and analytical analysis, observing their linguistic features in Albanian but also in the context of their counterparts in other European languages.

2. Anglicisms

The Dictionaries of the Albanian language published during the last 2-3 decades by the Academy of Sciencies of the Republic of Albania do not contain the term *Anglicism*; this term is only found in the Dictionary of the Linguistics Terms of 1975.

Xhevat Lloshi defines *English loans* in Albanian as the words that come out of the interaction between the two languages, Albanian and English language, as well as the words borrowed directly from English language, i.e. not through other source languages (2011: 65).

Whereas according to Filipović (2006: 2):

> an Anglicism is any borrowed word from the English language, referring to an object or a concept, which, at the time of the borrowing is an integral part of the English culture and civilization'; but also a word borrowed from English language, which, during its course of transfer is adapted in the target language with the purpose of being integrated in its linguistic system.

Manfred Görlach considers an Anglicism as "a word or an idiom, that is recognizably English in its form (spelling, pronounciation, morphology or at least one of the three) but is accepted as an item in the vocabulary of the recepient language, even though it does not exist or is used with a conscpicuously different meaning in English" (2002b: 10). Similarly, the term 'Anglicism' in the Albanian language refers to the English/English related words or phrases used by Albanian speakers, adapted, unadapted or in the process of adaptation in the Albanian language. The lexical areas they are used mostly are: information technology, gastronomy, fashion, sport, etc.

Etymologically, the term *Anglicism* is related to England; however, it is generally not used only for the words coming from the English language, but also for the English loans coming from

[1] <https://unitir.edu.al/doktoratura-irena-pata-kapo-fakulteti-i-gjuheve-te-huaja-departamenti-i-gjuhes-angleze/> (07/2023).

all the varieties of English language. Sometimes, in order to identify the origin of an Anglicism, the term 'Americanism' is also used – referring to the terms coming from the United States of America, subordinate to the term 'Anglicism'. Thus, we use the term Anglicism referring to the loans borrowed from the British and the American English. It is quite impossible to distinguish between the British and the American loans, as very often the words are not borrowed with specific features in their shape and many Americanisms often come through the British variety (Görlach 2002a: 196).

The 1980 Albanian Language Dictionary, published during the communist regime, included 53 Anglicisms; the Dictionary of the Albanian Language published by the Academy of Sciences in 2006 included 80 Anglicisms, fully adapted and massively recognised and used by Albanians. The 2006 Albanian language dictionary contains 20 Anglicisms more than the 2002 one. However, the press is overloaded with English words, most of which are 'real loans', many are scientific terms used in many languages, for which English is an 'intermediary' language and many others are 'false loans', as shall be indicated and illustrated in the following sections.

3. Internationalisms

Internationalisms are loans in the field of science and technology that often penetrate as indispensable elements together with the new tool, object, notion, invention, etc. According to 'Webster', the term *International Scientific Vocabulary* refers to the technical terms, economics, artistic terms, etc., which are mainly Latin or Greek formations, graphically or morphologically latinized. Many of these science terms are already 'rooted' in the Albanian lexis, as are other technical terms from various fields such as medicine, sports, design, etc. If we refer to the considerable number of Italianisms in the Albanian language (Jorgaqi 1992) it can be confirmed that many English origin words have penetrated Albanian language via Italian (e.g. Formula 1 race, the entire English terminology of which comes in Albanian from Italian language – *pit stop, box, etc.* – and only its name is pronounced as in Italian – *Formula Uno*). Thus, Italianisms, French, Greek, Russian, etc., loan words constitute a source for introducing Internationalisms also in the Albanian language.

Görlach (2001: 10) considers *internationalisms* as neo-Greek and Latin origin words (*administratë*-'administration', *telefon*-'telephone'), but also words from other languages transmitted via English language (*avokado, anorak*). *Internationalisms* are defined as such due to being spread in many languages of the world.

The Albanian linguistics has a different view considering the identification of international terms (Akademia e Shkencave e Shqipërisë 1998: 9): "When a word, except the neolatin languages (French, Italian) and the English language (having a terminology mainly constructed on Greek-Latin elements, similiar to the neolatin languages), is found also in the Germanic languages of the continent (German language in particular) and in the Slavic languages (Russian in particular) – then they shall be defined as *international words* or *internationalisms*; but when the Germanic languages of the continent and the Slavic languages have their own words, then attempts to find the appropriate Albanian word/term shall be made". This is the case with the term *energjia nukleare* 'nuclear energy', 'energy' being an international word, while the second element is not (the German and the Russian language do not use the word 'nuclear'); this is the reason why the Albanian term 'bërthamore' is found in schools texts and scientific publications, but both terms are extensively used. Referring to the above-mentioned principle the foreign terms of science field like *akselerim 'acceleration', kurbë 'curve', solucion 'solution',* etc., are substituted with *përshpejtim, lakore, tretësirë,* etc. (Lafe 2007). We think that the substitution of

these terms with their equivalents in Albanian language would be an ideal situation, however the reality and the numerous identified examples render this process quite challenging.

4. Pseudo-anglicisms

Pseudo-anglicisms are words or formations of a certain language, with English elements, but that are not English as such. These are differently known as 'false loans'. Görlach defines them as words that "although clearly derived from English, are not themselves English words, for instance they may be used as a member of a different word class, or in unEnglish compounds (*anti-baby pill* etc.)" (2001: 10).

Furiassi provides the definition of Pseudo-anglicisms as: "autonomous coinages which resemble English words but do not exist in English, or as unadapted borrowings from English which originated from English words but that are not encountered in English dictionaries, whether as entries or as sub-entries" (2003: 123).

In taking into consideration different studies consulted for the purpose of this paper, but not only restricted to that, with distinguished linguists and researchers like Filipović (1968, 1982), Görlach (2002a, 2002b), Gottlieb (2005), Onysko (2007), Pulcini (2017), Furiassi (2003, 2010), Gonzalez (2013), etc., it can be noticed that in their studies in specific languages, but also in the cross-language studies, they have listed very similar features the (English) Pseudo-loans display in these languages. The Albanian language is no exception. As an ancient language, belonging to a separate, unique and independent branch in the Indo-European language tree, even though in possession of a solid and well-established linguistic system, the last 30 years have revealed little resistance to the pressure the foreign words exercise, English ones in particular. This strong influence is seen in the extensive use of English loans, their increased number, the wide acceptance by the population, in the variety of forms they are used (in terms of spelling, pronunciation, meaning, etc.), with their different degrees of adaptation and the new words created.

The examples of Pseudo-anglicisms found in Albanian may fall under different classifications, as these words, in most of the cases, have undergone more than one modification, in their spelling, pronunciation or meaning. Some Pseudo-loans may come out of the (Anglicisms) abbreviation process, as are the ones listed below:

Boks ('boxing'), *foks* ('foxtrott'), *relax* ('relaxation'), *soft* ('software'), *happy end* ('happy ending'), *badi* ('bodysuit') are examples of apocope.
Skaut ('boyscout'), *çip* ('michrochip'), etc., are examples of apheresis.

Some proper nouns or distinguished British/American, etc., commercial brands, when used as common nouns in other languages (*Gillette, Pampers,* etc.) become pseudo loans. Interestingly, 'carter' is used in Cuban-American Spanish with the meaning of 'peanut'. Its etymology dates as early back as the Carter-Reagan presidential campaign, in which Carter was known for harvesting peanuts (Sánchez-Boudy 1999: 155). Or 'pullman' in Italian and Greek referring to the coach bus and adopted from Pullman Company which operates railway dining cars. In Albanian is the word *pampers*, the name of a diaper production brand, generalized by referring to diapers and not to the specific brand name.

Another category is that of 'hybrid anglicisms', i.e. English-induced compounds or phrases, in which one of the elements is borrowed from English (and sometimes adapted), and the other element is a native one; e.g *pipi-room* for 'toilet' in Cuban Spanish. Albanian is among the

Indo-European languages with the largest word-forming capabilities, since almost all forms of word-formation present and productive in Indo-European languages are also present in Albanian (Paçarizi 2019: 33). An example of English-induced compound in Albanian is the case of the words formed with the suffix *–man*. Generally, these Pseudo-anglicisms are thought to have been formed as a result of the need to name the author or the doer, etc.: *rekord – rekordmen* (for 'record holder'), or the new formation in Albanian of the word *bllokmen*, a word nonexistent in English, but a stylistically charged word referring to the Communist Party leaders living in the so-called 'bllok' area (an isolated block of flats and villas near the center of Tirana).

Another compound is the one formed with *-land* in order to give the idea of the land/ property belonging to someone:

Udhëtim në Pacolliland (A trip to Pacolliland - *Pacolli* is the surname of Bexhet Pacolli, a Kosovo politician) (*Klan*, 15.9.1999, 28); *Parajsa për ta është edhe ky Anarkiland* (anarchy + land), që quhet Kamëz…- The paradise to them is also this Anarkiland, called Kamza. (*Mapo*, 15.5.2011, 18)

One of the first Pseudo-anglicisms in Albanian language may be attributed to Faik Konica, the outstanding Albanian figure of the beginning of the 20th century: 'Zulluland' (Konica 1922) – zulu + land, a hybrid used by Konitza to satirize some aspects of the Albanian society in the 1920s.

The English element 'top' and the Albanian words *formë*, *listë*, *yje* form other English-induced compounds as in: *top-formë* ('top-form'), *top-listë* ('top-list'), *top-yje* ('top-stars'). 'Top-kanal' is the half-translation of the name of one of the most famous TV channels in Albania "Top Channel", sometimes used in the situations linked to fake news or simply in derogatory comments.

This semantic and word-building process occurs within the recipient language and is not any more a result of the 'languages in contact' process (Sánchez Fajardo 2018). Albanian magazines of fashion, gastronomy, sport, etc., are full of Anglicisms, adapted and unadapted and with plenty of 'new English words/formations' similar to the examples above.

Görlach (2002b: 62) provides a classification of Pseudo-anglicisms into four groups according to the level affected:

(a) spelling: when native words are spelt as if they were English,
(b) pronunciation: when native words are pronounced as if they were English,
(c) morphology: when derivatives or compounds, not recorded in English, might conform with English patterns,
(d) meaning: when English words are used in unnatural contexts.

Pseudo-anglicisms in Albanian seem to fulfill (c) and (d) criteria.

The morphology criterion encompasses a category of Pseudo-anglicisms that are not so numerous and yet they 'are thriving' every day with the increase of the impact of English language on Albanian language. There are several cases of English-origin words in Albanian that have undergone morphological adaptation. In addition, the case of derivatives or compounds, not recorded in English that might conform with English patterns is an interesting aspect of this study area (Kapo 2017).

The use of an English word in Albanian, in a grammatical category different from the category the word has in the source language, leads to the formation of Pseudo-anglicisms.

This has occurred with the adjective 'snob', used as a verb in Albanian: *snoboj*, a grammatical category this word lacks in the English language:

Talenti shqiptar ***snobon*** *Skënderbeun, firmos në kampionatin kroat.* – (*Panorama*, 3.2.2018) [The Albanian talent 'snobs' Skënderbeu', signs in the Croation championship].

The Italian 'football lingo' may have been the 'inspiration' for the coinage of this Pseudo-Anglicism in Albanian as well (from the Italian verb 'snobbare'); most of the sport articles in Albanian newspapers are translations from Italian sport news.

There are also other cases of English loans that have undergone a change in their grammatical category in Albanian. The nominalization of some adjectives is one aspect of the morphological modification:

'topless' *Nga ekspozimi i këmbëve tek* ***topless***. (*Koha jonë*, 28.7.2005, 15) [From the feet exposure to the topless]

Antidoping used as a noun while in English is an adjective:

Në Shqipëri nevojitet institucioni i antidopingut. (*Mapo*, 31.3.2011) – [The institution of antidoping is needed in Albania]

Examples of 'adjectivalization' of nouns can be found in the Albanian, Spanish, etc. press: the use of *fashion* meaning *fashionable*:

Fëmijët më ***fashion*** *dhe më të komentuar të momentit.* (*Shqip*, 18.3.2017) – [The most fashion and commented children of the moment]

According to Furiassi (2010) 'false loans' may derive from specific linguistic processes some of which apply also in Albanian. Compounding ellipses - where a multi-word expression loses one of its components: in Italian is used *personal* for 'personal computer', in Spanish and Albanian *camping* for 'camping site', *parking* for 'parking site/lot', *catering* for 'catering service' meaning 'food providing service' borrowed in Spanish and French, but also in Albanian *katering*. In many examples in all these languages it appears to refer also to 'the provider of this service'.

Shërbim gatimi dhe shpërndarje ushqimi, ***katering*** *(kryesisht për spitale, institucione ...).* – (*Shqip*, 7.4.2020) [Cooking services and food delivery, catering (mainly for hospitals and institutions...]

Gottlieb defines Pseudo-anglicisms as not being direct imports from an Anglophone source culture; they are sometimes coined in the domestic culture (Gottlieb 2005: 166-167). The Pseudo-anglicism examples from Albanian language provided in this article bear proof to this statement. Klajn introduces instances of coinages in the target language under the influence of English language: he categorizes the *compositions or locutions* with English elements, that do not exist in the English language, as Pseudo-anglicisms (Klajn 1972: 32-34). They are abbreviated or translated in the target language. A classic example of Pseudo-anglicisms, common to several European languages, is the loan s*moking*. Differently from English language, in Albanian it refers to a 'tuxedo', etc., which in fact is an ellipsis of the English composition 'smoking jacket'. It is obviously considered a Pseudo-anglicism due to 'smoking' not existing with this particular meaning in the English language.

In the same context, Nevena Alexieva considers the formation of Pseudo-anglicisms out of abbreviations or the clippings of the compositions, bearing the meaning of the whole phrase. She uses the term *loan clippings*, referring to all those borrowed words and phrases which, during the borrowing process, underwent structural simplification, i.e. as clipped ones (*night* used instead of 'night-club', *parking* used to replace the entire phrase 'parking lot' etc.). What is left from the phrase is the one that 'survives' from the entire transference process till it reaches the target language and carries the meaning of the entire composition in the source language (the English language) (Alexieva in Fischer, Pulaczewska 2008: 42).

Alexieva goes further in analysing the causes of the meaning and structure deviation of the loans. She considers the category of the 'clipped loans' as a phenomenon that predominates in most of the European languages, referring also to *The Dictionary of European Anglicisms* of Görlach with '*parking*' being used in 12 of the 16 European languages included in this dictionary; '*kamping*' in 15 European languages, *holding* in 9 languages, etc. In Albanian we have the following *clipped loans*:

air condition for *air conditioning*,
body for *body stocking*,
skaut for *boyscout*,
çip for *microchip*,
duty free for *duty free shop*,
fitness for *fitness center*,
foks for *foxtrott*,
house for *house music*,
holding for *holding company*,
kamping for *camping site*,
master for *master degree*,
renklist for *ranking list*,
market for *supermarket,* etc.
action for *action movie*,
box/boks for *boxing*,
çarter for *charter plane*,
desktop for *desktop computer*,
exchange for *exchange office*,
flesh for *news flash*,
folk for *folk dance/music*,
hostess for *air hostess*,
happy end for *happy ending*,
country for *country music*,
metal for *heavy metal*,
soft for *software*,

A Pseudo-anglicism in the Albanian language, undergoing a remarkable morpho-semantic transformation process, is the word *soft*; it is clipped from 'software' and then used with the meaning of 'sofware', in the grammatical category of noun (a grammatical category 'soft' lacks in the source language), as illustrated in the example below:

"*Surface" mburret me hardware-in e tij, ndërsa sa për aplikacionet dhe* ***softe*** të tjera ka marrë kritika të forta (She., 25.10.2012, 21) – ['Surface' brags with its hardware, while being criticized for many other applications and softs].

Relaks in Albanian is used as a noun, logically taken from the English noun *relaxation*, but most probably coming from the English verb *to relax*, used with the same form but in the category of a noun in Albanian: *Ky është një* ***relaks.…*** **–** [This is a relax].

Autonomous derivation – A specific category of Pseudo-anglicisms is that formed with the *–ing* suffix, coming either directly from abbreviating the compositions or by attaching this suffix, giving the word a completely different function (e.g. *dancing* for *dance-hall*, *camping* for *camp-site*), or *kitchening, balconing*, etc. in Spanish.

The loanwords productivity in Albanian, together with the numerous cases of adapted loans taking typical Albanian language suffixes or endings, is also seen in the newly created word *bullist* referring to 'a bully' (a person who purposely tries to hurt others) formed with an Anglicized base and a suffix used in Albanian to form the agent/doer, etc.:

Ato përfshijnë goditjet, rrahjet, ngacmimet verbale, gjestet fyese, përjashtimin ose thjesht presionin për t'iu përshtatur atyre që dëshiron apo thotë bullisti. (*Living magazine*, 30.5.2014) [They include hitting, kicking...in order to adapt to what the bully says]

Autonomous compounding – The receiving language creates words/phrases with English elements that exist in the source language separately: *rekordmen* in Albanian (recordman), Spanish, Italian, Portuguese, French, etc.; a coinage new to English and equivalent to 'record holder'.

Autonomous compounding, common to other languages as well, results in the combination of two autonomous lexical units in English, which combine in the recipient language. In Cuban Spanish for instance is found *gascar* < gas + car (Sànchez Fajardo 2018) similar to the Albanian '*bllokmen*' (a pseudo loan mentioned and analysed above) or '*copy-paste*' used to define the action of 'copying' and 'pasting' a sentence or a text, referring to the mere action of copying and adopting with no modification of a text or a piece of written material. It is mainly used as a noun phrase in Albanian or attributively in other contexts.

... përveç një propozimi që duket si copy-paste e premtimeve për të drejtën e votës së mërgimtarëve... (*Shqip*, 5.12.2017) – [...except a proposal that looks like copy-paste of the promises made on the emigrants' right to vote..]

Semantic shift or extension – Words that appear to be English but with a completely different meaning: *footing* referring to *jogging,* used in Italian, French, Spanish, etc., or *handy* for a mobile phone in German, etc.

Alexieva (in Fischer, Pulaczewska 2008: 42), along with many other linguists, thinks that 'the semantic extension', i.e. the adding up of the meanings an English loan has, comes as a consequence of a misunderstanding or wrong translation of the foreign word. Another cause for the formation of a Pseudo anglicism can be also the limited linguistic competence in the English language (Görlach 2002a: 163). The young generation that lived during the communist regime perceived many Anglicisms (often under the influence of Italian language) with the wrong pronunciation, like [ipare] for 'hit parade', or [apsajt] for 'offsite', [ence] for 'hands', [korne] for 'corner' (in football), etc. The English adjective 'open-minded' has become fashionable and frequently used by Albanian speakers in talkshows and everyday conversations, but pronounced as 'open-mind' (lacking the final ending or sound), a phenomenon mainly related to the unfamiliarity with the English morphology/language use or simply low sociolect.

It is important to underline the negative connotation the 'surviving' Anglicisms took during the isolation years, inspired by the communism propaganda. One can easily observe this in the Albanian Language Dictionaries published by the Academy of Sciences of Albania in 1980 and 1984. For instance, here is the definition for the Anglicism *boyscout* ('boyscout') on page 162 and 97 respectively:

> a member of the groups of children and young people established in some bourgeois countries pretending to conduct sport activities, discovery and exploratory trips in unknown territories, etc., but in reality have political and military objectives (transl. by the author).[2]

[2] BOJSKAUT ~ I m. sh. ~Ë, ~ËT. Anëtar i grupit të fëmijëve e të të rinjve që krijohen në disa vende borgjeze gjoja për veprimtari sportive, për udhëtime zbuluese e hulumtuese në krahina të panjohura etj., por që në të vërtetë kanë synime politike e ushtarake.

Another example of a pseudo loan in Albanian is the noun *meeting*: an assembly of people for a particular purpose, especially for formal discussion, used as referring to public gatherings or mass protests organized for political or other purposes. Stress shift occurs in this false loan, from the first to the second syllable when used in Albanian.

PS t'i bashkohet LSI në ***miting.*** (*Panorama*, 1.3.2009) [Socialist Party must join Socialist Movement for Integration Party in a miting]

Many of the pseudo loans identified above, in current and active use in Albanian language, can be considered as neologisms as they represent new words entering the language in the area of fashion, culture, technology, etc., becoming a natural part of our language (Kapo 2016b).

An Albanian compound word, the calque *fundjavë*, formed under the influence of English language ('weekend') has already entered the Dictionary of Albanian Language of 2006. Another similiar formation that has not yet received formal recognition but is widely known and used is the calque *fjalëkalim* translated word for word in Albanian from 'password'.

Other calque phrases in Albanian coined from English compounds as word for word translated phrases, used in both their English and Albanian versions, in the press and spoken language, are:

E drejta e autorit – copyright
Afati i fundit – deadline
Jastëk ajri – airbag
Baza e të dhënave – database
Numërimi mbrapsht – countdown
Gjuetia e kokave – headhunting
Vëzhgimi i zogjve – birdwatching

The higher frequency of the English words usage is due to their brevity compared to their equivalent phrases in Abanian, although the considerable stylistic charge that many of these words carry is not to be neglected.

5. Conclusions

Considering Onysko's affirmation that "Pseudo-anglicisms and hybrid anglicisms are indicators of lexical productivity in the RL" (2007: 52), and based on the abovementioned examples it can be confirmed that Pseudo-anglicisms in Albanian, as markers of lexical productivity, are an output of the morphological/morpho-syntatic modification of English-origin words/phrases. Albanian language Pseudo-anglicisms possess features and behave similarly to Pseudo-anglicisms of other European languages, as French, Russian, Bulgarian, etc. (Görlach 2002b: 121, 208, 257).

The 40 pseudo loans of the corpus are coined in the Albanian language as a result of the abbreviation process (the first or the second part of the English word being clipped (*badi* for 'bodysuit', çip [tʃip] for 'microchip', etc.), or the generalization of proper nouns (*pampers*), as English-induced compounds (*bllokmen, topyje*), as English words used in Albanian in another grammatical category, alien to the source language (the verb: *snoboj* from the adjective 'snob'); the nominalization of some adjectives (*antidoping, topless*), the *–ing* suffix attached to the first element of English compounds (*dancing* for 'dance-hall'), the simplification of English com-

pounds or phrases with the remaining word carrying the whole meaning of the phrase (*katering* for 'catering service'*, house* for 'house music'), the autonomous compounding (*rekordmen*), the semantic shift or semantic extension examples: *miting,* etc., as well as the numerous examples of calques translated from English language and offering Albanian speakers short and practical phrases or words alongside the Albanian equivalent.

The changing paradigms in English language teaching may very well lead us to stop viewing false anglicisms as a "mistake by non-native speakers", but as either a natural evolution of the language or a perfectly acceptable proposal by one dialectal group, in the same way a word from a "native" dialect (such as Australian English or Estuary English) might expand to other varieties and gain widespread acceptance (Campos 2011: 95).

The corpus of English words collected from the Albanian press and media, with real and 'false loans', the features of their transfer process and the way they are grammatically and semantically used in the target language provide a reflection of a non-duly-regulated-linguistic system, in terms of loans use in Albanian. The rules and standard of written Albanian are not always respected leading to a 'messy' use of English loans. "The more complete the standard of a language is from the point of view of a language comprehensiveness, wherever its speakers are located, the more resistant they shall be to the pressure the loans exercise" (Rrokaj 2013: 35).

[*Sa më i plotë të jetë standardi i një gjuhe nga pikëpamja e gjithëpërfshirjes gjuhësore anekënd dhe masës së folësve që e përdorin, aq më shumë rritet qëndresa ndaj trysnisë së huazimeve*]

Thus, it is important to let the process of borrowing and adaptation and non-adaptation make its way, giving the speakers of a language the space needed to get accustomed, accept or refuse the use of loans or coinages under the influence of other prestigious languages. What is important is to be open, setting no "violent boundaries" (Lloshi 2003: 92) during the process.

Although the native speakers of English may not be satisfied or may frown upon the 'strange use/transformation' the English words/phrases have undergone in other languages, or the new words that look like English but have nothing to do with English language, the 'false loans' co-exist with the real loans and the native words. However, as long as they serve to other speakers in their communication and enrich their vocabulary, why not soften the boundaries and try to benefit from this 'special output' of the globalization process: the Pseudo-anglicisms.

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Quaderni di Linguistica e Studi Orientali- QULSO
Working papers in Linguistics and Oriental Studies

Firenze University Press
https://oajournals.fupress.net/index.php/bsfm-qulso

OPEN ACCESS

Citation: G. Mazzaggio, Y. Moussaid (2023) The Role of Metaphors in Code-switching: A Qualitative Analysis of Italian-Arabic Bilingual Speakers. *Qulso* 9: pp. 297-314. doi: http://dx.doi.org/10.13128/QULSO-2421-7220-15152

Data Availability Statement: All relevant data are within the paper and its Supporting Information files.

Competing Interests: The Author(s) declare(s) no conflict of interest.

The Role of Metaphors in Code-Switching: A Qualitative Analysis of Italian-Arabic Bilingual Speakers*

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Abstract:

The use of figurative language is a pervasive aspect of daily communication across languages and cultures. This study investigates the use of metaphors by bilingual speakers who alternate between two languages on a daily basis and the potential role of these expressions in bilingual utterances. Specifically, we examine the spoken language of Italian-Arabic bilinguals and explore how metaphorical expressions in a bilingual context interact with code-switching, a prevalent linguistic phenomenon in bilingual contexts. Qualitative methods were employed, including interviews with Arabic-Italian bilinguals and a corpus of colloquial language. Our analysis focuses on identifying and analysing code-switching involving metaphorical expressions from both the perspectives of code-switching and metaphor. Our results reveal a higher frequency of intra-sentential forms of code-switching when metaphors are expressed. The majority of metaphors are expressed in Arabic, despite the prevalence of Italian in the statements. These findings aim at shedding light on the complex interplay between figurative language and bilingualism and contribute to our understanding of cross-linguistic communication.

Keywords: *Bilingualism, Code-switching, Metaphor, Pragmatics*

* Credit author statement. Greta Mazzaggio: Conceptualization, Methodology, Formal analysis, Investigation, Data Curation, Visualization, Writing – Original Draft, Writing – Review and Editing, Supervision. Yasmina Moussaid: Conceptualization, Methodology, Formal analysis, Investigation, Data Curation, Visualization, Writing – Original Draft, Writing – Review and Editing. Ethical approval: all procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Acknowledgments: This work has been supported by funding from the Italian Ministero dell'Istruzione, dell'Università e della Ricerca and from the European Union (PNRR - PE05 CHANGES CUP B53C22004010006).

1. Introduction

1.1 Code-switching and its Reasons

Code-switching is a linguistic phenomenon that involves the alternation between two or more languages during a conversation. Balanced bilingual and multilingual individuals are particularly prone to code-switching, as they possess the knowledge and mastery of multiple linguistic systems. Bilingual individuals, in particular, are constantly aware of the presence of two languages even when using only one of them (Grosjean 2008), which can lead to contact between the two linguistic systems and consequent switches between codes during speech. These switches are a form of linguistic variation and are considered one of the best-known manifestations of multilingualism.

In the existing literature, scholars often underline that the phenomenon of code-switching can be divided at least into two different types. Berruto (2009), for example, identifies two types of code-switching: "code-switching" and "code-mixing". Code-switching, also known as inter-sentential switching, involves switching between languages at an inter-phrasal level, resulting in a combination of utterances or propositions of different languages. For example, in an utterance as "I went shopping yesterday. J'ai acheté des chaussures et un sac à main" ('I bought shoes and a handbag'), there is inter-sentential code-switching because the speaker switches from speaking English to speaking French between two sentences. In contrast, code-mixing, also called intra-sentential switching, involves switching from one language to another within a single sentence, leading to sentences that combine elements from two or more different languages. An example of intra-sentential code-switching is: "I'm going to la fiesta tonight, pero primero tengo que ir al gym" ('I'm going to the party tonight, but first I have to go to the gym'). In this example, the speaker switches between Spanish and English within the same sentence. This definition partly takes into consideration the one proposed by Poplack (1980), who, more generally, classifies the phenomenon of code-switching into three types: inter-sentential code-switching, when the switch from one language to another occurs between two sentences; intra-sentential code-switching, when the switch takes place within the same sentence; and tag-switching, which corresponds to the introduction of a single and autonomous noun or expression (i.e., interjections, fillers, tags, and idiomatic expressions) within a discourse entirely expressed in a different language. Tag-switching is often used when the speaker finds it easier to use a word or an expression from another language that is more difficult to translate into the language they are using.

The reasons behind the phenomenon of code-switching are debated. Fishman *et al.* (1972) argue that the lack of sufficient vocabulary in one language may lead bilinguals to turn to the other language, giving rise to language contact phenomena. In contrast, Baker (2001) claims that language contact phenomena rarely occur because bilinguals have not learned sufficient terms to express themselves in the language they are using. Rather, code-switching is often used by speakers of all ages to express thoughts and ideas in a subjective and efficient manner. Nonetheless, even Baker (2001) acknowledges that a lack of lexical terms can sometimes induce bilingual speakers to use code-switching. For instance, if a bilingual does not know a word or phrase in a particular language, they may replace it with a term or expression from the other language that they know. This non-availability of certain terms in one of the languages may arise because bilinguals tend to use different languages in various contexts of their daily life. As a result, they may have a less precise lexical repertoire in one of the languages for a specific context.

In addition to using code-switching to fill lexical gaps in specific semantic areas of each language, code-switching can also be used to emphasize the content of statements, reinforce their meaning, or simply be clearer. Gross and Kaushanskaya (2015) reject the idea of lexical incompetence and instead suggest that bilinguals have the propensity to use the most facilitating language during a conversation. They introduce the theory of lexical accessibility, which suggests that bilingual speakers make switches to the most accessible language – the one whose vocabulary allows them to immediately express the concept they want to convey. From a sociolinguistic perspective, code-switching can also take on additional meanings. It can be used to lower tension during a conversation, underline familiarity with the interlocutor, or exclude people who do not understand the language to which the speaker has switched. In these cases, code-switching may be voluntary, representing a conscious choice on the part of the speaker (Grosjean 2008), or it may not be. Dal Negro and Guerini (2007) emphasize that code-switching is always characterized by a component of communicative intentionality. They argue that the switch is deliberately and intentionally carried out by the speaker, in order to fulfill specific discursive functions.

Baldi and Savoia (2018) argue that multilingual utterances, whether intentional or unintentional, are not a random mixing of forms of different languages governed solely by functional and pragmatic factors. Instead, they follow specific criteria and present restrictions that govern the possibilities of combining elements from different language systems. Poplack (1980) suggests that code-mixing forms are governed by structural restrictions that allow certain possibilities of combination between elements of different languages, while excluding others. Two types of restrictions are distinguished in the literature: the "equivalence restriction", which occurs when the switch from one code to another occurs at points where the word order of the languages correspond, and the "free morpheme restriction", which occurs when the transition to the other language occurs at any point in the discourse where a free morpheme can be inserted.

During the use of two languages, there is a qualitatively and quantitatively dominant language, also referred to as the "base language" or "matrix language" (Grosjean 2008). The matrix language provides the morphosyntactic framework for language production and the majority of its morphemes, while the other language handles other constituents, such as prepositions or syntagms, supplying mainly lexical morphemes and playing a secondary role with respect to the former language (Dal Negro and Guerini 2007). However, the matrix language does not always correspond to the dominant language of the speaker, which complicates the analysis of how the two languages interact during code-switching, especially when bilinguals equally master both languages.

This paper aims to analyse the forms of code-switching present in each of the examples provided while highlighting the predominant language and sentence constituents involved in the switch. Additionally, we attempt to establish the most common reasons that lead bilinguals to choose one language over the other and to use code-switching specifically when expressing metaphors.

1.2 Metaphorical expressions and the case of bilingualism

The study of figurative language has ancient roots dating back to Greek culture and, in particular, the rhetorical tradition, where metaphor was viewed as a mere decorative device. Research in pragmatics has treated metaphors like other figurative languages (i.e., irony, hyperbole), focusing on the discrepancy between what is literally said and what is implicitly communicated. According to Grice (1989), similarly to other instances of non-literal language, the interpretation of metaphors can be attributed to a violation of the "Quality Maxim" (i.e., speakers should

only say things that they believe to be true and for which they have sufficient evidence). Along this line, when the speaker says something that is blatantly false, the listener acknowledges that the speaker cannot have meant what has been literally said, seeking an alternative interpretive solution for the speaker's intended meaning (i.e., the metaphorical meaning).

In modern pragmatics' view, it has been increasingly recognized the valuable contribution that figurative language provides to our conceptual system – the way we think and reflect on things – and, consequently, to our communication in any form of daily interaction. In this change of paradigm, the phenomenon of metaphors is treated differently from other pragmatic phenomena. Lakoff and Johnson (1980; 2008) made a significant contribution to this switch in the paradigm by changing the emphasis of metaphor theories from language to cognition. They propose that metaphors are not simply linguistic expressions but are integral to our conceptual framework and our way of thinking: metaphors organize our comprehension of abstract concepts by aligning them with more concrete domains. For example, the metaphor "LOVE IS A JOURNEY" highlights the similarities between the experience of love and the experience of embarking on a journey, because both involve a process of moving from one point to another, with ups and downs, obstacles, and uncertainties. "Theorists of Relevance" (Wilson and Carston 2007; Wilson and Sperber 2012) suggest that metaphors lead to what has been defined as "lexical broadening", which extends the meaning of an expression beyond its literal definition. This process is guided by the expectation of relevance and creates *ad hoc* concepts that are specific to the communicative context. If, thus, metaphor involves the perception of a complex thing ("topic") in terms of something else ("vehicle") that shares at least one characteristic with it ("common ground"), in order to interpret a metaphor like "The singer is a drill," the listener must adjust the concept communicated by the word "drill" by emphasizing certain properties (e.g., loudness, harshness, unpleasantness) and derive the intended meaning of the speaker in the given context (for instance, "The singer's voice is loud, harsh, and unpleasant, like the sound of a drill"), as proposed by Carston and Wearing (2011). This novel concept of "drill" is defined an *ad hoc* concept which is conventionally written in small caps and marked with an asterisk (e.g., DRILL*). Schematically, Carston and Wearing (2011: 288-289) analysed the metaphor "Writing a PhD thesis was a marathon" proposing the representational levels involved as follows:

Sentence uttered:	*Writing a PhD thesis was a marathon.*
Decoded content:	[X WRITE A PHD THESIS] WAS A MARATHON
Communicated content:	
Explicature:	[S WRITE A PHD THESIS] WAS A MARATHON *
IMPLICATURES:	S FOUND WRITING A PHD THESIS A LONG, HARD PROCESS; COMPLETING IT TOOK A GREAT DEAL OF DETERMINATION AND MENTAL EFFORT; S HAD TO SACRIFICE A NORMAL EMOTIONAL AND SOCIAL LIFE IN ORDER TO DO IT; ETC.

(Carston and Wearing 2011: 288-289)

While there may be varying theoretical explanations for the mechanisms involved in comprehending metaphors, there is a widespread consensus that metaphors are pervasive in everyday life and that we often don't realize we are using them. According to Ervas, Gola and Rossi (2016: 121), although a metaphor is always a statement that is untrue in a literal sense,

its worth is assessed on the basis of how effectively and persuasively it communicates meaning. Some metaphors become so entrenched in language that they are considered "dead" or "lexicalized" metaphors and are catalogued in dictionaries as established language use. For example, the metaphor "TIME IS MONEY" has become a dead metaphor that is widely used in everyday language without any conscious awareness of its metaphorical nature (e.g., *time* can be invested, wasted, lost, possessed, etc.). However, metaphors can also be "creative" and "dynamic", with new meanings emerging over time. Distinguishing between lexicalized metaphors and creative metaphors can be difficult, and it's often better to view them as existing on a spectrum that ranges from the literal to the metaphorical, as suggested by Gola (2005) and Ervas (2015).

As just discussed, metaphorical expressions are not static; they are shaped and influenced by cultural variables. As language use and cultural norms evolve, old metaphors can lose relevance, and new ones can emerge. These sociocultural variables are also rooted in life experiences, communicative situations, and cognitive styles that are specific to the community of belonging. As such, metaphors are a complex product of both universal and cultural dynamics, reflecting the unique perspectives and experiences of the individuals and groups who use them (Deignan 2005; Kövecses 2005, 2006; Yoshimoto 2008). As expressed in Sopory and Dillard (2002), the "Communicator Credibility View" suggests that speakers who use metaphors are viewed as more credible than those who use literal language and that also Aristotle claimed that being a master of metaphors is a sign of genius; therefore, speakers who use metaphors are thought of positively. Indeed, an argument brought by authors is that metaphors reveal similarities between entities that were previously unknown, which can be interesting and pleasurable for the listener. As a result, the listener is impressed by the speaker's message and returns a positive judgment of the speaker's credibility (Gao *et al.* 2017). Since language is a fundamental part of our identity, being proficient in more than one language gives access to a wider range of linguistic resources, including different metaphorical expressions that can be both equivalent in the two languages but also very different. While research in the field of metaphor and bilingualism has focused on topics such as translation practices (a.o., Nida 1964; Dagut 1976, 1987; Kloepfer and Shaw 1981; Van den Broeck 1981; Ervas 2014; Mazzaggio 2016; Ervas and Gola 2017) and the advantages and disadvantages of bilingualism in processing metaphorical expressions (a.o., Heredia and Cieślicka 2016; Jankowiak 2019; Jankowiak, Naranowicz and Rataj 2021; Wang and Jankowiak 2021), there is a lack of qualitative analyses on the use of metaphors in code-switching situations. To address this gap, the present study will analyse corpus data from Italian-Arabic bilinguals to explore how metaphors are utilized in code-switching situations. The methodology of the study will involve a qualitative analysis of the corpus data, focusing on the types of metaphors used, the cultural and cognitive factors that influence their use, and the communicative functions they serve.

2. Methodology

Data collection for this study required two research work phases. The first data collection was conducted in 2019, followed by the second phase in 2021. In both phases, we recruited early Italian-Arabic bilinguals aged between 17 and 27 years, belonging to the second generation of Moroccan immigrants in Italy. These bilinguals acquired Arabic through their family environments and Italian through educational contexts during early childhood, making them simultaneous bilinguals. They have the ability to alternate between the two languages in daily conversations, using Arabic at home or with Arabic-speaking acquaintances and Italian in all Italian-speaking contexts.

To collect data, we adopted a qualitative and multi-methodological approach, with different methodologies employed in the two phases of the research. Specifically, during the first phase, we used semi-structured interviews, comprising targeted questions to obtain the necessary linguistic information and discursive questions to encourage participants to reflect on other linguistic aspects of interest. We conducted individual interviews in the Italian language with 11 Italian-Arabic bilinguals; interviews' durations ranged from 19 minutes to almost an hour, depending on the participant's willingness to elaborate on the topic of interest. Overall, the recorded materials used for the analysis consisted of 7 hours and 10 minutes.

The interviews were divided into two parts. In the first part, participants were asked identity-related questions, including their linguistic biography, and questions about their experiences with the languages and cultures involved in the study (i.e., Italian and Arabic). The second part aimed to evaluate the participants' levels of metalinguistic awareness, focusing on their appreciation of language-contact phenomena between the two languages they use. The interviews were recorded, transcribed, and analysed to obtain the desired linguistic data.

The second phase of the research involved five bilinguals who were identified among the 11 Italian-Arab speakers who took part in the first survey. A different methodology has been used in order to directly analyse specific linguistic phenomena taken from the bilinguals' spoken language. Specifically, we requested the participants to send us voice messages talking about any episode, anecdote, or aspect inherent to targeted contexts – i.e., family, friendship, university or work life, social media, leisure, mental operations, and religious contexts – imagining that the message recipient is an Italian-Arab speaker who can understand both Arabic and Italian languages. A fundamental aspect of this work is that the interviewer, as a matter of fact, was an Italian-Arabic simultaneous bilingual, making the communicative context more natural. The bilinguals were encouraged to use both languages as naturally as possible while recounting episodes, anecdotes, or aspects from the above-mentioned contexts. Although the participants were free to choose what to tell and how to do it, all the recordings were useful in creating a spoken language corpus that was manually transcribed, with 1 hour and 9 minutes of bilingual speeches collected. These linguistic data were then used to conduct studies on several linguistic aspects related to the way bilinguals use and alternate their two languages.

The present study aims to investigate the use of metaphors in social contexts where both Italian and Arabic languages are involved, mainly to understand how metaphors are used in code-switching situations.

3. Analysis

During the analysis of the corpora obtained from the audio recordings collected, the forms of language contact that have taken place between the two languages involved in this study emerged especially in terms of code-switching phenomena. In fact, there are several cases in which speakers switch from one language to the other one during their speeches. These linguistic alternations concern either single words of one language inserted within utterances expressed entirely in the other language, or broader conversational sequences.

The following analysis of the code-switching phenomena reported in this paper is based on the definition proposed by Poplack (1980), who distinguishes between tag switching (isolated words pronounced in the other language), inter-sentential code-switching (between two propositions), and intra-sentential code-switching (within the same proposition). Examining our corpora, although the data show a prevalence of Italian language over Arabic language, we found forms of code-switching both in terms of tag-switching, inter-sentential code-switching,

and intra-sentential code-switching. Therefore, the forms of code-switching found reveal that the speeches of Italian-Arabic bilingual speakers are characterized by switches from one language to the other one that does not necessarily occur between two utterances, but can also occur within the same utterance – and, in some cases, even within a single term (Moussaid, 2022) – involving different parts of the sentence as it will be shown by the examples analysed below.

Moreover, switching forms do not only vary from the linguistic point of view, but also from the semantic one. In other words, we found in our data several cases in which speakers use code-switching for content reasons or to convey a specific meaning by alternating the two languages. For this reason, in addition to analysing linguistically the types of code-switching found in the data collected, we aimed at investigating how the two languages are alternated by the speakers in order to express/communicate certain concepts and meanings. We analysed metaphorical and idiomatic expressions involving code-switching by using linguistic data extracted from corpora and transcriptions of interviews conducted during the research (see Section 2). These expressions were used by speakers to convey concepts beyond the literal meaning of the words used.[2] More specifically, we selected metaphors that were expressed by bilinguals using both Arabic and Italian (i.e., in a code-switching context) and then we described and analysed them, highlighting how code-switching interacts with metaphorical expressions and trying to figure out whether – and how – these expressions are influenced by (o interfere with) code-switching forms.

We begin the analysis with the excerpt in (1). Each example will be analysed by transcribing the Italian part of the statement in standard characters, the Arabic parts in italics (using transliteration), and enclosing in square brackets the same words in the Arabic alphabet. The analysed metaphors or metaphorical expressions will be highlighted in bold. All excerpts will be followed by an English translation.

(1) [...] "Come fa a venirti bene *kīka bla bayḍ* [كيكة بلا بيض]*?* Se vuoi *ğarbī* [جربي] ma secondo me ***maghādīš ṭlaʿ lik*** [مغادش طلع لك]." Alla fine, invece, è piaciuta a tutti e l'abbiamo mangiata tutti insieme.

[...] "How does a sponge cake without eggs come out well? If you want you can try, but in my opinion it won't come out well." However, at the end everyone liked it and we ate it all together.

In this discursive context, which was excerpted from the recordings, the speaker is saying that he proposed to his mother to make a cake without eggs, and he is explaining her reaction to this request. At the beginning of the statement, he directly reports the question his mother asked him after his request. Then, in the following sentence, he goes on paraphrasing what he was told through an indirect speech. Finally, in the last sentence, he comments on the outcome

[2] Metaphors and idioms are considered figurative language but differ in their structure and usage. A metaphor is a comparison between two things that are not literally related, while an idiom is a phrase or expression whose meaning cannot be understood from the literal definition of the words. Metaphors are often used to create vivid imagery or explain complex ideas, while idioms convey a particular meaning or cultural reference. As we have seen in the introduction, idiomatic expressions arise from metaphors but their metaphorical origin is no longer perceived by speakers. When a metaphor is learned, it becomes idiomatic (Bambini 2017: 56). Thus, in the idiomatic utterance, the literal meaning is bypassed and the utterance acquires a new conventional meaning, which used to be metaphorical (*ibidem*, 22); due to their often-correlated meanings and for the sake of our paper's goal, we will treat both of them as metaphorical expressions.

of his request after having realized it. The first part of the question is pronounced in Italian, while the second part is in Arabic. In particular, the initial interrogative adverb and the first verb are in Italian while their object complement is in Arabic. The type of code-switching involved in this question is intra-sentential switching as the passage from one language to the other occurs within the same sentence. Moreover, the use of the two languages within this interrogative sentence seems to be rather equal, since almost half of the sentence was uttered in Italian and the other half in Arabic, and both languages were used to refer to some main parts of the sentence: the verb was expressed in Italian, while its object complement in Arabic. In the second sentence, however, the Arabic language seems to prevail despite the fact that it begins with Italian. In the sentence "If you want you can try but, in my opinion, it won't come out well", the verb "try" and the expression "it won't come out well" were expressed in Arabic, while the conjunctions and the complement "in my opinion (according to me)" were expressed in Italian. This is, therefore, another clear form of intra-sentential code-switching.

In the sentence just analysed, then, we can notice a second element of our interest, namely a metaphor. In fact, the Arabic expression *maghādīš ṭlaʿ lik* [مغادش طلع لك] literally means 'will not stand up'. The verb *ṭlaʿ* is the dialectal form of the verb *ṭalaʿa/yaṭlu*ʿu [طلع/ يطلع], which in standard Arabic means 'to go up' and which in its spoken and more dialectal form also takes on the meaning of 'to rise/to lift'. Consequently, the meaning of this expression is metaphorical, as the speaker uses the phrase "if you want you can try, but in my opinion, it will not rise well" to say that the final result of the cake will not come out well. The metaphor is based on a similarity between the process of the cake rising and the upward movement conveyed by the verb.

After this expression, inserted in a sentence, characterized by intra-sentential code-switching which ends in Arabic, then the speaker moves on to the next sentence which is entirely pronounced in Italian. Therefore, the passage to the last sentence can be categorized as an inter-sentential switching since the switching from one language to another occurs between sentences and not within the same sentence.

Moving to the example in (2) there are some forms of code-switching that occur from Italian to Arabic language and which are forms of intra-sentential code-switching. As can be observed, the switches in this example involve short segments of Arabic words inserted in an Italian phrasal context and they perform different functions within the utterance. In particular, the first two code-switchings concern single words, while the last one involves a phrasal segment consisting of several units.

(2) [...] sui social media non saprei cosa raccontare, a parte il fatto che ultimamente li uso pochissimo perché **non ho** mai **tempo** per starci. *ṣaraḥa* [صراحة] sono contenta così, ***kayḍay'u*** [كيضيع] **un sacco di tempo**, ma anche i contenuti non che mi facciano impazzire... È anche vero che negli ultimi due anni, da quando ***glesnā fi dār*** [جلسنا في الدار] praticamente, per quel poco tempo che ci ho passato, mi è parso che la qualità dei contenuti sia cambiata (positivamente) [...]

[...] About social media I wouldn't know what to tell you, except that I use them rarely because I never have time to stay online. Honestly, I'm okay this way, since they waste a lot of time and even the content doesn't make me crazy... It's also true that from the last two years, mainly since we've been at home, and judging from the little time I've spent on them, it seemed to me that the quality of the contents has changed (in better) [...]

The first Arabic word *ṣaraḥa*, which is the first code-switched term, is an adverb and means 'honestly', the second code-switched word is a verb, and finally the last code-switching occurs to express a verb and its object complement. The first verb expressed in Arabic, *kayḍay'u*, is the third person plural of the present tense of the verb *ḍaya'a/yuḍayi'u* [ضيّع\يضيّع], which means 'to lose' and which therefore can be translated as 'make lose' (in the sense of waste), while the second verb, *glessnā*, is the dialectal form of the Arabic verb ğalasa/yağlisu **[جلس\يجلس]** conjugated in the first person plural and literally has the meaning of the verb 'to sit'. Finally, *fī dār* is the complement of location of the verb *glesnā* and it means 'in the house'.

The verbs involved in the code-switching forms that appear in this example are part of a metaphorical expression. In the first case, the verb *kayḍay'u* – which was already mentioned as meaning 'to lose' – is used to express the meaning of 'to waste time'. This metaphorical expression has been pronounced partly in Arabic, as far as it concerns the verbal part, and partly in Italian, as concerns the object complement part. Moreover, the Italian following part of this expression presents another metaphor since the word *sacco* literally means 'bag', but here is used to mean "a lot (of time)". The metaphorical meaning of both *kayḍay'u* and *sacco* exists and they are used both in Italian and Arabic by using the corresponding word in each language.

Differently, the second phenomenon of code-switching found in this excerpt is characterized by the passage from the Italian language to the Arabic language to convey a metaphorical expression that is peculiar to the Arabic language and which is not present in the Italian language. The verb *glesnā*, as already anticipated, literally means 'to sit down', while, in this case, together with its object complement, which is also involved in the code-switching, it is used by the speaker with the meaning of "since we stayed at home" and not with its literal meaning "since we sat at home". The speaker is referring to a specific circumstance of national lockdown which was characterized by the impossibility of leaving home. Considering this context, the same expression pronounced in Italian – i.e., "da quando stiamo in casa", 'since when we stayed at home' – seems to have a less strong meaning and does not seem to precisely describe the necessity to stay at home given by that circumstance. On the contrary, the Arabic expression better conveys this nuance of meaning, since the expression "to sit at home" metaphorically implies a sense of physical confinement that aligns with the idea of being forced to stay at home and unable to leave. The Arabic expression more accurately captures this sense of constraint and the feeling of being confined to someone's residence. In other words, code-switching and metaphor seem in this case to have been used by the speaker for the same reason, namely the need to use an expression that is as representative as possible of the situation he is describing. Specifically, the speaker switched language and used a metaphor to be more explanatory during communication without interrupting the flow or structure of the sentence he had already started in Italian.

The same metaphor "un sacco di tempo", that we found and previously analysed in excerpt 2, was found even in another point of the collected recordings, as it is possible to notice from the sentences reported in the example in (3).

(3) [...] Ci ha messo **un sacco di tempo** a fare un'operazione perché non riusciva. Il programma non le prendeva i dati tanto che ***ḍay'at trān*** **[ضيعت تران]** ha dovuto **prendere il treno** più tardi!

[...] It took her a long time to do an operation because she could not do it. The program was not accepting her data, so she missed the train and had to catch the train late!

The first sentence of the statement is entirely in Italian, which prevails all throughout the example. On the other hand, Arabic language was chosen by the speaker only to express the verb and the object complement of the consecutive clause "tanto che *ḍay'at trān*". This is a form of intra-sentential code-switching from Italian to Arabic language, which occurs as the only point of switch within an utterance consisting of more than one subordinate.

The speaker describes an episode that happened to another person, explaining that she took a long time to complete an online operation because the website was not functioning properly. Consequently, she missed the train she had planned to take and had to catch the next one. What is remarkable in this excerpt is precisely the code-switching, since the point at which the switch occurs toward the Arabic language is the same point at which a metaphorical expression begins. The verb *ḍay'at*, which is conjugated in the third person of the past tense of the verb *ḍaya'a/yuḍayi'u* **[دخل\يدخل]**, is a geminate Arabic verb that literally means 'to lose'. In other words, it can be translated as 'she lost' (the train). Therefore, since the meaning conveyed is not that of having lost something, it is a (lexicalized) metaphor that the speaker used to say that the person did not manage to get to the station on time to board the train she planned to take. This metaphorical expression exists with the same meaning in Italian; in the same situations, Italian speakers use the phrase "perdere il treno", where the verb "perdere" means 'to lose'. Both verbs have the same literal meaning of 'to lose', and in both languages, this verb can be used in the same expression and with the same metaphorical meaning.

A second metaphor is present in this excerpt. Unlike the first one, which was expressed in Arabic, the second metaphor is in Italian and its meaning is specular to the first metaphor's one. Specifically, 'taking the train' is the second metaphor, and the Italian verb *prendere* literally means 'to take'. Again, in this context, it does not mean physically taking something but rather boarding a train to move from one place to another. This use of *prendere* in Italian is a lexicalized metaphorical expression for taking a train or other means of transportation. Even in the Arabic dialect considered in this study, to express the meaning of the sentence "to take the train", speakers use the Arabic verb šadda/yašuddı **[شدّ\يشدُّ]** which literally means 'to take' as the Italian verb *prendere*. This happened even in example 2 with the expression "*kayḍay'u* **[كيضيع]** un sacco di tempo" which contains two metaphors, each one expressed in one language but they both have a correspondent metaphorical expression in the other language. Then, the question that arises is the following: if each of the metaphorical expressions has a corresponding one with the same meaning in the other language, why were two different languages used to express them, and why did the speaker code-switch to express the first metaphor? What is the function of the metaphor in this case, and what is the function of the code-switching that the speaker used? These questions highlight the complex interplay between linguistic, cultural and cognitive aspects since code-switching can serve various functions, such as playing with social and emotional expression, signalling identity, and filling lexical gaps. In this case, the speaker's code-switching may have been linked to her individual communicative/linguistic habits.

Another instance of code-switching occurring with the start of a metaphorical expression is reported in (4).

(4) [...] però in questa relazione ci sono ***wāḥd 'lḥudūd*** **[واحد الحدود]**. Ci sono delle questioni personali che non necessariamente devono essere condivise e che l'altro può accettare [...]

[...] but in this relationship there are boundaries. There are personal issues that do not necessarily have to be shared and that the person concerned can accept it [...].

Here we can notice that the metaphor coincides again with a phenomenon of code-switching and that the latter is another form of intra-sentential code-switching. The extract is taken from a longer utterance in which Italian predominates. The sentence of interest is the opening adversative clause, which is part of the extract containing both the code-switching phenomenon and the metaphor. The subsequent sentence is spoken entirely in Italian and serves to contextualize the preceding clause, clarifying the meaning of the first sentence. *Wāḥd 'lḥudūd* in Arabic means '[some] boundaries'. Consequently, the entire sentence which contains code-switching means: 'but in this relationship there are boundaries'. Once again, as underlined in some previous examples, the part of the sentence involved in the code-switching is that of the object complement which is referred to in Arabic in contrast to the rest of the statement. The meaning of "[some] boundaries" in this expression is also metaphorical, since a relationship does not have tangible boundaries. Rather, it is a figurative expression that the bilingual speaker used in Arabic to convey the idea that there are limits to what is acceptable within the relationship being discussed. Interestingly, the same metaphorical expression exists in Italian with the same terms and meaning, both literal and metaphorical. However, despite this, the speaker chose to switch languages to produce the metaphor. As previously discussed, the reason for code-switching may be to emphasize the meaning or content of that specific part of the sentence by expressing it in another language. In this case, the use of a metaphorical expression might serve to convey a complex idea concisely and vividly, while the code-switching adds emphasis and highlights the importance of the concept being conveyed. Another possibility is that, while speaking, the speaker had a relationship in mind with an Arabic-speaking person, which could have prompted the code-switching.

A further example of a metaphor in a code-switching context is (5).

(5) L'ho ascoltata poche volte, infatti ***bāqa madakhltš liya l-rāsī*** [باقى مدخلتش لي لراسي], ma sono sicura che come tutte le altre, dopo un po' la imparerò a memoria come tutte le altre canzoni sue. Sono sempre belle e orecchiabili, è *wā'r* [واعر] proprio a livello musicale [...].

I've listened to it a few times and I still haven't learned it but I'm sure that like all the others, after a while I will learn it by heart as happened with all his songs. They are always nice and catchy, he is great musically talking [...].

This example features two instances of code-switching. The first code-switching occurs in the explanatory coordinate of the sentence, where the speaker switches from Italian to Arabic. The second code-switching involves a single adjective expressed in Arabic instead of Italian in the latter part of the utterance.

The speaker is discussing a song and mentions that they have only heard it a few times, so he has not yet learned it. However, based on his experience with other songs by the same singer, he expects to learn it soon because he considers the singer's music to be beautiful and catchy. *Bāqa madakhltš liya l-rāsī* is the expression the speaker uses to say that he has not learned the song yet, but literally means: 'it has not entered my head yet'. It is a common idiomatic expression that is used to describe a situation where someone is facing an overwhelming or challenging task that they cannot handle. *Madakhltš* is the negative form – negated through the prefix of negation *ma* – of the Arabic verb *dakhala/yadkhulu* [دخل\يدخل] conjugated in the third person singular of the present tense which means 'to enter'. It is, therefore, a metaphorical expression since the speaker uses the expression "still does not enter my head" to say that he has not learned the song by heart yet. This expression exists also in Italian ("non mi è entrata in testa") but it might have a slightly different connotation.

Both the Arabic and the Italian expressions use metaphorical comparisons to convey the idea of not understanding something. However, the Arabic expression uses a metaphor of entering a situation without one's head to convey the idea of being unprepared or lacking knowledge, while the Italian expression conveys the idea of not registering or making an impression on the mind. This might be linked to the fact that in Arabic culture, the head is associated with wisdom, hierarchy, and power (Pietrăreanu 2017). Therefore, the metaphor of not entering a situation with one's head carries a powerful symbolic meaning that conveys the idea of being unprepared. The Italian expression "non mi è entrata in testa" might draw on a different metaphorical comparison, which is based on the idea of the mind as a receptacle for knowledge and information. In Italian culture, the head is also associated with knowledge and intelligence, and the specific metaphor used in this expression emphasizes the idea of something not entering the mind, as if the mind were a container that could be filled with knowledge or emptied of it. So, while both expressions share the same overall meaning, the specific metaphors used in each expression are slightly different due to the cultural and linguistic differences between Arabic and Italian.

Another interesting code-switching occurrence is analysed in the example (6) below.

(6) [...] Invece, aver applicato quello che avevo studiato in ambito lavorativo, per me è stato proprio... Come si dice *bi-al'arbiya:* ***'l-harba*****!' [بالعربية: الهربة]**. Non so se hai presente, ma è un'espressione per dire "una meraviglia" [...].

[...] Instead, having applied what I had studied in the field of work, for me it was just... As they say in Arabic: 'an escape!' I don't know if you are familiar with it, but *'l-harba*' is an expression used to say '[what] a wonder'.

This example showcases not only the code-switching phenomenon and the metaphor, which are the main focus of our analysis, but also a metalinguistic reflection made by the speaker. During the interviews collected for the first survey (see Section 2), metalinguistic reflections were more frequent, as the questions asked to the interviewees specifically addressed the characteristics of their bilingualism. Conversely, in the recordings collected for the creation of our corpus during the second survey, bilinguals' linguistic and metalinguistic reflections were rarer. The metalinguistic reflection presented in this example is one of the few instances found during the analysis of the corpus. We find it noteworthy as it not only contains a metalinguistic observation but also a code-switching phenomenon and a metaphor.

Following the first sentence, which is entirely in Italian, the speaker begins a linguistic reflection in Italian, then switches to the original language of the Arabic expression they are reflecting on. The Arabic expression "bi-al'arbiya: l-harba!" literally translates to 'in Arabic: an escape!'. The word quoted by the speaker is a peculiar idiom that exists in Moroccan Arabic and which is used to indicate a feeling of wonder, a turn for the better, or a positive breakthrough. Actually, the speaker uses this word in correlation to the content of the previous sentence and hence in reference to the application of what he has studied in a working environment. However, the term *harba* is a noun that literally means 'escape' and it comes from the Arabic verb *harabal/yahrubu* [هرب\يهرب] which means 'to run away'. Consequently, *harba* means 'escape', but it does not refer to concrete action: it is rather a metaphor used to indicate a positive feeling. This expression reminds the Italian metaphorical meaning of *si vola* which literally means 'we are flying', but which is used – colloquially and informally – to indicate a positive feeling, something that makes us feel exhilarated. Linked to *si vola*, in Italian is also common for the

younger generation on social media to use the expression *volo!*, 'I fly', when something particularly ridiculous or trashy (i.e., vulgar, tasteless, or of poor quality) has occurred. This expression is often accompanied or replaced by the airplane emoji, which serves as a metaphor for the idea of taking off or escaping from a situation that is seen as ridiculous or embarrassing. The use of *volo!* in these trashy contexts can be seen as a form of satiric detachment, where the speakers are acknowledging the absurdity of the situation while also distancing themselves from it. This expression is often used in informal and colloquial contexts, such as online chats and social media comments, and is typically associated with a sense of humour and light-heartedness.

As concerns the code-switching, even in the case just presented, the switch occurs from the Italian language to the Arabic language and is an intra-sentential code-switching. More specifically, the switch to the Arabic language takes place as soon as the speaker starts reflecting on the Arabic expression he wanted to explain, so he switches in order to describe that expression by using the language to which it actually belongs (Arabic), instead of continuing to use Italian. In other terms, the purpose of the switch, in this sentence, seems to occur due to the speaker's need to use the original language to which the idiom belongs and he made the switch evident by saying *bi-al'arbiya*, which means 'in Arabic'. By choosing to use an Arabic metaphor within an Italian sentence, the speaker is not only demonstrating his proficiency in both languages, but also highlighting the intercultural connections and influences that exist between these two linguistic traditions and exploiting his communicative advantage. The last example of code-switching is found in the excerpt in (7).

(7) Il mio tempo libero mi piace passarlo con gli altri, infatti *had l'*ām **[هد العام]**ho sentito la differenza rispetto agli anni precedenti [...] Quando eravamo *fī 'd* ār **[في الدار]** e non si poteva uscire, s'è provato un po' a **ricreare la stessa atmosfera**, lo stesso ğaw **[جو]** insomma, anche per mantenere una continuità, e per carità un po' ***fawğnā 'la rāsnā*** **[فوّجنا على راسنا]**, ma non era la stessa cosa [...]

I like to spend my free time with other people, in fact I felt the difference this year compared to the previous years [...] When we were at home and couldn't go out, we tried a bit to create the same atmosphere, also to maintain continuity, and for goodness sake we had a bit of fun, but it wasn't the same [...]

Although the Italian language predominantly features, the speaker uses Arabic for certain segments of the sentence. In this passage, the speaker switches to Arabic to express i) a temporal complement, ii) a place complement, iii) an object complement, and iv) a verb and its object complement, before continuing with an adversative clause entirely in Italian. The first code-switching occurred to specify the time of the explanatory coordinate clause, with "had l'ām" meaning 'this year' and indicating that the speaker felt a difference compared to previous years. *Fī 'd ār* is the second code-switching to Arabic, it is a temporal expression, and it means 'at home'.

The third code-switching, which is also a metaphor, involves an object complement and it is a reinforcing code-switching since ğaw is a noun meaning 'atmosphere' and this term was already used by the speaker in the previous sentence (in Italian). "Ricreare la stessa atmosfera"] is an Italian metaphor that translates to 'recreating the same atmosphere' in English. This metaphor is often used to describe the act of trying to recreate a specific mood or feeling that was present in a past experience or environment. In the context of this excerpt, the speaker is discussing how he enjoys spending his free time with others, and how the COVID-19 pandemic has affected his ability to do so. He talked about feeling the difference in his social life during

the pandemic compared to previous years when he was able to be together with others in person. The phrase "ricreare la stessa atmosfera" is used here to describe the attempt to recreate the same atmosphere or vibe of being together with others through the use of social media and technologies, even though they were unable to physically meet, due to lockdown restrictions. The speaker mentions that they tried to create the same ğaw or feeling of being together, in order to maintain a sense of continuity and connection with their friends. However, they also acknowledge that it was not the same as being together in person, and that they had to make do with the situation they were in. The bilingual speaker in this excerpt switches between using the word *atmosfera* in Italian and ğaw in Arabic because he is trying to convey the same idea in both languages; using both words, however, may also help the speaker to more accurately convey the nuances of the feeling or mood he is trying to describe, as well as reinforcing the message.

Finally, "[...] per carità un po' *fawğnā ʿla rāsnā*, ma non era la stessa cosa", represents the last form of intra-sentential code-switching that we can observe in this excerpt. This code-switching involves a verb and its complement that were pronounced in Arabic within a sentence expressed in Italian. In particular, this code-switching occurs to convey an Arabic idiom that is common usage in the Arabic language and that in English can be translated with 'we have amused our heads'. However, when considered from the perspective of the meaning it conveys, it can be seen as a metaphorical expression, as the literal meaning of *fawğnā ʿla rāsnā* does not have the same meaning as *svagarsi*, 'having fun', that the speaker intended to convey. *Fawğnā* comes from the standard Arabic verb *fawwağa/yufawwiğu* [فوّج\يفوّج] which takes on the meaning of 'having fun' and here is conjugated in the first-person plural of the past tense. One of the examples given by the Arabic dictionary (standard) to explain the meaning of the verb *fawwağa/yufawwiğu* [فوّج\يفوّج] used in this utterance is the phrase *fawwağa ʿan nafsih* [فوّج عن نفسه] whose meaning is '[he] amused himself'. In the dialectal Arabic form, used by the speaker in this statement, a similar but different expression is used to convey the same concept, since in our excerpt the speaker uses an expression that literally can be translated as 'we have amused our heads' to convey "we have amused ourselves". It is not clear whether "our head" in this case is used to mean "our mind" or to mean "ourselves"; *rāʾs* [رأس] in standard Arabic only has the meaning of head, whereas in dialect – in addition to this meaning – it is also used with the meaning of "oneself", as is happening in expressions like "kantkallam 'la rāsī' " [كنتكلّم على راسي] which is a common way to say 'I speak of/about me' and does not mean 'I speak of/about my head'. In this case, the code-switching allows the speaker to use the Arabic idiom to express a specific and precise concept that might be difficult to translate or express equivalently in Italian.

4. Conclusion

Figurative language possesses a suasory advantage over literal language; using metaphors can increase the persuasiveness of a message by leveraging the audience's prior knowledge and experiences. This familiarity with the subject matter can lower the cognitive load and enhance the ease of processing, ultimately making the message more attractive and comprehensible (Sopory and Dillard 2002). It also provides us with the necessary tools to effectively communicate our thoughts, emotions, and experiences to the others. As reported in Bambini (2017: 16-17), a study by Graesser, Mio and Millis (1989) conducted on television debates in the late 1950s estimated that a new metaphor was used every 25 words, with 4% of television communication being figurative. These significant percentages suggest how non-literal language offers communicative benefits, allowing for the communication of more than what is explicitly stated, with cognitive, social, and emotional effects.

In being bilingual or multilingual, you can elevate your communication game by tapping into multiple linguistic resources and individuals might have access to a wider range of cultural experiences and knowledge, which can further enhance their ability to use metaphors effectively in communication. Bilingual speakers often switch languages in a process called code-switching. Code-switching allows individuals to effectively communicate with others who share their linguistic background and cultural references, creating a sense of connection, identity, and understanding.

This study explored the role of metaphors in code-switching in the speech of Italian-Arabic bilinguals. To collect data, we employed a qualitative methodology, using semi-structured interviews and voice messages in two experimental phases. Our analysis of the audio recordings revealed several instances of code-switching, where participants alternated between Italian and Arabic. Interestingly, we observed that metaphors were commonly expressed through code-switching, particularly through intra-sentential code-switching. Even though Italian was the dominant language in the conversations, participants tended to use Arabic when conveying metaphors. Code-switching was common in the bilingual participants' speech, even when statements predominantly utilized one language, with insertions of the other language. More specifically, the examples examined in paragraph 3 were made up of sentences characterized by a prevalence of Italian language and insertions of short phrases in Arabic language. Actually, except for example no. 5 (see paragraph 3), where almost a whole proposition is pronounced in Arabic, all the other examples are characterized by a general prevalence of Italian language and a direction of switching from Italian to Arabic language rather than the reverse. Therefore, the forms of code-switching identified concern especially brief phrases and single lexical items inserted within utterances expressed in another language. Furthermore, according to the distinctions made by Poplack (1980) (see paragraph 1.1), all the code-switching phenomena found in our examples are forms of intra-sentential code-switching. In all the utterances, the switch always takes place within the sentence, except for example 4 (see paragraph 3), where the first proposition ends in Arabic language and the following one starts in Italian language, making it an inter-sentential code-switching.

We have examined the interplay between code-switching and metaphorical expressions, and considered the motivations behind its usage by bilinguals, although the rationale for each instance of code-switching may not have been always evident. While some instances of code-switching appeared to be intentional, as suggested by Dal Negro and Guerini (2007) and exemplified in example 3 where the speaker used code-switching to emphasize his message, our analysis revealed that not all instances of code-switching were intentional. Instead, bilinguals often used code-switching to be more direct, clearer or to express themselves subjectively. Interestingly, our analysis suggests that when bilinguals have a high level of proficiency in both languages, code-switching becomes more automatic and less intentional, allowing for greater expressive freedom in terms of linguistic and cultural identity, which is one critical aspect of code-switching.

For many speakers, code-switching can be a way of expressing diverse aspects of their identity, such as their ethnic background, their fluency in multiple languages, or their sense of belonging to a particular linguistic or cultural group; at the same time, it can also be a way of negotiating and navigating different social contexts and adapting to the linguistic and cultural expectations of different interlocutors. For example, code-switching can be used strategically to achieve specific communicative goals, such as building rapport with interlocutors, conveying humor or irony (Scotton and Ury 1977), or persuading (Sopory and Dillard 2002).

Metaphors are also tightly linked with language and culture and the fact that not all metaphorical expressions are universally shared underscores the importance of considering the translational equivalence of metaphors in the study of code-switching contexts. The discipline that mainly considers a concept like "metaphorical equivalence" is Translation Studies, which delves into the intricacies of how metaphors are transferred across languages and cultures. This field primarily focuses on scrutinizing written materials and exploring innovative techniques to effectively translate phraseological units from one language to another. The concept of equivalence has been a central focus of translation theory, with two types of equivalence identified: semantic equivalence, which is based on the idiomatic meaning of linguistic units, and communicative equivalence, which is based on pragmatic aspects such as the communicative situation, register, style, and more (Navarro 2008: 79-80). Several classifications of equivalence have been developed over the years; Navarro (2008) identifies five degrees of equivalence. Total equivalence refers to cases where the same image, semantic value, and lexico-syntactic congruence are maintained in two languages. For instance, biblical, historical, or mythological phrases are often examples of total equivalence. Maximum equivalence refers to cases where the phrase in the original text and that in the translated text do not maintain the same image but have the same denotative meaning and communicative value. Partial equivalence covers metaphors that have the same idiomatic meaning but undergo variation in cultural reference, those that possess the same image but have a different breadth of meaning, and those with the same morphosyntactic structure that differ in vocabulary. Minimum equivalence occurs when there is a translation error. Finally, zero equivalence occurs when an equivalent metaphor cannot be found in the target language, and other translation techniques such as semantic or pragmatic paraphrasing, compensation, substitution, addition, or elimination must be used (Mazzaggio 2016). To sum up, Translation Studies have typically concentrated on written materials like texts and translations. However, nowadays, there is an increasing curiosity in exploring the part played by translation and language switching in spoken communication, particularly in the context of code-switching. Examining how bilingual individuals create metaphors in code-switching situations can provide a deeper understanding of the connection between language, culture, and the use of metaphorical language. This perspective is valuable for the field of Translation Studies and can also help us better comprehend how language is used in everyday communication, as well as its impact on our perspectives and life experiences.

In conclusion, this paper takes a unique approach to examine the usage of metaphors in code-switching scenarios among Italian-Arabic simultaneous bilinguals. Our analysis showed that metaphors played a significant role in these code-switching scenarios, and that their forms were influenced by cultural and individual factors. In this respect, it is worth considering that the experimenter's own Italian-Arabic bilingualism may have had a significant impact on the participants' comfort levels and willingness to engage in code-switching. Indeed, by sharing a common linguistic background with the participants, the experimenter could have created a more conducive environment for the participants to express themselves freely and confidently. For example, the participants may have felt more at ease and less inhibited when communicating with someone who shared both their languages. This comfort level could have encouraged them to use more metaphorical expressions in code-switching contexts than they would have with a monolingual experimenter, as they may have felt more confident in their ability to convey their intended meanings. Further research is needed to explore the potential impact of the experimenter's linguistic and cultural background on bilingual speakers' use of language.

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Quaderni di Linguistica e Studi Orientali- QULSO
Working papers in Linguistics and Oriental Studies

Firenze University Press
https://oajournals.fupress.net/index.php/bsfm-qulso

Citation: I. Micali (2023) Tra contatto e mutamento: fenomeni di variazione fonetica di una parlata alloglotta. *Qulso* 9: pp. 315-335. doi: http://dx.doi.org/10.13128/QUL-SO-2421-7220-15160

Data Availability Statement: All relevant data are within the paper and its Supporting Information files.

Competing Interests: The Author(s) declare(s) no conflict of interest.

Tra contatto e mutamento: fenomeni di variazione fonetica di una parlata alloglotta

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Abstract:

This paper investigates the retention of palatal laterals [ʎ] and the reduction of final unstressed vowels in the Occitan variety of Guardia Piemontese, in Calabria. These features were considered of particular interest because they are still attested in some Piedmontese Occitan varieties. Through the analysis of a linguistic corpus and the methodology of sociolinguistic analysis, the study has a twofold objective: (i) to test whether prolonged contact with the Italo-Romance variety has led to an expansion of linguistic variants in terms of specific phonetic features; (ii) whether and how certain types of realization of a linguistic variable are able to direct linguistic change.

Keywords: *Language Variation and Change, Minority Languages, Occitan, Phonetic Variation, Sociolinguistics*

1. Prospettive di analisi

Questo contributo si inserisce nel quadro degli studi dei fenomeni di variazione linguistica in situazioni di contatto. Come è noto, nessuna comunità linguistica si può dire totalmente omogenea. "The normal condition of the speech community is a heterogeneous one […] Moreover this heterogeneity is an integral part of the linguistic economy of the community, necessary to satisfy the linguistic demands of every-day life" (Weinreich, Labov e Herzog 1968: 17). La variazione è una caratteristica universale e funzionale del linguaggio (Foulkes 2006) e le differenze di pronuncia, di morfosintassi, di lessico emergono regolarmente nell'uso di una o più lingue nelle diverse situazioni comunicative.

Sappiamo che la variazione linguistica, a prescindere da dove la si osservi, non è casuale o legata al singolo ma segue una particolare sistematicità. Essa avviene all'interno di limiti ben

precisi e corrisponde a un ventaglio ristretto di possibilità compatibile con il sistema universale di principi che costituisce la facoltà di linguaggio e determina la conoscenza linguistica del parlante (Savoia e Manzini 2007: 86).

Per Savoia:

> [l]a variazione linguistica è quindi il risultato dell'interazione di un sistema grammaticale universale e innato con le proprietà semantiche degli elementi lessicali, apprese dal parlante per ciascuna lingua. Infatti, sono gli elementi lessicali a registrare le categorie morfosintattiche rilevanti per la formazione delle frasi. In particolare la variazione può essere collegata a meccanismi rilevabili nel processo di acquisizione. (2008:4)

Al contempo, quando parliamo di variazione linguistica non possiamo non tenere in considerazione i meccanismi esterni legati a fattori di tipo sociale che riguardano le scelte dei parlanti (Baldi e Savoia 2017). Per dare conto dei fenomeni di variazione infatti è necessario "guardare la lingua non dal suo interno, ma dall'esterno, in connessione con l'ambiente, nel senso più ampio, in cui essa opera. […] D'altra parte non è nemmeno corretto dire che la variazione sia una caratteristica unicamente dell'uso" (Berruto 2009: 17-18).

Il rapporto esistente tra i tratti interni e strutturali della lingua e i fatti extralinguistici esterni al linguaggio sono oggetto di analisi degli studi sociolinguistici (Chambers 2003) e l'idea che la variazione sia una parte intrinseca del linguaggio è l'assunto fondamentale dell'approccio sociolinguistico di impostazione variazionista (Labov 1969: 728). Discutere del complesso rapporto fra variazione e teoria linguistica è questione che trascende di molto i limiti di questo lavoro, pertanto sarà sufficiente riportare la sintesi di Berruto (2009: 18) secondo il quale "la variazione […] non sta per così dire né dentro né fuori del sistema, ma sta nell'interfaccia fra sistema e uso".

In particolare la sociolinguistica della variazione si inserisce nella prospettiva secondo cui i parlanti fanno delle scelte quando parlano e si alternano tra queste scelte, inoltre nei loro comportamenti linguistici si riflette la struttura sociale e il sistema di credenze e di valori ad essa collegati. Le scelte linguistiche dei parlanti si rivelano dunque portatrici di un'ampia gamma di significati sociali e identitari (Eckert 2018). I rapporti tra lingua e genere, lingua e politica, lingua e identità e i significati sociali ad essi correlati sono solo alcuni esempi di quanto la sociolinguistica sia diventata centrale per l'analisi della variazione linguistica. Se la lingua ci fornisce un insieme di simboli "which we can use in locating ourselves in the world" (Hudson 1996: 12), "il concetto stesso di identità non può prescindere dalla pluralità e dalla differenza, quindi la differenziazione è il solo modo in cui di fatto si può manifestare linguisticamente l'identità" (Berruto 2009: 14).

Gli approcci teorici e metodologici relativi agli studi sulla variazione hanno progressivamente spostato l'attenzione dalle questioni demografiche ed etnografiche alle questioni sottese alla costruzione del significato sociale attraverso la misurazione e la selezione delle variabili. Come è noto, una variabile sociolinguistica "is the first and also the last step in the analysis of variation" (Labov 2004: 7) e può essere definita come un insieme di "alternative ways of saying 'the same' thing" (Labov 1972: 188), o come "a linguistic unit with two or more variants involved in covariation with other social and/or linguistic variables" (Chambers e Trudgill 1984: 50). Ognuna delle realizzazioni alternative di queste unità è quindi detta variante e tra esse deve esserci lo stesso valore referenziale (Sankoff 1988: 142-143), ovvero devono essere portatrici dello stesso significato. Perché la variabile assuma rilevanza sociolinguistica, le varianti devono correlare con fatti extralinguistici, come, ad esempio, la caratterizzazione sociale del parlante,

la sua provenienza geografica o il grado di formalità del contesto (Berruto 1995). Modi diversi di dire la stessa cosa possono verificarsi a ogni livello della grammatica di una lingua o di una varietà di lingua, ma anche all'interno di ogni registro stilistico e spesso anche nello stesso discorso e nella stessa frase. In questo senso si parla di variazione "intrinseca" (Labov 1969: 728).

Poiché le variabili linguistiche interne a una comunità di parlanti, siano esse morfosintattiche, fonologiche, lessicali o discorsive, variano in modo sistematico questo comportamento può essere trattato servendosi di metodi quantitativi (Labov 1963, 1969). L'analisi delle strutture linguistiche eterogenee all'interno di una comunità partono dal presupposto che ogni volta che esiste una scelta tra due (o più) alternative nel corso di una produzione linguistica e che tale scelta può essere stata influenzata da un numero qualsiasi di fattori, è opportuno ricorrere a tecniche statistiche (Sankoff 1988: 2). In questo senso la natura della sociolinguistica variazionista è multipla: è empirica e si basa sui dati ricorrendo a metodi scientifici e test statistici, tuttavia i modelli linguistici possono essere compresi solo attraverso la componente interpretativa legata all'uso reale della lingua.

Nonostante la presenza di alcuni studi sociolinguistici ante litteram che mettono in correlazione variabili fonetiche e variabili sociali (Levine e Crockett 1966; Kindaichi 1967), sono le note ricerche di Labov (1963, 1966, 1972, 1973) sulla pronuncia della fricativa interdentale sorda [θ] inziale di parola e sulla variazione tra pronuncia o mancata realizzazione di (r) preconsonantica nella città di New York a mettere in luce una regolare sistematicità nei processi di variazione linguistica all'interno di una comunità, spiegando alcuni meccanismi di cambiamento da una fase linguistica all'altra.

Attraverso l'analisi dei processi di variazione infatti è possibile osservare se e come certi tipi di realizzazione di una variabile siano in grado di indirizzare il cambiamento linguistico. "All languages change through time. We do not really know why this is, but it is a characteristic of all human languages. They also change in different ways in different places" (Trudgill 2003: 7). Alla base della sociolinguistica variazionista vi è la ricerca dei principi generali che regolano il cambiamento linguistico. Se una forma sembra sostituire l'altra, sia nel tempo sia lungo una qualche dimensione di variazione (Sankoff e Thibault 1981: 213), allora questo può essere sintomatico di un cambiamento linguistico in corso. "Not all variability and heterogeneity in language structure involves change; but all change involves variability and heterogeneity" (Weinreich, Labov e Herzog 1968: 188).

Tra variazione e mutamento intercorrono rapporti molto stretti,[1] in quanto i fenomeni di mutamento linguistico sono spesso alimentati da fatti di variazione linguistica e il mutamento consiste nella sostituzione durante un certo lasso di tempo di una variante con un'altra variante, attraverso una fase in cui le diverse varianti coesistono e si distribuiscono secondo tendenze determinate da fattori sociali (età, genere, classe sociale dei parlanti, valore di prestigio o meno delle varianti, ecc.). In altri termini, il mutamento è il prodotto della variazione nella misura in cui l'esistenza di diverse varianti presuppone l'introduzione, tramite innovazione interna o esterna, di una nuova variante in un particolare sistema.

Seguendo questa prospettiva le lingue di minoranza rappresentano un punto di osservazione privilegiato per l'analisi della variazione e del mutamento linguistico. Come sostiene Berruto (2007: 23) "[v]i troviamo infatti manifestata empiricamente nella sua pienezza tutta la gamma dei fenomeni prodotti dal contatto, o concomitanti col contatto fra sistemi linguistici in relazione a diversi caratteri dell'ambiente sociolinguistico di riferimento". La compresenza di diversi codici all'interno di un repertorio linguistico complesso, quale quello delle aree alloglotte,

[1] Per una sintesi approfondita sulla questione del raccordo tra variazione (sincronica) e mutamento (diacronico) si veda Labov (1994, 2001).

genera continui processi di conservazione, innovazione e mutamento, comportando svariate conseguenze sia sul piano delle lingue sia in relazione alle scelte linguistiche dei parlanti (Dal Negro 2005; Weinreich 2008 [1953]). Tenendo in considerazione la differenza tra la variazione indipendente dal contatto fra sistemi, e la variazione data dalla compresenza di sistemi, dipendente dal contatto, l'analisi dei fenomeni di variazione che coinvolgono le lingue minoritarie permette quindi di mettere in relazione i fatti linguistici che emergono in situazioni di contatto con la caratterizzazione della comunità e le dinamiche sociolinguistiche in atto.

2. Ambito di indagine

All'interno di questo contributo verrà preso in esame il sistema linguistico della varietà occitana di Guardia Piemontese, isola occitana in Calabria. Si tratta di una delle minoranze linguistiche storiche presenti sul territorio calabrese che, insieme alla comunità di lingua albanese in provincia di Cosenza e alla comunità di lingua greca in provincia di Reggio Calabria, sono riconosciute dalla legge nazionale 482/1999 e dalla legge regionale 15/2003.[2]

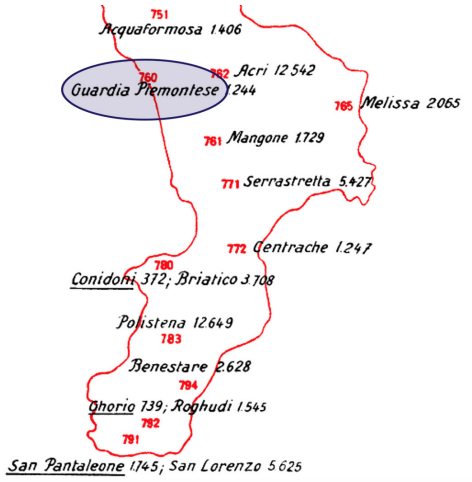

Figura 1. Guardia Piemontese in AIS[3]

Il guardiolo è un misto di varie parlate della zona alpina (Genre 1986) che ha molto in comune con quelle della Val Pellice (Kunert 1999). L'origine di Guardia Piemontese, infatti, è da ricondursi allo stanziamento, a partire dal XIII secolo, di esuli valdesi provenienti dal Piemonte presso le terre di Fuscaldo, a nord del fiume Crati. Riguardo alla provenienza dei valdesi, Rivoira (in stampa) puntualmente segnala che gli studi ad oggi esistenti "limitano il confronto alle sole varietà delle Valli Valdesi partendo dal presupposto che i calabro-valdesi provenissero da quest'area soltanto" ma che "[l]avori come quelli di Genre hanno gettato le basi per un ampliamento del confronto con una più vasta area alpina che includesse anche il Queyras".

[2] Il *gardiol* è stato inserito dall'UNESCO nell'*Atlas of the World's Languages in Danger* (2011) come lingua "severed endangered". Cfr. <https://unesdoc.unesco.org/ark:/48223/pf0000192416> (07/2023).

[3] L'immagine è tratta da Tisato (2010), NavigAIS. AIS Digital Atlas and Navigation Software. Si tratta della versione elettronica scaricabile dell'AIS – *Atlante linguistico ed etnografico dell'Italia e della Svizzera meridionale* (<https://navigais-web.pd.istc.cnr.it/> 07/2023).

La comunità guardiola è caratterizzata da una situazione di contatto linguistico peculiare al cui interno è possibile riscontrare un repertorio plurilingue strutturato su più livelli. Si tratta di un repertorio che vede la presenza costante di tre diverse varietà (varietà alloglotta, italiano, dialetto calabrese) che si dividono le funzioni all'interno dello spazio linguistico al variare di più elementi.

"Analizzare il repertorio linguistico di un'area non significa limitarsi a elencare le varietà di lingua parlate – o, comunque, a disposizione – della comunità locale, ma anche indagare il modo in cui i diversi codici linguistici convivono e vengono usati dai parlanti nei differenti contesti comunicativi" (Rivoira *et al*. 2022: 30). Pertanto, alla luce dei dati riportati in Micali (2022), oggi la situazione di Guardia Piemontese può essere rappresentata da un tipo di repertorio in cui la l'italiano è posto sul livello più alto (A) in quanto lingua ufficiale e nazionale, mentre il codice alloglotto e la varietà linguistica italoromanza (calabrese) si trovano sul livello più basso (B), con una subordinazione di entrambi i codici all'italiano in termini di dilalìa. Riguardo alla sovrapposizione funzionale tra due le varietà "basse" nei domini d'uso informali e nella socializzazione primaria, l'elaborazione dei dati relativi alla competenza linguistica unita all'analisi del continuum dei domini d'uso (familiare/amicale/istituzionale) hanno permesso di riscontrare un ruolo pressoché marginale svolto dal dialetto calabrese all'interno del repertorio linguistico della comunità guardiola. Riprendendo Mioni (1989) e Dal Negro e Guerini (2007: 31), il seguente sottotipo di repertorio linguistico (Figura 2) può essere adeguato alla rappresentazione della situazione sociolinguistica di Guardia Piemontese.

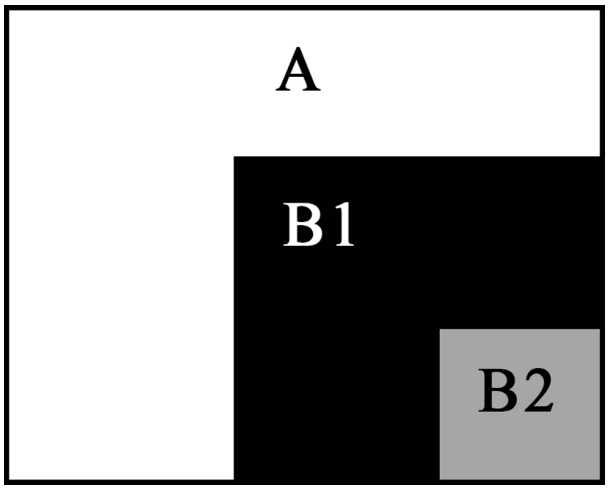

Figura 2. Il repertorio linguistico di Guardia Piemontese

Secondo tale schema l'italiano si pone sul livello alto (A), relativo allo scritto e ai contesti parlati formali, il codice alloglotto occupa buona parte dello spazio comunicativo informale e familiare (B1), infine la varietà dialettale, pur condividendo i medesimi ambiti d'impiego, si trova in una condizione marginale (B2) rispetto alla lingua guardiola.

Non diversamente da quanto si verifica presso altre aree di minoranza (Bitonti 2012; Spagna 2018, 2019; Rivoira *et al*. 2022) l'italiano, oltre a essere la lingua dei domini d'uso formali e della comunicazione con persone esterne alla comunità, si configura come il codice linguistico quasi esclusivamente utilizzato dalle giovani generazioni. Inversamente proporzionale è invece il suo uso tra parlanti adulti e anziani che, nei contesti informali e familiari, prediligono la lingua

alloglotta. È pertanto evidente una costante e progressiva interruzione della trasmissione linguistica intergenerazionale che rappresenta il primo dei nove parametri individuati per valutare il grado di vitalità delle numerose *languages in danger* (Brenzinger *et al.* 2003).

3. Ipotesi e obiettivi della ricerca

Il livello di analisi linguistica preso in esame per questo contributo riguarda il sistema fonetico-fonologico. Il caso di studio offerto dalla comunità di Guardia Piemontese consente infatti di verificare la presenza di fenomeni di *microvariazione* "che consiste nella presenza e nell'impiego di varianti a livello basso e a-semantico (come tipicamente in fonetica e fonologia segmentali), ed è meno visibile, molto più puntuale, capillare e sfumata" (Berruto 2009: 12). I fenomeni di variazione fonetica e fonologica costituiscono una delle aree più produttive delle ricerche sociolinguistiche variazionistiche (Bertini *et al.* 2017) configurandosi tra i livelli di analisi linguistica come quello più chiaro e più solido da trattare in quanto le variabili fonologiche "are straightforward in the sense that they are obvious functional equivalents" (Tagliamonte 2011: 177). Inoltre, nella discussione relativa al "localizzazione" della variazione rispetto al sistema linguistico sembra essere certo che i punti più suscettibili di variazione riguardino maggiormente la "periferia" (fonetica e lessico) e meno il "centro" (morfologia e sintassi) delle lingue (Berruto 2009: 21; Bertinetto 2003).

Lo studio che verrà qui presentato si è quindi proposto un duplice obiettivo: (i) verificare se il contatto prolungato con la varietà italoromanza abbia determinato un allargamento delle varianti linguistiche in relazione a precisi tratti fonetici e (ii) se e come certi tipi di realizzazione di una variabile siano in grado di indirizzare il cambiamento linguistico.

Per secoli la varietà occitana di Guardia Piemontese ha subito un intenso contatto con la realtà linguistica circostante, rimanendo di fatto isolata dall'occitano alpino e cisalpino. Questi fattori hanno inevitabilmente avuto rilevanti effetti di ricaduta sul piano linguistico portando a due fenomeni apparentemente contrastanti: (i) l'introduzione di elementi della varietà italoromanza in varie aree del vocabolario, della fonologia, della morfologia e della sintassi (Micali 2016); (ii) la conservazione di numerose caratteristiche tipiche della lingua occitana a tutti i livelli della lingua (Micali 2022; in stampa).

Un dato da tenere in considerazione quando si tratta di lingue di minoranza è quello relativo al numero dei parlanti.[4] Le dimensioni della comunità, ma anche i cambiamenti che occorrono al suo interno, possono infatti fungere da indicatori della maggiore o minore probabilità di una varietà di mantenere tratti conservativi (Bakker 2011; Trudgill 2011) e "la gamma di varietà che costituiscono un diasistema dipende in stretta misura dalla complessità della società cui fa riferimento" (Grandi 2019: 262). Seguendo questa prospettiva "se si considera una società grande ci si aspettano delle tendenze centrifughe esterne alla lingua con il risultato di una più alta variazione interna. Al contrario le società più piccole saranno caratterizzate da tendenze centripete e la variazione interna sarà di conseguenza più ridotta" (Angster 2020: 106).

Come è noto, però, "le lingue sono in continua competizione tra loro per conquistare nuove funzioni e nuovi parlanti" (Nettle e Romaine 2001: 47) ed è innegabile la relazione di ruolo che intercorre tra una lingua minoritaria rispetto a una lingua maggioritaria. Ne consegue che una lingua piccola sarà inevitabilmente una lingua di contatto con la realtà linguistica

[4] Il "numero assoluto di parlanti" è il secondo dei nove parametri individuati per valutare il grado di vitalità delle lingue in pericolo (Brenzinger *et al.* 2003).

circostante nonostante sappiamo quanto forte e radicato sia il rapporto tra comunità alloglotte e isolamento geografico.[5] D'altra parte è altrettanto evidente che le minoranze linguistiche si sottraggono a questa condizione di isolamento venendo inevitabilmente segnate dalle dinamiche della mescolanza e del contatto in un quadro di multiculturalità e multilinguismo (Berruto 2007; Dal Negro e Guerini 2007; Bombi e Orioles 2016). Pertanto, in termini di variazione che cosa ci si può aspettare da tali lingue?

4. Materiali e metodologia di analisi

La prospettiva adottata in questo contributo si basa sull'assunto secondo il quale una variabile e le sue varianti diventano dati linguistici e i dati linguistici variano in relazione a delle variabili sociali (indipendenti). Per dare conto della variazione di date strutture linguistiche (fonologiche, morfosintattiche, lessicali) è necessario ricorrere all'analisi di dati che corrispondano alle scelte linguistiche ricorrenti dei parlanti. Un ampio insieme di tokens ripetuti e trattati statisticamente può essere in grado di rivelare quali sono i modelli d'uso più significativi (Cedergren e Sankoff 1974; Labov 1969). È ovvio che la descrizione delle singole occorrenze non è rilevante ai fini dell'analisi dei fenomeni di variazione che invece richiedono lo studio sistematico delle scelte ricorrenti dei parlanti (Poplack e Tagliamonte 2001: 89).

Tenendo in considerazione il principio di *accountability*, secondo il quale una variante viene studiata in relazione alle varianti con cui compete all'interno di una stessa variabile, il modello di analisi della variazione intralinguistica sviluppato da Labov (1972), costituisce un punto di riferimento per il caso di studio che qui si presenta in quanto permette di ottenere importanti informazioni sia sulla lingua, sia sui comportamenti linguistici dei parlanti, sia infine sulle dinamiche del contatto e del mutamento linguistico.[6]

Nel dare conto di fatti di variazione fonetico-fonologica la metodologia della ricerca è passata attraverso la realizzazione di un corpus di parlato. Dopo una prima fase di osservazione partecipante, il corpus è stato costruito attraverso la somministrazione di un racconto appartenente alla tradizione popolare con richiesta di traduzione dall'italiano al guardiolo. L'utilizzo delle traduzioni come strumento di elicitazione dei dati risulta piuttosto diffuso negli studi su lingue e dialetti in situazione di minoranza (Moretti 1999; Bitonti 2012; Paulis *et al.* 2013), in parte per favorire la produzione di strutture grammaticali precise e per facilitare i conteggi statistici, in parte proprio perché nelle comunità alloglotte i meccanismi code-switching, code-mixing e i fenomeni di convergenza e di mescolanza risultano ricorrenti e spesso associati alla quotidiana modalità comunicativa (Gumperz e Wilson 1971; Altimari 1986, 1992; Altimari e Savoia 1994; Savoia e Manzini 2007).

Le interviste semi-strutturate sono state condotte da chi scrive con microfono palese e si compongono di 38 registrazioni audio per un totale di circa 10 ore di parlato. Il testo del

[5] "Dorian (1994: 694) osserva come una società estremamente omogenea come quella dei pescatori gaelici di Embo nell'East Sutherland caratterizzata da un'elevata variazione – sia *inter-speaker*, sia *intra-speaker* –, collegando ciò alla mancanza (o scarsa adeguatezza) di una varietà di prestigio a cui i parlanti possano riferirsi come norma. Un altro aspetto osservato da Dorian (1973: 437) è che il tasso di variazione nel gaelico parlato nella comunità di Embo appare molto più elevato di quello parlato in altre comunità come Golspie o Brora, che più rapidamente hanno perso il proprio carattere gaelico e attribuisce questo effetto al prolungato periodo di bilinguismo inglese-gaelico trascorso però in un tendenziale isolamento" (Angster 2020: 106-107).

[6] Secondo Poplack e Tagliamonte (2001: 94) le scelte compiute da un parlante rappresentano la grammatica variabile (sottostante) del parlante stesso ma anche la grammatica della comunità linguistica di appartenenza.

quale si è fatta richiesta di traduzione è tratto da *La Calabria*. *Periodico di letteratura popolare*,[7] fondato nel 1888 e pubblicato fino al 1902. La rivista contiene canti, preghiere, favole, proverbi e indovinelli appartenenti al sapere popolare calabrese e al suo interno sono presenti nove racconti relativi alla comunità alloglotta di Guardia Piemontese. Si tratta di testi mancanti di trascrizione fonetica, riportati da diversi raccoglitori del tempo nel tentativo di riprodurre il più fedelmente possibile i suoni dell'oralità corredati di rispettiva traduzione.

Il racconto selezionato per le interviste è costituito da una successione di periodi brevi e monoproposizionali che hanno permesso di ricostruire la variabilità del parlato.[8] Inoltre, il grado di colloquialità del racconto e la richiesta di traduzione hanno permesso di fornire una serie di contesti direttamente confrontabili fra tutti gli informanti. Non sono mancate le reinterpretazione libere del testo che hanno facilitato la produzione di parlato spontaneo, quello che in termini laboviani è definito *casual speech* (Labov 1966: 59).

Com'è noto "the aim of linguistic research in the community must be to find out how people talk when they are not being systematically observed; yet we can only obtain this data by systematic observation" (Labov 1972). Dunque come osservare i comportamenti e le scelte linguistiche dei parlanti senza che la presenza dell'osservatore influenzi il comportamento dei soggetti osservati?

Ai fini della presente ricerca, la frequente ripetizione delle proposizioni contenute all'interno del racconto ha avuto il pregio di indurre i soggetti intervistati ad abbandonare, quasi inconsapevolmente, eventuali forme di ipercorrettismo e di ovviare all'*observer's paradox* (Labov 1972; Chambers e Trudgill 1998). Inoltre, alla fine dell'intervista i parlanti non hanno risparmiato il ricorso al cosiddetto *small talk* (Legewie 2006), attraverso una sorta di ricapitolazione dell'intervista stessa corredata da commenti e digressioni relativi a parole e locuzioni caratterizzate da un alto grado di occorrenza nel registro della comunicazione quotidiana e questo ha permesso di verificare ulteriormente l'autenticità dei dati ottenuti.

5. Il campione e il corpus

L'analisi linguistica che costituisce il nucleo centrale di questo lavoro si basa su un corpus di dati raccolto da chi scrive nel corso di diversi soggiorni a Guardia Piemontese compresi tra il 2013 e il 2014.

I parlanti intervistati sono 38 e rappresentano il 35% del campione oggetto dell'intera indagine[9] equamente distribuiti per fasce d'età e genere (Figura 3 e Figura 4). Sappiamo che i dati linguistici provenienti da parlanti appartenenti a fasce di età diverse all'interno della stessa comunità linguistica o all'interno di comunità diverse nello stesso Paese sono in grado di fornire prove importanti per capire come può avvenire il cambiamento linguistico (Tagliamonte 2006; Eckert 2018).

[7] I testi sono apparsi per la prima volta su *La Calabria. Rivista di letteratura popolare* 8 (1), 15 settembre 1895, 1-2; 8 (4), 15 dicembre 1895, 28-31; 8 (6), 15 febbraio 1896, 43-44; 8 (12), agosto 1896, 29-30; 9 (6), agosto 1897, 41-43; 14 (1), novembre 1901, 2-3; 14 (2), gennaio 1902, 15.

[8] Nello specifico il racconto è apparso su *La Calabria* 14 (5), luglio 1902, 37-38.

[9] Il lavoro qui riportato si inserisce all'interno di una più ampia ricerca linguistica sul campo che ha coinvolto 120 parlanti ai quali è stato sottoposto un questionario sociolinguistico per verificare il grado di vitalità della lingua occitana (Micali 2022).

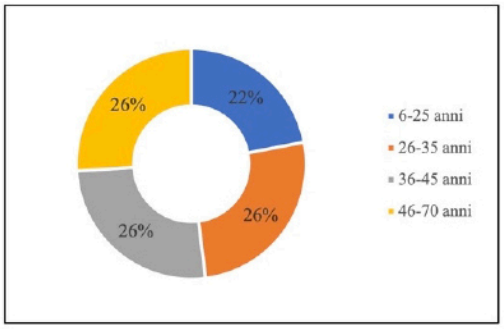

Figura 3. Distribuzione dei parlanti per fasce d'età

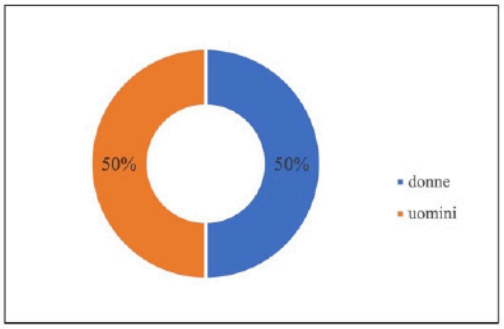

Figura 4. Distribuzione dei parlanti per genere

Dal punto di vista socio-biografico si tratta di parlanti con un livello di studi medio e medio-basso;[10] i dati relativi alla condizione professionale attestano una considerevole percentuale di donne disoccupate a cui si aggiungono informanti che lavorano nel settore dei servizi (impiegate presso enti pubblici o privati), mentre le professioni maggiormente svolte dagli uomini riguardano attività di tipo prevalentemente manuale (artigiani e operai).

Per quanto attiene alla competenza linguistica, il 90% dei parlanti intervistati dichiara di avere avuto come L1 la varietà guardiola e il restante 10% sostiene di averne competenza attiva, pur non rappresentando la prima lingua di acquisizione. Com'è noto nell'ambito delle indagini autovalutative le risposte degli intervistati spesso possono essere filtrate dalle loro intenzioni e dalle loro propensioni ideologiche. I comportamenti linguistici sono infatti legati alle rappresentazioni, alle idee, alle convinzioni degli individui. Le indagini autovalutative, pur rivelandosi strumenti utilissimi a delineare il quadro generale dei rapporti tra le varietà in uso all'interno di una comunità, rappresentano fotografie oggettive e fedeli della realtà linguistica e solo se sono affiancate da strumenti conoscitivi volti a verificare il reale grado di competenza della lingua.

6. Variabili interne e variabili esterne

L'analisi del comportamento di alcune variabili all'interno di un corpus permette di comprendere se è presente una variazione linguistica a cui è attribuibile un significato sociale. Il primo passo è quindi riscontrare la frequenza con cui ogni variante della variabile si presenta, analizzare la distribuzione dei dati, per poi determinare i fattori indipendenti che possono influenzare la presenza della variante presa in esame. Per determinare dove varia una variabile linguistica è necessario circoscrivere "the variable context" (Poplack e Tagliamonte 1989: 60) o "the envelope of variation" (Milroy e Gordon 2003: 180).

Al fine di descrivere la distribuzione delle varianti e verificare, altresì, il grado di conservazione del sistema fonologico della varietà occitana di Guardia Piemontese sono state prese in esame due variabili che permettono di distinguere il guardiolo dal dialetto calabrese e, di conseguenza, legarlo alle varietà occitane cisalpine. Esse coincidono con il mantenimento della laterale palatale /ʎ/ in corrispondenza del nesso latino originario *LJ* e il dileguo delle vocali finali come caratteristica del vocalismo atono (ad eccezione della *-a*).

[10] Si tratta principalmente di soggetti in possesso di diploma di scuola media inferiore e di diploma di scuola secondaria superiore.

L'analisi è stata condotta su base uditivo-percettiva che ha permesso di individuare e categorizzare le diverse varianti. Nei paragrafi che seguono si cercherà di evidenziare la fisionomia fonetica del guardiolo limitatamente ai tratti ritenuti più importanti e funzionali allo scopo della ricerca.

Per quanto riguarda le variabili esterne in primo luogo è stata valutata la variazione tra fasce d'età in modo da riscontrare la presenza di particolari differenze all'interno dei diversi gruppi anagrafici. Attraverso la suddivisione del campione in quattro fasce d'età è stato poi possibile verificare se la trasmissione linguistica intergenerazionale abbia determinato un ampliamento delle varianti o piuttosto una loro perdita. Tali dinamiche sono state valutate tenendo conto anche del genere dei parlanti.

6.1 Vocalismo atono: il dileguo delle vocali finali

Com'è noto, la Calabria presenta una macrosuddivisione in dialetti meridionali intermedi e meridionali estremi e stando a Pellegrini (1977) risulta attraversata da sei isoglosse. Guardia Piemontese si trova all'interno di un'area linguistica peculiare. È posta al di sotto della linea Diamante-Cassano in cui prevale il sistema vocalico di tipo siciliano a tre gradi con la fusione di Ī, Ĭ, Ē > i; Ō, Ŭ, Ū > u (Tagliavini 1962, Rohlfs 1966, Varvaro 1988). Come ci possiamo aspettare, non diversamente dalla maggior parte delle altre varietà occitane (Rivoira *et al*. 2022), il sistema vocalico guardiolo "mantiene invece distinti gli esiti di Ī > i, *filə* 'filo', da quelli di Ĭ, Ē > e, *pélə* 'pelo', *télə* 'tela', *sérə* 'sera'" (Greco 1988a: 722) seguendo lo schema del vocalismo tonico panromanzo.

La distribuzione del vocalismo atono in Calabria è certamente assai complessa. La visione tradizionale riconosce un'isoglossa Cetraro-Bisignano-Melissa che segna il "limite meridionale del passaggio delle vocali finali all'indistinta *-ə* in Puglia e Calabria" (Pellegrini 1977: 43) separando i dialetti con *-ə* (a nord) da quelli senza (a sud), pur senza tracciare confini netti e certi. Questo fenomeno interessa quasi tutta l'Italia meridionale, ma laddove non è ancora una regola fonologica, esso è connesso a fattori come l'enfasi, lo stile e la velocità d'eloquio (Romito *et al*. 1997; Loporcaro *et al*. 1998). In particolare Guardia Piemontese fa parte dell'area IIa (calabrese centrale) e si colloca immediatamente a sud della linea Cetraro-Bisignano-Melissa (Figura 5).

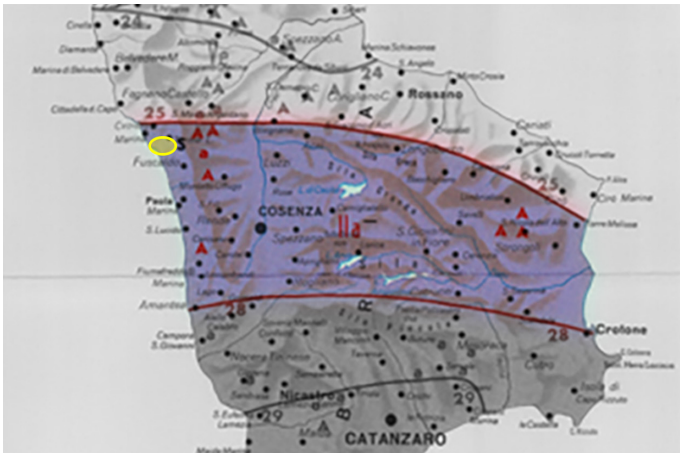

Figura 5. Guardia Piemontese nella *Carta dei dialetti d'Italia* (Pellegrini 1977)

Dagli studi di Morosi (1890: 384) sappiamo che nel guardiolo le vocali atone finali "si turbano e si dileguano nei casi stessi in cui si turbano e si dileguano tra i Valdesi del Piemonte. Solo è da notare che la tendenza al dileguo è qui ancora più viva, e intacca pur l'A finale". Quanto si verifica nelle Valli occitane piemontesi è chiaramente accertato: le vocali atone finali "cadono di regola tutte tranne l'A" (Morosi 1890: 339 § 52). Relativamente all'esito di quest'ultima si riscontra "*-a* finale intatto" nella varietà di Pramollo, "l'*-a* generalmente incolume" ad Angrogna,[11] "*-a* ed *-o* allo sbocco della Germanasca nel Chisone e sulla montagna tra S. Germano e Pomaretto", "l'*-a* sempre incolume" a Bobbio e Villar Pellice (Morosi 1890: 373-377).

Le ricerche successive a Morosi (Grassi 1957; Kattenbusch 1982; Greco 1988a; 1988b; Kunert 1999; 2005a; 2006) confermano come caratteristica del vocalismo atono guardiolo la tendenza al dileguo delle vocali finali che si realizza attraverso la realizzazione della vocale centrale media [ə]. Non mancano però alcune particolari annotazioni relative alla *-a* finale. Per Greco (1988a: 723) "il dileguo delle vocali finali si è ormai generalizzato anche per la *a* atona finale", per Kunert (1999: 94) "*a* finale atona può anche essere muta", per Parlangèli (2010: 27) "si riscontrano casi di alternanza tra il mantenimento di *-a* finale, la sua riduzione al suono indistinto ə e anche la sua caduta".

Dal confronto delle prime trascrizioni è possibile verificare che anche la resa grafica dell'elemento vocalico finale ha prodotto evidenti difformità: si oscilla da sequenze consonantiche senza l'inserimento dell'elemento vocalico (*AIS*, *La Calabria*),[12] alla registrazione di *-a* piena o *-u* pur precisando che si tratta di una "vocale indistinta" "appena percettibile" (Morosi 1890: 384). E anche nelle ricerche condotte in tempi più recenti l'annotazione grafica risulta disomogenea e la realizzazione di [ə] viene resa talvolta come *-ë* (*orelhë* – orecchio) (Genre 1992: 20), talvolta come *-a* (*aurelha* – orecchio) (Kunert 2005b: 15).

Tale disomogeneità riguarda la dibattuta questione relativa alla scelta della grafia per la resa della varietà occitane che, nel nostro caso specifico, corrisponde ora alla volontà di conferire alla parlata guardiola un aspetto più unitario in un'ottica "panoccitana" mediante il ricorso alla *grafia classica" o normalizzata* (Kunert 2006: 8), ora alla necessità di rispettare "la coscienza linguistica dei parlanti" attraverso l'adozione della *grafia dell'Escolo dóu Po* o *concordata* che permette di trascrivere con precisione l'inventario fonologico della parlata e di "ridurre il guardiolo ad una delle sue realizzazioni possibili in bocca ad un parlante reale" (Genre 1992: 18-19).[13]

6.2 La resa della laterale palatale [ʎ]

Nelle parlate occitane il nesso originario LJ realizza l'esito propriamente palatale [ʎ] reso nella grafia attraverso il digramma <lh> (FILIU > FILJO > *filh* > figlio)[14]. L'analisi del gruppo consonantico *lh* permette anzitutto di verificare il particolare processo evolutivo del nesso latino LJ che, come i vari nessi con jod, nelle lingue romanze generalmente palatalizzano con esiti vari come in (1a) (Lee 2010: 67).

[11] Ad Angrogna la *a* atona finale dell'articolo determinativo singolare femminile (*la*) corrisponde a una centrale medio-bassa, mentre nei corrispettivi plurali mantiene il suo timbro pieno (Rivoira 2007: XXII).

[12] A riguardo si vedano le carte AIS 1037 – 'acqua'; 959 – 'alla catena' (cfr. <https://navigais-web.pd.istc.cnr.it/> (07/2023). Per i testi contenuti su *La Calabria. Rivista di letteratura popolare* cfr. 8 (1), 15 settembre 1895, 1-2; 8 (4), 15 dicembre 1895, 28-31; 8 (6), 15 febbraio 1896, 43-44; 8 (12), agosto 1896, 29-30; 9 (6), agosto 1897, 41-43; 14 (1), novembre 1901, 2-3; 14 (2), gennaio 1902, 15.

[13] Per un approfondimento relativo alla questione della grafia si vedano Genre (1974, 1994); Kunert (1993, 1999, 2002, 2005a).

[14] Per un approfondimento sugli sviluppi della laterale in occitano si veda Müller (2011).

(1) a. FOLIA > it. *foglia*, port. occ. *folha*, cat. *fulla* ([ʎ]); fr. *feuille* ([j]), sp. *hoja* ([x])

Nelle valli piemontesi *lh*, intervocalico o conservato in finale, è regolarmente pronunciato [ʎ] nelle valli settentrionali (Alta Valle Susa meno Exilles, Val Chisone,Val Germanasca), in una parte delle valli centrali (Bobbio e Angrogna in Val Pellice e in alta Val Po) come in (2a-b), ma perde il suo carattere laterale e "passa a semiconsonante o semivocale, segnate con i grafemi *i* o *y*" in parte delle Valli Pellice e Po, e verso sud a partire della Val Varaita come in (2c-d) (Rivoira 2007: XXV).[15]

(2) a. *Lou filh* 'Il figlio' (Bobbio Pellice) b. *Lou velh* 'Il vecchio' (Salbertrand, Pragelato, Angrogna)

c. *Lou fiy* 'Il figlio' (Villar Pellice) d. *L'oureia* 'L'orecchio' (Luserna San Giovanni)

Riguardo al nesso LJ in Calabria, Rohlfs (1966: 396 § 280) nota che "prevale ǧǧ nel sud e nell'estremo nord, mentre nella regione centrale si ha di regola *ʟʟ*".[16]

Dagli studi di Morosi (1890: 385) sappiamo che nella varietà di Guardia Piemontese LJ si presenta nelle forme che variano tra l'articolazione laterale palatale /ʎ/ e quella approssimante palatale /j/, mentre dalle carte AIS si ravvisa una chiara prevalenza di esiti palatalizzati.

Anche in questo caso gli studi più recenti, che si collocano tra la fine degli anni Ottanta e i primi anni Duemila, ravvisano analogie e differenze pur senza una completa sistematicità. Le ricerche di Greco (1988a: 723) riscontrano la presenza propriamente palatale del nesso LJ negli informanti più anziani (*fillə, óllə*) e ne ravvisano un'evoluzione verso un'occlusiva postpalatale sonora (*figgə, óggə*) dovuta alla pressione del calabrese. Genre (1992: 22) nota "il passaggio di *l* e *lh* a qualcosa di intermedio tra *l* e *d* retroflessa, e rispettivamente, palatalizzata", pur notando la laterale *lh* "ancora ben attestata" ma tendente "a desonorizzare in finale assoluta". Kunert (1999: 96) attesta la pronuncia di una "occlusiva dentale sonora palatalizzata [ɖ̟] distinta da [ɻ] da una parte dei guardioli", sostenendo che pur attribuendone l'influsso "a certe parlate calabresi "questo non spiega la distinzione tra [ɖ̟] e [ɻ] (in calabrese esiste solo [ɻ])". Per Parlangèli (2010: 54) "il gruppo consonantico lh, sia in inizio di parola che nel corpo della parola, viene utilizzato sia per indicare l'occlusiva postpalatale *ǵ* 'abelh' (APICULA) *abeǵ*; che la liquida laterale palatale *l*, 'batialh' (BAPTIMUS) *batial*".

E ancora consultando il *Vivaio Acustico delle Lingue e dei Dialetti Italiani*[17] si evince che il nesso consonantico *lh* in tutte le occorrenze produce un'affricata postpalatale sonora [d͡ʒ] reso ortograficamente con il digramma <ǵǵ>.[18]

[15] Per gli esiti di LJ nelle valli del Piemonte si veda Morosi (1890: 309-380).

[16] Per una panoramica sugli sviluppi della laterale in area romanza si vedano Celata (2006); Vecchia (2017).

[17] Si tratta di un atlante sonoro pubblicato on-line (1998-2008): <https://www2.hu-berlin.de/vivaldi/> (07/2023).

[18] Occorre però precisare che tutte le voci contenute nel *Vivaio Acustico delle Lingue e dei Dialetti Italiani* sono realizzate da un'unica informante.

7. Risultati dell'analisi

7.1 Dileguo delle vocali atone: il caso di -a finale

Al fine di verificare in che misura l'indebolimento delle vocali atone finali e la successiva realizzazione di una vocale centrale media [ə] intacca la *-a* sono state prese a disamina le forme *tuvaglia* 'tovaglia' e *ghiessia* 'chiesa'.[19] All'interno del racconto utilizzato per l'intervista tali forme vengono sempre trascritte dal raccoglitore con *-a* finale. Come già segnalato, gli studi e le ricerche sul guardiolo presentano trascrizioni spesso disomogenee e in riferimento alla *-a* finale è possibile riscontrare un'alternanza di esiti. Considerato che nel medesimo testo la pronuncia palatalizzata di *-u* nelle espressioni "*ina famiglia, ina ghiessia, in eggh*" (*una famiglia, una chiesa, una volta*) viene sempre resa attraverso la grafia *i* per rendere il particolare suono guardiolo,[20] quanto è lecito supporre che la resa grafica di *-a* potesse corrispondere, ancora alla fine dell'Ottocento, a un più diffuso mantenimento della vocale finale? E cosa accade oggi al sistema fonologico guardiolo relativamente a questo tratto?

La Tabella 1 mostra la distribuzione complessiva delle forme *tuvaglia* e *ghiessia* relative al mantenimento o all'indebolimento in *schwa* della *-a* finale.

	6-25 anni		26-35 anni		36-45 anni		46-70 anni	
	M	F	M	F	M	F	M	F
touvalhë	50% (12 occorrenze)	25% (6 occorrenze)	100% (30 occorrenze)	60% (18 occorrenze)	100% (30 occorrenze)	80% (24 occorrenze)	100% (30 occorrenze)	100% (30 occorrenze)
touvalha	50% (12 occorrenze)	75% (18 occorrenze)		40% (12 occorrenze)	0	20% (6 occorrenze)	0	0

	6-25 anni		26-35 anni		36-45 anni		46-70 anni	
	M	F	M	F	M	F	M	F
guieizë	75% (3 occorrenze)	75% (3 occorrenze	60% (3 occorrenze)	100% (5 occorrenze)	100% (5 occorrenze)	100% (5 occorrenze)	100% (5 occorrenze)	100% (5 occorrenze)
guieiza	25% (1 occorrenza)	25% (1 occorrenze)	40% (2 occorrenza)	0	0	0	0	0

Tabella 1. Distribuzione delle forme relative al mantenimento di *-a* atona finale

[19] Tutte le forme analizzate sono riportate all'interno del contributo seguendo la trascrizione originale del raccoglitore. Tuttavia per agevolare la comprensione della pronuncia guardiola, nella trattazione dei dati riportati nelle tabelle si seguirà la *grafia dell'Escolo dóu Po o concordata.*

[20] Può essere certamente indicativo che tra la fine dell'Ottocento e l'inizio del Novecento i raccoglitori delle 'novelline provenzali', pur non disponendo di particolari strumenti per riprodurre graficamente i suoni della parlata guardiola, riportano in tutte le trascrizioni l'articolo indeterminativo maschile e femminile (un, una) sotto le forme *in, ina.*

I dati mettono in luce che le forme che presentano *-a* finale compaiono coinvolgendo principalmente le informatrici donne. Non si ha quindi una riduzione sistematica delle varianti ma un ampliamento, seppur sporadico. Uno sguardo più attento ai risultati consente di riscontrare che le fasce generazionali dove la *-a* finale è mantenuta sono quelle che coinvolgono i parlanti più giovani (6-25 e 26-35 anni).

La problematicità dell'analisi della forma *tuvaglia* 'tovaglia' è correlata alla situazione di contatto che coinvolge spesso italiano e dialetto, in quanto la forma guardiola presenta una quasi omofonia con la forma italiana. Potrebbe quindi essere lecito ipotizzare un adattamento sul piano fono-morfologico alla forma dell'italiano ('tovaglia') attraverso la sostituzione del fonema sul modello standard che funge da varietà di prestigio. È frequente infatti che "l'italianizzazione può comportare l'introduzione di fonemi nuovi, estranei al dialetto e può quindi determinare dei cambiamenti nell'inventario fonematico del dialetto con possibili conseguenze anche sulle norme distribuzionali dei fonemi già preesistenti. Più spesso però, sotto la pressione dell'italiano, si registra la perdita di tratti fonetici e fonologici peculiari dei dialetti" (Cerruti 2016: 69-70).

Questo quadro, pur coinvolgendo principalmente le donne, non sembra trovare la medesima corrispondenza tra le generazioni più adulte (36-45 e 45-70 anni) caratterizzate invece da una sistematica incidenza di esiti in cui è chiaramente evidente la realizzazione della vocale centrale media [ə] senza differenze di genere rilevanti.

7.2 Il mantenimento della laterale palatale

All'interno del testo utilizzato per la creazione del corpus di parlato il digramma <*lh*> (che, come detto, in occitano rappresenta la laterale palatale sonora /ʎ/) si presenta nelle forme "*travaglia*", "*tuvaglia*", "*pigli*", "*sagli*".[21] In realtà le occorrenze del gruppo consonantico *lh* aumentano considerevolmente data la presenza di articoli e pronomi maschili e femminili.[22]

	6-25 anni		26-35 anni		36-45 anni		46-70 anni	
	M	F	M	F	M	F	M	F
/traˈvaʎə/	0	0	0	0	0	0	0	60% (9 occorrenze)
/traˈvaɟa/	25% (3 occorrenze)	75% (9 occorrenze)	0	20% (3 occorrenze)	0	0	0	0
/traˈvaɟə/	75% (9 occorrenze)	25% (3 occorrenze)	100% (15 occorrenze)	60% (9 occorrenze)	100% (15 occorrenze)	40% (6 occorrenze)	100% (15 occorrenze)	0
/traˈvadʒə/	0	0	0	20% (3 occorrenze)	0	60% (9 occorrenze)	0	40% (6 occorrenze)

[21] Per avere un numero più consistente di tokens da analizzare, l'analisi è stata estesa anche alle occorrenze delle forme "*tuvagli*" e "*pigli*".

[22] *Lhi* corrisponde all'articolo determinativo maschile plurale, ma anche al pronome personale di 3ª persona femminile singolare e ai clitici soggetto di 3ª persona femminile singolare e plurale e di 3ª persona maschile plurale. In guardiolo i clitici soggetto sono obbligatori alla 2ª persona singolare e alla 3ª persona singolare e plurale. Si usano anche dopo un soggetto nominale e dopo un pronome tonico (Micali, *in stampa*).

	6-25 anni		26-35 anni		36-45 anni		46-70 anni	
	M	F	M	F	M	F	M	F
/tuˈvaʎə/	0	0	0	0	0	0	0	60% (27 occorrenze)
/tuˈvaʎa/	50% (18 occorrenze)	75% (27 occorrenze)	0	40% (18 occorrenze)	0	0	0	0
/tuˈvaɟə/	50% (18 occorrenze)	25% (9 occorrenze)	100% (45 occorrenze)	40% (18 occorrenze)	100% (45 occorrenze)	40% (18 occorrenze)	100% (45 occorrenze)	0
/tuˈvadʒə/	0	0	0	20% (9 occorrenze)	0	60% (27 occorrenze	0	40% (18 occorrenze)

	6-25 anni		26-35 anni		36-45 anni		46-70 anni	
	M	F	M	F	M	F	M	F
/ˈpiʎə/	0	0	0	0	0	0	0	60% (24 occorrenze)
/ˈpiɟə/	100% (32 occorrenze)	100% (32 occorrenze)	100% (40 occorrenze)	80% (32 occorrenze)	100% (40 occorrenze)	25% (16 occorrenze)	100% (40 occorrenze)	0
/ˈpidʒə/	0	0	0	20% (8 occorrenze)	0	75% (24 occorrenze)	0	40% (16 occorrenze)

	6-25 anni		26-35 anni		36-45 anni		46-70 anni	
	M	F	M	F	M	F	M	F
/ˈsaʎə/	0	0	0	0	0	0	0	60% (3 occorrenze)
/ˈsaɟə/	100% (4 occorrenze)	100% (4 occorrenze)	100% (5 occorrenze)	80% (4 occorrenze)	100% (5 occorrenze)	25% (2 occorrenze)	100% (5 occorrenze)	0
/ˈsadʒə/	0	0	0	20% (1 occorrenze)	0	75% (3 occorrenze)	0	40% (2 occorrenze)

Tabella 2. Distribuzione degli esiti relativi al mantenimento della laterale palatale

I dati osservabili nella Tabella 2, che rappresenta la frequenza delle diverse varianti, offrono indicazioni piuttosto precise in merito a tale fenomeno. La resa della laterale palatale /ʎ/ vede coinvolte principalmente le donne della fascia d'età 46-70 anni che, seppur in misura ridotta, presentano anche le varianti [ɟ] e [d͡ʒ]. È interessante osservare che la laterale palatale viene realizzata da tutti i parlanti intervistati negli esiti dell'articolo maschile plurale e dei pronomi maschili e femminili di terza persona singolare e plurale *ilh*.[23]

La distribuzione totale della varianti evidenzia (i) un'incidenza statisticamente significativa dell'occlusiva postpalatale sonora [ɟ] come variante in uso tra gli informatori di sesso maschile senza particolari differenze riguardo alla fascia d'età considerata; (ii) la completa scomparsa dell'esito propriamente palatale tra i parlanti maschi del guardiolo.

8. Discussione dei risultati e considerazioni conclusive

L'analisi linguistica ha mostrato (i) l'alternanza tra il mantenimento di *-a* finale e la sua riduzione alla vocale centrale media [ə] relativamente al vocalismo atono; (ii) l'adozione di esiti diversi dalla laterale palatale [ʎ] e la presenza delle varianti [ɟ] e [d͡ʒ]. Tali esiti sono favoriti, seppur in misura diversa, dal contatto del guardiolo con la varietà calabrese di contatto e con l'italiano.

La distribuzione delle varianti relative alle *tuvaglia* e *ghiessia* permette di ipotizzare che gli esiti in cui *-a* finale è mantenuta (statisticamente più rilevanti e maggiormente diffusi tra le fasce generazionali più giovani nella forma *tuvaglia*) siano dovuti al contatto con la varietà di prestigio (esiti italianizzanti) ma anche con i vicini dialetti calabresi in cui *-a* finale è mantenuta, piuttosto che alla conservazione dell'antico tratto che caratterizza il vocalismo atono occitano che, come abbiamo visto, risulta ancora attestato nelle comunità valligiane. Sappiamo, infatti, che la pronuncia [guieiza] è ampiamente diffusa tra le parlate delle valli a sud della Val Pellice.[24] Il considerevole numero di occorrenze attestate (34 in totale) per la variante [guieizə] lungo tutto l'asse generazionale sembra però confermare che l'indebolimento delle vocali atone finali, che si realizza attraverso la realizzazione della vocale centrale media [ə], ha interessato ormai definitivamente anche la *-a* finale. Osservando la distribuzione della variante /guieiza/ tra le nuove generazioni essa potrebbe sembrare l'effetto dell'italianizzazione della forma alloglotta (come già per "*tuvaglia*"). Tuttavia, considerata la sua diffusione, seppur sporadica, anche tra i giovani di sesso maschile, potrebbe non essere escluso un processo di convergenza linguistica verso il dialetto italoromanzo circostante[25] che esercita, come avviene per alcune aree del Meridione italiano, il ruolo di modello linguistico più prestigioso (Di Salvo e Matrisciano 2019, 2020).

Quanto alla verifica del mantenimento della laterale palatale i risultati ottenuti permettono di riscontrare che, nonostante le differenze nell'ordine delle frequenze di occorrenza delle varianti, il numero di esiti propriamente palatalizzati è drasticamente ridotto: soltanto tre informanti appartenenti alla fascia d'età 46-70 anni hanno reso l'originario nesso consonantico *lh* attraverso la laterale palatale [ʎ] ed è interessante notare che si tratta di tre donne rientrate dal Canada dopo circa trent'anni. Pertanto è lecito dedurre che l'esito palatale caratterizzasse

[23] Quando la forma antica *li* (< ILLI) precedeva una parola iniziante per vocale si determinava una sequenza LJ che, come nel caso delle parole FILIAM, FOLIA, MULIER (< *figlia, foglia, moglie*), comporta un esito palatale della laterale alveolare geminata determinato dal contesto vocalico (Rohlfs 1966: 396, §280).

[24] Per una sintesi più puntuale si veda la voce "gleisa" in *Lo Tresòr de Lenga. 100 Paraulas dal Tresòr* (<www.chambradoc.it/100ParaulasDalTresor.page> 07/2023).

[25] A riguardo si veda la carta AIS 783 - 'la chiesa' per i punti 761 (Mangone) e 762 (Acri) (cfr. <https://navigais-web.pd.istc.cnr.it/> 07/2023).

fino a qualche decennio fa i parlanti più conservativi, mentre oggi la parabola può dirsi grosso modo conclusa. Tuttavia, la conclusione *tout court* di una assimilazione al sistema fonologico della varietà calabro-cosentina potrebbe essere forse eccessivamente affrettata. Un dato particolarmente evidente è senza dubbio il numero di occorrenze attestate per l'occlusiva palatale [ɟ] lungo l'intero asse generazionale. Ma la variazione fonetica degli esiti di LJ nota anche la forma affricata postpalatale sonora [d͡ʒ] registrando dunque non una riduzione delle varianti ma un ampliamento. Poiché, come detto, uno degli obiettivi della ricerca è identificare e spiegare la variazione fonetica socialmente motivata, un rapido sguardo ai dati permette di riscontrare una spiccata caratterizzazione di genere della variabile presa in esame. Tra le donne delle fasce d'età 36-45 e 46-70 vi è, infatti, una minore convergenza verso la forma occlusiva palatale [ɟ] diffusa nella varietà calabro-cosentina. Come già è emerso da un'indagine sociolinguistica più ampia (Micali 2022: 103), tali risultati sembrano essere ricondotti alla composizione e alla stratificazione socio-economica della comunità guardiola.[26] Per quanto attiene alla variante [d͡ʒ], essa viene si riscontrata esclusivamente nelle produzioni di parlanti di genere femminile ma con la completa esclusione della fascia generazionale più giovane (6-25 anni) e un ridotto numero di occorrenze attestate nella generazione immediatamente successiva (26-35).

Un'ultima e più approfondita considerazione meritano gli esiti prodotti dalle fasce d'età più giovani. I risultati emersi dall'analisi delle due variabili analizzate si rivelano infatti utili al fine di verificare se la trasmissione linguistica intergenerazionale abbia determinato un ampliamento delle varianti o piuttosto una loro perdita e consente di comprendere se e come certi tipi di realizzazione di una variabile siano in grado di indirizzare il cambiamento linguistico. Nello specifico, tra le donne delle fasce generazionali più giovani (6-25 e 26-35 anni) si riscontra con maggiore frequenza il mantenimento di *-a* finale e la realizzazione della laterale palatale [ʎ],[27] mentre i giovani di genere maschile registrano una tendenza più significativa alla realizzazione della vocale centrale media [ə] e dell'occlusiva palatale [ɟ].[28] I pattern di variazione emersi in relazione all'età e al genere delle nuove generazioni rispecchiano dunque la tendenza registrata in molti lavori di sociolinguistica (soprattutto di stampo anglosassone) secondo cui le donne risultano più sensibili alle forme linguistiche di prestigio (italiano) mostrando nei confronti della lingua un atteggiamento più normativo degli uomini i quali, invece, usano con maggiore frequenza le varianti non standard (Labov 1990: 213). Tuttavia per quanto riguarda i giovani parlanti di genere maschile gli esiti dovuti al dialetto calabrese di contatto potrebbero essere indicativi di una ridistribuzione funzionale dei codici nel repertorio linguistico della comunità guardiola all'interno del quale la varietà calabrese "guadagna" progressivamente spazio all'interno dei domini d'uso.

In conclusione, l'analisi della variazione fonetica relativa alle variabili considerate sembra essersi rivelata come un indicatore interessante, per quanto ancora da approfondire, dello stato di conservazione del sistema fonetico e fonologico guardiolo. La distribuzione delle varianti e la loro caratterizzazione sociale diventano strumenti in grado di evidenziare mutamenti fonetici in atto, soprattutto all'interno di quelle comunità di minoranza le cui lingue sono inevitabilmente esposte alle dinamiche del contatto linguistico divenendo lingue a rischio di estinzione.

[26] A Guardia Piemontese tra le donne vi è un'alta percentuale di casalinghe e pensionate il cui titolo di studio è legato ad un'istruzione elementare, mentre tra gli uomini è predominante l'attività di operaio. Tale composizione sociale fa sì che gli uomini siano maggiormente esposti al contatto con la realtà calabrese circostante e di conseguenza con modelli linguistici diversi. Al contrario, le relazioni delle donne si svolgono quasi prevalentemente all'interno della rete familiare.

[27] Si vedano i dati delle forme /traˈvaɟa/ /tuˈvaʎa/ (Tabella 1 e Tabella 2).

[28] Si vedano i dati relativi alle forme /ˈpiɟə/ /ˈsaɟə/ (Tabella 2).

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Glottodidattica
Language Teaching

Quaderni di Linguistica e Studi Orientali- QULSO
Working papers in Linguistics and Oriental Studies

Firenze University Press
https://oajournals.fupress.net/index.php/bsfm-qulso

OPEN ACCESS

Citation: D. Cappelli (2023) Italian – Spanish: Difficulties in learning. A survey of literature. *Qulso* 9: pp. 339-356. doi: http://dx.doi.org/10.13128/QULSO-2421-7220-15166

Data Availability Statement: All relevant data are within the paper and its Supporting Information files.

Competing Interests: The Author(s) declare(s) no conflict of interest.

Italian – Spanish: Difficulties in Learning. A Survey of Literature

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Abstract:

Italian and Spanish are two languages with a very high degree of similarity. The aim of this article is to define what are the main difficulties that learners of both languages experience in learning the opposite foreign language. Transfer is one of the main causes of errors found in interlanguages, but it is crucial to analyze its effects specifically and understand that it is not the sole cause. The perceived closeness can have both positive and negative implications depending on the various stages of learning, which does not seem to have a constant increasing trend, and the initial confidence tends to disappear over time. The role of the first language is crucial in learning related languages that cannot avoid undergoing Contrastive Analysis, since learners must activate comparison with their own linguistic heritage in an effort to reduce the risk of error fossilization.

Keywords: *Contrastive Analysis, Fossilization, Interlanguage, Second Language Acquisition, Transfer*

1. Introduction

It is impossible to deny the similarity between Italian and Spanish, since all languages that derive from Latin share words and structures, in a more or less marked way, but the relationship between them is very close. The fact that both belong to the group of Romance languages simplifies classification and recognition of the many similarities that exist in both in the lexicon and syntax of Italian and Spanish. Without a doubt, this aspect which on the one hand constitutes a positive factor for learning, represents at the same time a dissuasive element that generally does not encourage learners to go on discovering the differences that exist between the two languages. However, this is very important because understanding the differences means deepening the knowledge of languages.

The perception of familiarity in oral comprehension is due to the almost perfect equivalence of the vowel systems: the absence of

complex phonemes (such as the nasal vowels of French) allows you to identify words from the first contact with the new language. Structural correspondences and the significant amount of lexical coincidences also draw attention, so the speaker has the immediate sensation of understanding the other language and of being able to speak it without great efforts. The Romance origin that unites them and their diachronic development justifies this similarity. However, gradually the contact deepens and unexpected difficulties appear: affinities often mask subtle differences.

Both the easiness and the traps have become commonplace: due to the positive effects of similarity, many learners do not find it necessary to undertake a serious study to acquire satisfactory communicative competence. These seem to be the main causes for which only a small part of the learning in students of the two languages will reach an advanced level. The learning of Spanish by Italians, and vice versa, is seen as an easy and not unnecessary thing, given that in extreme cases mutual understanding is obtained by speaking each one's own language but when contact with the other language is more prolonged, the feeling of "false friends" dominates (Bailini 2016).

The alleged ease turns into a paradox and, in fact, half a century ago the linguist Carlo Tagliavini (1947: 261) stated that Spanish is for an Italian speaker one of the most difficult language to learn correctly. According to his observations, those who start studying Spanish and German at the same time, within a year will have ten times more knowledge of Spanish, but the distance will be canceled soon and after five years at the latest the student will master German better than Spanish.

There is no scientific evidence to support Tagliavini's paradox in its quantitative terms; moreover, the linguist was mainly referring to translation ability, which today is far from being considered the main intention of second language (L2) proficiency. However, it is true that teachers' experience leads to similar conclusions. On the other hand, however, the study of Spanish in Italy is influenced by the prejudice of the futility of in-depth study; with the result that Italians know it little and poorly and hardly know the language, even at an academic level. Tagliavini himself showed little interest in further study of the language and focused mainly on literary topics.

2. The Action of transfer

The perception of closeness can be a source of mistakes due to the transposition of sounds, forms and structures belonging to the mother language and it becomes a dangerous affinity as the apparent simplicity converts itself in the greatest difficulty. During the first year of study, students assimilate divergences and develop a feeling of confidence at the same time. They achieve quick results at first, but in the long run they are less likely to truly master the foreign language. In fact, these languages are the easiest to learn in a wrong way, which means that it is common for learners to make mistakes. Italian and Spanish sound reciprocally understandable, as the structure of their words is similar and sometimes almost equal, or identical. The mistakes caused by the transposition are the effects of the linguistic transfer, which consists in the transfer of the habits that have been consolidated in their native language into the L2, sometimes it promotes the learning of the Second Language, but more frequently it disturbs it. Generally, the transfer tends to occur when the learner recognizes some similarity between the first language (L1) and the second language (L2) and thus formulates assumptions about the function of the L2 that are based on this similarity.

The first definitions of this concept are related to the Structuralism and the Contrastive Analysis (CA) which believed that the mother language (LM) influenced the learning of a second

language (SL). The behaviorists thought that every learning was conditioned by the previous ones and learners tend to transfer in the new language their native language structures (Lado 1957). With the development of the innatistic theories, the CA is attacked and consequently the theory of transfer is discredited (James 1980). For many years this thought was neglected and transfer is still considered as an inconsistent concept. Moreover, the theory was easily attacked considering that CA had focused on transfer as a linguistic "product" and had as its goal to find out where negative action would occur, while at the same time admitting the existence of positive transfer. In the Eighties, instead, there was a change of perspective: transfer began to be considered as a "process", or as a set of strategies for learning and production. Transfer is not only a use of linguistic habits, as it was in the past, but a set of cognitive mechanisms involved in every aspect of language: pronunciation, morphosyntax, vocabulary, etc.

According to the previous affirmation we can suppose that the CA should be able to understand that interlinguistic contrasts can often create barriers rather than removing them (Odlin 1989: 30). Anyway, it is fundamental to highlight that this is not true since differences are more problematic than similarities. It is due to the fact that the learning difficulties are not always directly proportional to the differences between the languages. In addition, the transfer does not only occur between the ML and the SL, but from any other linguistic knowledge to the new language. In fact, Italian we can observe it also in students that study Spanish after having already learned other languages, such as English and French. However, excluding terminological questions, they share the belief that transfer is only an aspect of progress in a new language (Calvi 1999).

Another key point in the learning of similar languages is the Perception of Distance, or the hypothesis formulated by the speaker on the typological closeness between the L1 and the L2 because it promotes transfer. We are dealing with a psycholinguistic criteria, centered on the learning and complexity of the phenomena involved and not only on actual similarity and linguistic relations. As Eckman suggests in his Theory of Evidence (1977) the ability to transfer elements of one language to another one does not depend only on the linguistic contrast but also on how the speaker perceives this contrast. This explains the reason for which some particularly marked structures, in general poorly transferable, can be transferred to nearby languages and not to distant ones. Thus, in trying to identify L1 language features that create difficulties in L2, the concept of markedness is crucial. It represents complexity, low frequency, low productivity, low semantic transparency or deviation from the basic structures of a language. The perceived distance experienced by learners is one of the main mechanisms that activate transfer even if the typological similarities do not guarantee the positive one. In order to predict the hypothetical effects of the contact between the L1 and the L2, the notion of distance must be integrated with the concept of transferability based on the learner's perception of the structures of the L1. As Kellerman (1983) suggests, the degree of transferability of a linguistic element is inversely proportional to the degree of markedness in a psycholinguistic sense.

2.1. The relation between transfer and other processes

The studies in the field of second language acquisition claim that the initial development sequences of the interlanguage (IL) are the same in all learners, regardless of their L1. The markedness represents an important concept for the analysis of the interlanguages of related languages, understood as what is perceived as difficult to learn. The only model for analyzing IL of related languages that exists today is that of Schmid (1994), who approaches the topic from a cognitive perspective, considering on one hand the influence of perceptions of similari-

ties and differences between the L1 and the L2, as explained above, and on the other hand the possibility that confidence in the previous language skills is linked to some kind of universal preferences in language development. Schmid elaborates his model starting from the theory of Natural Morphology, whose parameters provide a theoretical basis for the relationships of markedness through a series of morphological naturalness principles, both universal and specific to the pair of languages in analysis, which are: biunivocity, the morphotactic transparency, morphosemantic transparency and diagrammaticity.

Starting from these principles, Schmid (1977) elaborates the theory of Naturalness Differential Hypothesis, which makes it possible to predict that when Spanish learners of Italian as a foreign language-and the same is true for Italian learners of Spanish as a foreign language-perceive similarities between the L1 and the L2 and make assumptions about the morphological structure of the latter, these will be based on their mental representations of their L1. On the oter hand, they will experience difficulties when they try to assimilate in their IL elements different from their L1 and less natural, since any analysis of the IL cannot be separated from the analysis of errors.

In other words, some particularly marked forms can be transferred to a close language, while other poorly marked structures may be non-transferable in a language that is very distant from the L1 of the learner. The hypothesis of closeness allows native Italian speakers to transfer into Spanish even the most marked forms, so theoretically these are not loanwords.

However, transfer processes are not constant in the course of learning; they concurrently evolve according to numerous factors, such as the level of learners' performance and their metalinguistic awareness (Calvi 1995):

- the beginners tend to transfer even the marked forms in the L2, based on the interlinguistic similarities;
- intermediate-level students are more aware of the actual differences between the two languages and they are disappointed by their mistakes and they would subsequently tend to be more careful;
- at the advanced stages of learning, learners would again be inclined to transfer.

This procedure is called U-shaped and it is clearly observable in the Italian learners, who approach the new language with confidence, thanks to the similarities, and reach the first results in a short time. It is followed by a critical phase during which they try to keep distance from the problematic L2 and try to avoid transfer, but the habit of recurring will return, even in marked structures. The tendency to mix the two languages is quite common even at the most advanced levels (Bizzoni and De Fina 1992).

The linguistic habits associated to the L1 interfere with the L2 learning and they are therefore considered responsible for the quality in production of the L2. This use of behaviors, already learned in the past, is automatic and subconscious and it can be distinguished as being either positive or negative:

- positive transfer occurs in cases where the structure to be learned does not differ from that one already acquired in the L1 so, the execution is correct because it is only necessary to transfer the known behavior to the new situation;
- negative transfer leads to improper performance, because the behavior to which the learner is used to is different from the one to be acquired and he or she will tend to misuse it.

Of course, there are also incorrect executions which do not come from the L1 habits and therefore they are not treatable in terms of transfer (Baldi and Savoia 2018: 65). When there is an actual parallelism between the two linguistic systems, the transfer is positive; Moreover, the negative side is not reduced to simple transfer, but includes other phenomena such as the inclination to avoid complex structures or to use easier ones (Odlin 1989). This case is very common between Italian and Spanish, since often the two languages do not diverge in the structures but in the frequencies of them at both discursive and pragmatic level.

2.2 Negative transfer and the fossilization phenomena

Recently, Selinker and Lakshmanan (1992) have shown that transfer is one of the main causes of fossilization. This is also based on the reality of learners of similar languages: often, the rapid initial progress is followed by fossilization and, unfortunately, the negative effects of transfer are extremely difficult to eradicate. Considering the similarities between the two languages, the fossilization of transfer does not inhibit communication decisively and the learner prefers to remain at the level attained. For this reason, the motivation is fundamental in learning because it helps students to improve their L2 level.

An interesting study, conducted by Alessandro Vietti (2006) on the learning of Italian by Peruvian hispanophones immigrated to Italy, is very useful to emphasize that the proximity between languages can actually constitute an obstacle rather than an advantage in learning. The aspect which immediately attracts attention is the presence, in different degrees and forms, of the Spanish language in sentences that were supposed to be Italian in the communicative intention of the speakers. In other words, in speaking Italian, Peruvians rely heavily on their L1, that is, they transfer part of the Spanish lexicon and grammar into Italian. This transfer of Spanish into Italian affects different levels of the language (phonology, morphology, syntax and lexicon) with different intensity and in several ways.

Italian spoken by Peruvians will have a communicative success that will exert a force in the opposite direction to the goal of learning L2 Italian correctly. Simply because this variety of Italian actually works, in the sense that it ensures mutual understanding, this acts as a brake on learners' motivation to further develop their IL. In a sense, this variety is functional to the immigrant's primary communication needs; obviously, by diversifying the needs and social relationships, the Peruvian's Italian will move in the proper direction.

The relationship between transfer and the other processes involved in the acquisition of a L2 has only been clarified partially. In fact, different mechanisms are also present and the individual variations make any prediction uncertain. In didactic teaching, it is necessary to consider the most obvious manifestations and the most elusive effects, namely the overproduction or avoidance of certain structures. Thanks to the studies made by the sociolinguists and the cognitive sciences, transfer is no longer appearing only as a passive phenomenon, suffered by the learner, but also as an active process, otherwise as a cognitive strategy, when the L1 is used as a source of hypotheses about the L2, or a communicative one.

Transfer manifests itself in all aspects of the language, even though it may be in a different way, where they combine themselves with other mechanisms linked to the acquisition sequences and the linguistic universals.

- In the phonetic and phonological field, the influence of the L1 is more evident than in other areas. In fact, the comparison of Italian and Spanish phonological systems does not involve any particular difficulties, but the phonetic differences can cause persistent transfer that clearly identify the learner's ML.

- With regard to morphosyntax, it is more difficult to distinguish the transfer effects from errors related to learning in general and there are divergent points of views, for example, some students believe that the transfer of inflectional morphemes, such as prefixes, suffix, etc., from the L1 to L2, are rare and irrelevant (Klein 1986) while others affirm that the pronounced formal similarities make it possible (Odlin 1989). The word order is very flexible in both languages and the similarities between their negative and interrogative constructions should allow a positive transfer, it is not necessary to apply particular rules for the negative form or for the interrogative one. Therefore, simple demand-response interactions do not require acquisitive efforts, the only difference is the graphic mark of the question. However, there are also some structural difficulties in Spanish language that could discourage the Italian learner (for example the use of *Ser* and *Estar*, the choice between the indicative and the gerund and the numerous verbal periphrases). The approach to these structural contrasts increases the sensation of distance; the errors do not depend on the affinity between the two systems but rather on divergences. It is unlikely that just from a few elements already acquired the learner will be able to construct a certain number of sentences, it does not occur with any other language, in any learning situation and with any method of study.
- As far as lexicon is concerned, the beneficial effect of interlinguistic similarities is known, but the fact that lexical relationships involve negative transfer when formal similarities correspond to semantic or a different frequency in the use of similar words must not be underestimated. A key concept regarding the "false friends", or words that are formally close but dissimilar in meaning; for the beginner students it is fun to discover that in Spanish the word *burro* means "donkey" whereas *burro* in Italian means "butter", and that *aceite* means "oil" in Spanish and "vinegar" in Italian. But not all the false friends constitute an obstacle to the learning, in some cases in fact the same word belongs to completely different contexts in the two languages so, once you go over the first approach, they are easily recognizable.

The notion of transfer and the perception of distance are useful in focusing on the learning of related languages, even if these processes take place unconsciously and there is no tangible evidence of their development. Of course, the only data available are the linguistic productions, in particular the analysis of errors which helps us to deduce the cognitive mechanisms that come into play. In this regard, it is necessary to remind the change of perspective introduced by Corder's (1981) considerations about the meaning of the errors of the students of L2. He introduced a new positive vision of the error in which it constitutes a creative procedure process in the formulation of hypotheses on the new language. The perception of proximity and transfer condition the learning process of Spanish by Italian native speakers in each phase of learning and in every linguistic sector, or more generally in the acquisition of affinity languages.

3. The construction of the interlanguage

The problem related to transfer lies within the psycholinguistic aspects of the acquisition of second languages and it's even more relevant in the teaching of Spanish to Italian speakers. The transfer means a diversified process and not only a negative mechanism that causes errors in production.

This concept is based on the Chomskian approach, according to which the learner does not merely imitate patterns, but acquires the rules of language through complex cognitive processes. According to studies on analysis errors, learning a language follows structured systems; the student sets them through mental processes that originate an intermediate linguistic system

between L1 and L2. This intermediate system is the interlanguage, or a temporary linguistic system, in continuous evolution, which the learner elaborates though hypotheses to be verified on the functioning of the second language and in which elements of the ML are also found. In other words, it is a constantly evolving linguistic system that proceeds, through the various stages of learning, moving away from the ML rules to get closer to the second language ones.

The interlanguage theory also helps to reevaluate the role of the L1 in the new language learning, as an inevitable reference point in the process. Comparing acquired knowledge with new knowledge is a universal cognitive process that should not be undone in the case of language learning. The investigations in different sectors of the language sciences underlines numerous peculiarities of the process of learning similar languages but there is a clear evidence of speakers' tendency to use specific cognitive strategies as soon as they perceive closeness.

It is also necessary to highlight the need to reinforce the comparative activities spontaneously carried out by the speakers. It helps them to distinguish similarities and differences, regularity and irregularity; in other words, to strengthen the IL exploration strategies (Dabène 1996). In this way, they will be able to control interference and at the same time to take advantage of proximity. Hispanophones are one of the most studied linguistic groups, especially in situations of contact with English, while little attention has been paid to the acquisition of related languages, which have peculiar features. Therefore IL, like all natural languages, contains a system of rules and basic elements (lexical, phonological, grammatical, etc.) whose organization constitutes a functional and coherent whole, which is characterized by being systematic, in the sense that some structures recur constantly in IL.

Starting from this premise, Adjemian (1976) argues that before stating that the recurrence of an output that does not reflect the rules of L2 is due to a transfer process, it would be necessary to study how often and in which linguistic contexts it appears in order to understand if it is the result of the internal consistency of a given IL or of a transfer process. According to the author, the aspect that differentiates IL from a natural language is permeability, in many cases coming from the infiltration of rules extraneous to the IL, which contaminates internal systematicity, or from a hypergeneralization or distortion of a rule of one's own IL. IL becomes permeable when the pupil tries to communicate in L2 using structures he has not yet organized in his IL: in other words, the use of hypergeneralization or simplification strategies violates the internal systematic nature of IL and makes it permeable. In this perspective, Adjemian (1976) believes that the notion of stability of the IL should refer only to those parts of the system that have lost their permeability: therefore, we must not focus exclusively on the presence or absence of correct or incorrect forms but rather on their persistence.

This is what makes them stable and recurrent allowing them to be considered IL rules; but, since they are the result of consolidated infiltrations, they are considered as fossilizations. According to Adjemian, fossilization and backsliding are other exclusive features of IL which differentiate it from natural languages. Fossilization of a component or subcomponent of an IL can be the result of one of these three processes (1976: 97-99):

- the generalization of an element of the L2 with respect to the L2 itself;
- a loan from the L1 in the IL;
- the correct reproduction of an element of the L2 in the IL.

Adjemian argues that while in the case of fossilization it may happen that the learner is not aware of the mistake, in the case of regression, however, the speaker should be able to formulate hypotheses on the correct rule or form.

Tarone (1982), who analyzes the IL variability from a sociolinguistic perspective, considers IL as the product of a continuum of styles that depend on the context of use. He affirms that each learner of a L2 elaborates a series of different ILs ranging from a meticulous style, in which the speaker pays particular attention to the form, to a less scrupulous one in which he focuses more on the content than on the form. Tarone believes that the more meticulous style, despite being the result of greater attention to the form, is less stable, therefore more variable, than the less scrupulous style, which is less permeable to infiltrations from the L1. Tarone defines the IL as a capability continuum and binds its development to the degree of attention that the learner is able to activate in his own productions and to the ability to effectively use the linguistic knowledge at the time of implementation: both elements are bound to the acquired competence, which is configured as the average term between linguistic knowledge and its implementation.

3.1 The fossilization in the interlanguage

Selinker identifies five basic processes present in the latent psychological structure that intervenes in the construction of the IL and also introduces the notions of fossilization and backsliding or regression, defining the first as those items, rules and linguistic subsystems that the speakers of a particular L1 tend to keep in their IL in relation to a given object language (OL), regardless of the age of the student or how much training they have received in the OL (1972) and the second as the manifestation in the IL of erroneous forms of the OL that already seemed eradicated and that arise when the pupil expresses in the OL new concepts that imply a greater attention to the content than to the form or in situations where the affective filter prevents him from controlling his own productions or, to a lesser extent, in case of tiredness and / or maximum relaxation. According to Selinker (1972), the most interesting phenomena to be studied in IL as a product are the fossilizable elements with respect to the following five processes:

1) If they are the result of the influence of L1, we may speak of linguistic transfer;
2) If they are due to phenomena attributable to teaching techniques, we speak of transfer in education;
3) If they are connected to the pupil's ability in front of the L2 material to be learned, we talk about learning strategies;
4) If they are the result of the way the pupil tries to communicate with L2 native speakers, it is about communication strategies;
5) If they are the result of hypergeneralization of the linguistic input of the L2, we talk about learner attempts.

Selinker also reports the difficulty of irrefutably identifying which of the five processes mentioned are attributable to some interlinguistic productions, given that sometimes the latter are the result of a set of factors, and also the difficulty in predicting what the fossilizable elements will be. Subsequently, Selinker and Lamendella (1978) consider fossilization as the cessation of learning before the L2 rules are assimilated and that it can manifest itself at all linguistic levels and in all areas of speech, despite the motivation and the possibility of exposing oneself to the L2.

Nakuma (1998) summarizes the four main hypotheses regarding fossilization: the first is the one proposed by Weinrich which considers fossilization as a 'permanent transfer' without taking into account other possible causes; the second is the one introduced by Nemser (1971) who considers the IL as a "permanent intermediate system" and denies the possibility that an adult

learner may speak an LS in the way a native speaker does; the third comes from Hale in 1988, which considers fossilization as the 'manifestation of a difficulty in recomposing the L2 parameters' and, finally, the fourth is that of Selinker and Lakshamanan (1993) which is considered the result of the Multiple Effects Principle (MEP). Since we still do not know why some structures fossilize and others do not, these authors believe that fossilization is the result of a stabilization of interlinguistic forms that occurs when one or more factors of the acquisition of a L2 interact. This is what they call MEP, in which there is a weak form, where transfer is a co-factor for the determination of the multiple effect, and a strong form, where transfer is the fundamental factor in determining the multiple effect. Selinker and Lakshmanan go as far as saying that when MEP is active, it is not possible to de-fossilize fossilized structures through language acquisition strategies.

Not everyone agrees with this point of view and they prefer to share with Durão the belief that, at least in the case of related languages, 'fossilization can be undone' given that (2007: 55):

> el mantenimiento de ciertos errores puede estar más relacionado con factores personales que con una incapacidad para interiorizar datos lingüísticos correctamente [...] y entendemos que si la motivación lleva a los aprendientes a aprender una LE jugando, por tanto, un papel activo, procesando, generando hipótesis, comprobándolas y refinándolas, son los propios aprendientes quienes determinarán el nivel lingüístico que su interlengua va a alcanzar y no, meramente, las circunstancias de aprendizaje.

As Nakuma (1998) argues and as Durão points out, since there is no agreement between scholars or empirical evidence that the principles of Universal Grammar are totally or partially available or whether they are at all. Nakuma argues that one of the causes of fossilization could be the learner's deliberate decision not to learn some forms of L2 being confident in having already mastered them. In other words, fossilization would be the result of the learner's perception that a form of L2 has an exact correspondent in L1: according to the principle of the economy of language, the learner avoids learning a structure that he considers useless. This theory attributes the cause of the fossilization entirely to the transfer and states that, until the student becomes aware of his erroneous perception, any attempt to correct the fossilization will be useless. Nakuma adds that, since fossilization depends on transfer of L1 or other known languages, it is also necessary to take into account the possibility of positive fossilization, in other words what occurs when the perception of correspondence between L1 or others known languages and L2 is correct. The same author claims that 'negative fossils' are usually combined with other errors that help identify them. Therefore, they should not be considered "permanent errors" but rather unacknowledged forms of L2 and, from here, we may start demonstrating the false perceptions that generated them. Durão (2007) concludes by saying that fossilization consists in the presence of a characteristic feature of a precise stage of language learning in another but also in the weakening of the development of the IL in a certain stage of language learning, which can be modified and associates the phenomenon with various factors, among which: the need to compose sentences with elements that are not yet fully mastered; the insufficient amount of input received, the lack of opportunities to practice L2 and the excessive generosity of some L2 native interlocutors who, upon understanding the statements produced by the learners, do not give a significant feedback from the learning point of view.

4. The Contrastive Analysis

The first researches on L2 teaching / learning were based on the Contrastive Analysis of languages, which assumed that the learner's mistakes in a foreign language were due to the

differences between the mother language and the foreign one and to the transfer of L1 in the use of L2. The mother and second language systems were investigated and compared in their lexical, morphological, syntactic and phonological structures to highlight the student's potential errors and to individuate the possible obstacle (with the pedagogical intention of helping to overcome the habits related to the mother language).

The study of the linguistic behavior of the learners showed the extreme weakness of the line of studies focused on Contrastive Analysis in fact, there were errors in contexts of identity or similarity between the two linguistic systems. It became evident that other factors played a decisive role. In fact, the behaviorist model ignored the creative aspect of language, focusing almost exclusively on context influence. A huge part of this research has been interested in spontaneous L2 acquisition, which, due to the high exposure to foreign language and low impact of control activities typical of school settings, is more suitable for the study of the mental mechanisms involved.

Comparison is a universal cognitive strategy. In the spontaneous L2 acquisition context, the speakers lean towards the observation of the new language but, at the same time, they experience contrasting procedures, particularly productive in case of marked analogies between L1 and L2. When the perception of distance between L1 and L2 is minimal, the learning process develops in a peculiar way, with a high initial ease of understanding but with a strong tendency towards contamination phenomena (particularly evident in natural contexts). In the following phases, there is a tendency towards distancing, characteristic of guided learning.

In summary, the teaching of L2 cannot refuse the contrast, which is particularly recommended when the distance is reduced and perceived. Of course, talking about contrastivity does not mean returning to the old hypotheses of the Contrastive Analysis but adopting a more dynamic approach characterized by an explicit contrastive reflection. Among the main implications of contrast, we can highlight:

- identification of the psycholinguistic aspects related to language acquisition by teachers for the students, they must be aware of the typological relationship between L1 and L2 and the repercussions on the pupil's behavior while facing the new language;
- linguistic comparison between the systems concerned as provided by the traditional Contrastive Analysis but extended to the phonetic, morphosyntactic and lexical aspects and to the pragmatic and cultural ones.
- explicit contrastive reflection, according to the current pedagogical orientation that supports the development of adequate metalinguistic knowledge, that is, an understanding of system functioning. Once it is ascertained that the student spontaneously tends to compare L2 with L1, it is advisable to strengthen the comparison strategies.

The first two aspects refer to the didactic program and partially coincide with the traditional Contrastive Analysis, but only according to a cognitive approach and not to a conductive one.

Concerning the explicit reflection (rejected by the structuralism) we can add that activities of this type can occupy a space that varies according to the curriculum design chosen. For example, the reflection will be dominant in the case of university students of language and minimum in the case of children and adults with a poor cultural preparation. But none of this should be missing, considering that often the request for explanations comes from students in the first place. The previous reflections on the learning process also suggest the opportunity to adapt the teaching methodology to the characteristics of the different levels of competence:

- in the initial stages, the ease in understanding helps a rapid immersion in L2 but it is better to pay attention especially to the pronunciation, so that no transfer is established;
- further on, the student will need many reinforcement exercises to overcome the difficulties and achieve a satisfactory and productive ability;
- finally, when the competence is already consolidated, it is advisable to use techniques that enhance the learner's motivation and active participation, also in the treatment of contrasting difficulties, which can be addressed through specific tasks.

The Contrastive Analysis of different languages had to underline both similarities and differences in behavior, which represent an obstacle to language learning. This contrasting phase, with a clear behavioral matrix, insisted on the difference between L2 and L1 structures with the pedagogical intention of helping to overcome the habits related to the mother tongue. It is undeniable that, among Italians who learn Spanish, students at a higher level represent a minority, for the hierarchical position of this language among the L2 studied and the high possibilities of exploiting basic knowledge. In addition, data on the more advanced stages are seldom because the interest of researchers is concentrated in the early stages.

5. The role of L1 in language learning

The syntactic and lexical differences between languages represent the theoretical and methodological space in which the learning of L2 is inserted. The variation between languages can be reduced to a set of fundamental and universal principles and categories on which the knowledge of L1 and L2 are respectively constituted (Baldi 2019). The notion of parameter allows to clarify the relationship between Universal Grammar, L1 and L2: the parameters are different ways of lexicalizing, in different languages. As White (2003) notes, the theory of the Universal Grammar (UG) and of the parameter setting is not a true theory of the transition towards the acquisition of L2; the transition brings into play the ability to recognize and modify a parameter or the filtering effect that the grammar of L1 can have on L2 by inhibiting or facilitating the perception and recognition of the properties of L2.

The learning process is the transition from an initial state, in which knowledge of the L1 / L2 specification is absent, to that in which a certain degree of knowledge is reached. Regarding L1, the end point of the process is the steady state, substantially similar for all children exposed to the same language. For L2, the steady state varies from speaker to speaker according to the different factors that interact with learning, both in the case of speakers of the same L1 and of speakers with different L1 (White 2003: 241).

According to Berwick and Chomsky (2011: 37) it is the processes of externalization, that is the morphological and phonological means which convert syntactic objects into entities accessible to the sensorimotor system, to create linguistic differences. The parameters, in essence, are not other than the result of the outsourcing of the syntactic combinations by the lexical elements both of content and grammar.

If the variation between languages depends on the way the lexicon of a language cuts out the conceptual and phonetic space available for the language, we can ask ourselves if the acquisition of L2 is sensitive to the differences between L1 and L2. Here the question arises about how much the knowledge of L1 can influence, favoring or damaging, the structures of L2 (Cook 2008). The transfer theory (Selinker and Gass 1983) starts from the observation that the learner of L2 can be based on the properties of the lexical elements of L1 and on the structural organization in the L2 acquisition process. In this context, it is assumed that the linguistic habits associated

with L1 interfere with the learning of L2 and are therefore responsible for the quality of the productions in L2. Of course, we can expect the learner to use his linguistic knowledge in the L2 development process, as Cook recalls (2008: 13):

> The first language helps learners when it has elements in common with the second language and hinders them when they differ. Spanish speakers may leave out the subject of the sentence when speaking English, saying 'Is raining' rather than 'It is raining', while French speakers do not. The explanation is that subjects may be omitted in Spanish, but they may not be left out in French. […] Various aspects of L2 learning need to be investigated before it can be decided how and when the first language is involved in the learning of the second. Though transfer from the first language indeed turns out to be important, often in unexpected ways, its role needs to be established through properly balanced research rather than the first language taking the blame for everything that goes wrong in learning a second.

However, L1 is not the crucial factor; next to it there is the language faculty that returns to operate and, more generally, the individual's conceptual abilities. Giving an excessive weight to L1 is the result of structural methods based on Contrastive Analysis, inspired by methods and techniques for segmentation and classification of linguistic expressions which refers to the structuralist approach (Weinreich 1953, Lado 1957). The basic traits of structuralism, in turn, reflect and implement behaviorist approaches. The comparison between units and constructions of L1 and L2 brings into play, in fact, an essentially conventionalist consideration of linguistic devices, characterized by the correspondence to a particular labeling of objects and events in the conditions of communication. The teaching of L2 which is inspired by this method provides a gradual exposure of the structures of L2 that differ from those of L1. The aim is to reduce the effect that different structures between L1 and L2 could have on the learning process, blocking or damaging the structures of L2 (negative transfer). It is unclear why having a morpho-syntactic rule or property phonological in L1 should block or damage the learning of L2, since such properties simply would not have positive evidence in L2. They may, however, appear in L2 in form of imperfections or deviations from the norm (Baldi and Savoia 2018).

As already seen, Selinker (1972) calls interlanguages the intermediate stages reached in the learning process with respect to the object language. In Corder's terms (1981: 90), the interlanguages tend to arrange themselves along an evolutionary axis that aligns systems of increasing complexity, dynamically oriented towards L2. In this vision, the interlanguages are not only the result of wrong acquisitions, that is, acquisitions only partially corresponding to L2 or totally inadequate which are temporary but internally incomplete. The observation that learning, in the same way as in the acquisition of L1, provides regularity in the order of acquisition of grammatical morphemes (Brown 1973, Dulay and Burt 1974) and, in general, in the development sequences of constructs, such as interrogation and denial agrees with the hypothesis that intermediate systems are not only the result of imitation and are structured on the basis of principles.

According to this approach, error analysis plays an important role, in particular because it contributes to highlight the types of errors that do not depend on transfer nor from an inadequate application of the properties of L2 (Eubank 1991). In the process of teaching and learning of L2, especially in the school context, the error is the "failure to achieve a didactic goal" (Cocchi et al. 1996). It corresponds, in any case, to the application of a rule or generalization not belonging to L2 or the failure or incomplete acquisition of the morpho-lexical properties of elements of a language. Language exercises, including formal ones, metalinguistic reflection and the verification tests aim to bring the learned language closer to L2, identifying the critical

stages of the process. The error typology clearly recalls that found in the acquisition process of L1, with the difference that the errors in L2 also depend on – or are mainly due to – the transfer of L1 on L2. So, it is interesting to distinguish evolutionary phenomena, similar to those that characterize the acquisition of L1, from those related to the transfer, which relate L1 rules to interlinguistic L2 rules. This is particularly important in the case of learning L2 in older children school, therefore still in the space of the critical period. If we consider learning L2 as a construction process based on principles of the faculty of language, we must ask ourselves what role the structures of L1 play on progressive learning over those of L2. It is evident that a part of the knowledge of L2 is influenced by morpho-syntactic, lexical and phonological properties of L1 (Cook 2008, Cook and Newson 2007, White 2003). This is even more valid if we assume, as already proposed, that the variation is ruled by lexical properties of the elements.

5.1 The Universal Grammar and L2 learning

The issue of the access to the Universal Grammar in the acquisition process of a L2 is complicated. Indeed, following Chomsky (1986, 2002, 2005) we can consider the UG as the set of principles that is imposed on the primary data to which the child is exposed in the L1 acquisition process. It follows that the language faculty can be conceived as a state of mind / brain of the child from which it begins the acquisition, that is the training of knowledge of the particular language. The initial state therefore contains the general elementary properties of natural languages, the format of language possible. We will call this set of properties, principles and instructions, UG. The acquisition determines the development of subsequent states that implement parametric choices and a lexicon, until reaching adult linguistic knowledge, that is the complete set of instructions relating to the structures and lexical properties of a language, the particular internal language. Internal language represents the stable state, which coincides with the initial state fixed on a certain lexicon and on certain principles and structural properties (Cook and Newson 2007: 50). Stable state is achieved through a series of possible intermediate states that emerge, as is known, in the acquisition process of the child.

For L2, therefore, access to the initial state of L1 is no longer possible, given that the speaker has already set the UG properties on its language. Consequently, the development of L2 starts from the stable state of L1 and the instructions contained therein to obtain some knowledge in L2. The speaker consequently develops a language or handles UG instructions from the stable state of L1 or based only on L1. We will therefore have the following possibilities (Cook and Newson 2007: 232):

- the L2 learner has no UG;
- the L2 learner can access to a second copy of the Official Journal;
- the L2 learner can resort to UG as it is incorporated in the stable state of L1;
- the L2 learner can partially use UG.

The first hypothesis excludes the use of the UG, now incorporated in L1. It will be the properties of L1, together with cognitive and learning strategies, that will bring the speaker to master L2. There are elements in favor of this conclusion, including the following: knowledge of L2 never reaches a level equal to the native one; some languages are easier to be learned from others depending on the L1; L2 is subject to fossilization rather than progress to full native language level; learning L2 gives much more variable results if compared to the learning of L1. On the other hand, it is difficult to understand how learning of L2 can be accomplished without any

element of language faculty. The second hypothesis, Full Access Hypothesis can be linked to the often observed fact that the development of L2 is in many cases independent from L1 properties of the learner, as shown for example by the learning order of grammatical morphemes (Dulay and Burt 1973) up to the basic properties of grammars shared by speakers of different L1. Cook (1988), based on White (1986) and other experiences, he concludes that L1 significantly influences the learning of L2; however, access to the UG must remain open for the setting of the rules that differ from the mother tongue. The ability to leverage the UG would be demonstrated from the poverty of th topic stimulus: the acquisition of L1 in fact implies knowledge linguistics that the child cannot derive from the superficial properties of the sentences to which the child is exposed. This fact constitutes one of the fundamental proofs in favor of the existence of the language faculty as a genetically determined mental capacity. Similar phenomena also distinguish the learning of L2: to a learner of L2 some properties are known which may not have been acquired by the environment. The idea is that this knowledge comes, as in the case of the acquisition of L1, from general properties of the language faculty. All this leads Cook to rule out the possibility of "wild grammars", that is arbitrary and random constructions, and to conclude that access to the UG is still available. In fact, the very notion of UG and of language faculty has changed compared to first formulations of the Chomskyan framework. If we assume that the UG is nothing but the initial state that will be changed by exposure to L1, we will necessarily have to predict a certain degree of transfer of L1 on L2, a phenomena observed in literature (Baldi and Savoia 2018). This leads to a less radical and more convincing hypothesis, according to which access to the UG would be mediated by the stable state (Schwarz and Sprous 1996).

The last hypothesis, according to which the L2 learner can partially use the UG, corresponds to the idea that once the stable state of L1 has been reached, the speaker can access the UG only partially, thus leading to the disposal of simplified or reduced structures, those which would precisely emerge in many initial states of L2. Examples are provided by the speakers who acquire Italian L2 by reducing the agreement morphology of the verb or noun. In general, it would be the functional morphology of a language that underwent the greatest limitations, as indeed happens in many language disorders.

We must consider that the learner builds language structures on the basis of principles of the faculty of language and, at the same time, taking into account the parameterization set in L1, which must be continuously related to the input in L2. In one of his latest articles Krashen (2020) emphasizes the importance of the quality of the input, which does not necessarily have to be captivating itself, since it is up to the teacher to make it so through teaching action. The motivation is provided by materials and not by the learner, since the learning based on the 'need' runs out rather quickly.

The learning process therefore involves intermediate stages, characterized by a more basic organization, which may tend to get closer and closer to the target language or to consolidate and fossilize. In this case, the learner, both in spontaneous and guided contexts, will tend to reproduce phonological and morphosyntactic fossilized solutions different from both L1 and L2. The construction of the various stages of these different language states is ruled by cognitive components internal to language, together with extralinguistic factors, related to communication needs. This is the base in which the communication methods operate and, in particular, on those oriented on the needs of the learner and his motivation. For the approaches of cognitivist type, executions diverging from L2 are not considered negatively as failure in learning, therefore unlike the assessment associated with the behavioral approaches, but as the manifestation of the elaboration phase grammar by the learner, useful for grading teaching (Baldi and Savoia 2018: 72).

The teaching of L2 that starts from this assumption uses teaching methods aimed to create linguistic contexts that are as rich as possible, capable of providing input linguistics sufficient to power the devices of the language faculty. Development of the internalized knowledge of L2, or of the specific linguistic competence, is the purpose of the acquisition process. In this context, the grammatical correctness of the sentence is seen as a secondary issue, insofar as it is not related to specialized levels of cognitive organization. Given these premises, correctness will be the result of an integrated process that combines different and appropriate communication contexts, diversified linguistic inputs, and any metalinguistic reflection components through dictations and written tests.

Returning to the frequently asked question: is learning nearby languages easier? We can say that the common belonging of L1 and L2 to a linguistic type (morphological or syntactic) obviously favors the learning of some grammatical categories. Italian and Spanish both derive from Latin and this justifies the significant amount of common novel lexicon. This implies that the two languages not only share similar ways of constructing words and sentences or expressing the same grammatical categories, but also a very similar if not identical lexical "material". Once established what we mean by neighboring languages, we can therefore observe that the Hispanophone speakers are facilitated in learning in the sense that, in relation to speakers with other L1, they may start from a more advanced level. The Spanish speakers skip, so to speak, the phase of the prebasic variety and is placed between the basic and the postbasic by virtue of the possibility of establishing strong links between his source language and the one they want to learn (Schmid 1994).

6. Conclusion

Despite of the lack of specific experimental data, it is clear that the peculiarity of learning an L2 not far from L1 can be summarized in the following aspects:

- the availability of an initial knowledge platform;
- the use of some particularly productive learning strategies, based on the comparison between L1 and L2;
- the variation of the perception of distance, which determines oscillations between approach and departure;
- the rapid evolution of the interlanguage in the initial phase, with a subsequent tendency to stagnation and fossilization.

Considering that, it is necessary to adopt an appropriate pedagogical approach to take advantage of the closeness benefits and to control the negative aspects, at the same time. Contrastivity, in its distinct modalities, is one of the most advisable teaching strategies. In addition, there is a need to increase researches in the field of guided language learning, so that the teaching methodology can adapt more and more to the type of learner, according to the relationship of proximity between the languages involved.

The Contrastive Analysis for teaching (based on the systematic comparison between the L1 and the L2) tries to identify the areas of greatest difficulty. It plays an irreplaceable function and it should consider all the linguistic aspects, from phonetics to morphosyntax, vocabulary and speech. This goal is still far from being achieved in the case of Italian and Spanish, the aspects that still need to be clarified are substantial, even putting together the partial works available. There is a need for a cumulative work able to examine the teaching / learning process in an effective way.

The Contrastive Analysis reacquires strength in a glottodidactic perspective, it is useful not only for a purely predictive purpose as it was in the past and excluding the use of the L1 from didactics is not sufficient to prevent possible transfer. The learners must have the possibility to access their linguistic heritage activating the comparison. The transfer phenomena appears no more as a passive process for the learner but as an active process, or rather as a cognitive and communicative strategy. However, caution is necessary in strengthening the spontaneous strategies of active transfer, since they promote the hybridization and fossilization phenomena, especially when the interlinguistic similarity is more pronounced.

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Quaderni di Linguistica e Studi Orientali- QULSO
Working papers in Linguistics and Oriental Studies

Firenze University Press
https://oajournals.fupress.net/index.php/bsfm-qulso

OPEN ACCESS

Citation: A. Paparatty (2023) Lo *storytelling* come elaborazione cognitiva delle esperienze in bambini con DSA. *Qulso* 9: pp. 357-378. doi: http://dx.doi.org/10.13128/QULSO-2421-7220-15153

Data Availability Statement: All relevant data are within the paper and its Supporting Information files.

Competing Interests: The Author(s) declare(s) no conflict of interest.

Lo *storytelling* come elaborazione cognitiva delle esperienze in bambini con DSA

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Abstract:

This article aims to explore a linguistic dimension's aspect that significantly characterises human forms of communication: the ability to elaborate stories. Since narration represents the main cognitive tool involved in the data of experience storage operation, the proposal is to identify the intrinsic pedagogical potential that resides in it. Starting with an investigation of the cognitive properties underlying their interpretation on a narrative level, brain mechanisms underlying the act of writing are observed. A conceptual reformulation of the narrative experience as an educational strategy is suggested: this idea made it possible to develop a linguistic analysis of narrative processes in a group of children with specific learning disorders or other fragilities. Narrative constitutes a space for a recapitulation of experiences during the child's stages of cognitive development. The elements of the storyworld are interwoven, resulting in an overall representation of the narrated events. The texts produced highlight the need to narrate an own autobiographical experience and the conviction that our link with storytelling is the only possibility of constructing contexts of meaning.

Keywords: *Children, Cognitive Processes, Educational Contexts, Language, Storytelling*

1. Introduzione

Che la narrazione possa considerarsi come il tratto distintivo dell'umanità è avvalorato dal suo carattere universale e pervasivo. "Passiamo la vita a fabbricare storie che fanno di noi i nobili, per quanto fallaci, protagonisti di drammi in prima persona" (Gottschall 2018: 174). E ci ritroviamo ogni giorno anche dentro le storie degli altri. Ogni giorno riceviamo proposte dalle numerose agenzie narrative che incrociamo durante le conversazioni quotidiane. Trascorriamo gran parte del tempo a raccontare storie ad altri individui e la metà di questo tempo è impiegata nella produzione e nell'interpretazione di narrazioni spontanee (Eggins e Slade 1997). Costruiamo interpretazioni più o meno coerenti della realtà attraverso i nostri racconti. Tuttavia,

le nostre narrazioni non sempre hanno un riscontro fattuale: spesso, alludono a situazioni mai accadute o a eventi che potrebbero ancora verificarsi. Non soddisfano, quindi, criteri di verità, ma si affidano a principi di plausibilità e coerenza (Smorti 1994).

Le narrazioni appartengono, storicamente, tanto alla mente quanto alla cultura. Rappresentano il mezzo attraverso cui avvengono gli scambi culturali. Non solo: gli individui costruiscono le storie per comprendere il mondo e sé stessi. Le storie sono così costruite per organizzare i dati esperienziali nella memoria, in particolare quando una violazione delle aspettative necessita di una nuova interpretazione. In questo senso, l'atto di narrare acquisisce un valore euristico paragonabile al *problem solving*: se da un lato si occupa di veicolare significati, dall'altro si impegna a costruire i significati stessi. In quanto esseri umani, raccontiamo storie per dare un senso alle nostre esperienze: la mente narrante, assuefatta di significati, è una fabbrica che produce storie predisposte a individuare schemi significativi (Bruner 2006). Come gli individui apprendano a "fare cose con le parole" (Austin 1962) è una questione assai dibattuta negli ultimi decenni. La teoria di Chomsky suggerisce la presenza di una disposizione originaria, ossia di un pacchetto di abilità innate che risiede in specifiche aree cerebrali, deputate all'elaborazione del linguaggio e ad altre forme di apprendimento (Baldi e Savoia 2018). Trattandosi di un'abilità naturale, la competenza narrativa, o *storytelling*, si forma nelle fasi iniziali dello sviluppo cognitivo dell'individuo e si perfeziona attraverso un contatto prolungato con le storie e "ripetute esposizioni" a esse (Levorato 1988: 255). Una delle caratteristiche fondamentali delle storie è la tensione tra una polarità canonica (credibilità) – in cui si sviluppa il corso "naturale" degli eventi – e uno scarto, o violazione, delle aspettative (raccontabilità) mediate dal racconto stesso (Labov 1997). Questo approccio analizza la narrazione non tanto dal punto di vista delle informazioni contenute nel racconto, quanto dalla prospettiva di una forza drammaturgica che nel racconto risiede e che tale racconto esprime.

A partire da un'osservazione dei processi mentali coinvolti nell'elaborazione delle storie, in linea con l'idea che la narrazione sia il principio fondante delle strutture cognitive, è possibile affermare che i meccanismi deputati all'organizzazione dei dati esperienziali abbiano prevalentemente un carattere narrativo. A tal proposito, un'analisi degli aspetti formali del racconto consente di definire la narrazione come una strategia di ricapitolazione dell'esperienza, ovvero del mondo narrativo che ricalca gli sviluppi degli eventi narrati. Nel tentativo di tratteggiare i contorni della mente da cui prende vita la capacità di narrare storie – capacità che contribuisce a definire la natura umana in modo profondo – il presente studio intende mostrare l'efficacia della pratica narrativa all'interno di percorsi formativi complessi e in contesti educativi. Oggetto d'analisi è l'espressione linguistica, semiotica e narrativa di un gruppo di bambini con disturbi specifici dell'apprendimento in relazione ai loro processi inferenziali. L'analisi consente di valutare l'esperienza narrativa come una strategia valida per la formazione individuale e per un'intenzionalità nella relazione educativa. Giacché la narrazione attiva un "pensiero narrativamente orientato" (Castiglioni 2011: 101), il procedere educativo, orientato narrativamente, collabora alla costruzione di un "contesto di apprendimento rassicurante" (Bruner 1991: 101).

2. L'autoracconto come accesso privilegiato al sé

Le storie sono mappe. Quando siamo piccoli, contribuiscono alla conoscenza del mondo fuori da noi; quando siamo adulti, ci aiutano a conoscere meglio ciò che si trova dentro di noi.

Come il linguaggio umano, anche la finzione narrativa si serve di una Grammatica Universale (GU) per accedere alle strutture profonde in cui gli eroi affrontano le proprie sfide e combattono per superarle. La mente/cervello dell'uomo è un sistema complesso in cui varie

componenti interagiscono, una delle quali è la cosiddetta facoltà del linguaggio. Un bambino, dotato della facoltà del linguaggio come parte del suo patrimonio innato, è posto in un ambiente sociale dove apprenderà un I-linguaggio (Chomsky 2021: 33). La sua facoltà di linguaggio seleziona i dati rilevanti dagli eventi che hanno luogo nell'ambiente, e utilizzando tali dati in un modo determinato dalla sua struttura interiore, egli costruirà una lingua che verrà incorporata nella mente. In questo senso, il linguaggio è solo uno dei tanti sistemi di conoscenza che, sul piano cognitivo, il bambino giunge ad acquisire. Essendo concepita come l'esito di un progetto geneticamente determinato, l'acquisizione del linguaggio avviene spontaneamente. La GU si riferisce – per Chomsky – allo stato iniziale comune a tutti gli individui dal momento in cui vengono al mondo. Essa rende conto dello stato della facoltà del linguaggio sia precedente che successivo al contatto con i dati forniti dall'esperienza. Questa dotazione biologica e squisitamente umana presenta variazioni minime tra gli individui, salvo in condizioni di presenza di alcune patologie di tipo neurolinguistico. In linea generale, i bambini si accostano al compito di acquisire il linguaggio con un ricco schema concettuale già instaurato e attraverso un sistema di assunti circa la struttura di enunciati più complessi. Considerare "l'aspetto creativo del linguaggio" (Chomsky 2021: 6) significa, dunque, che gli individui sono in grado di potenziare la capacità di utilizzare il linguaggio senza acquisire nuove conoscenze sul linguaggio stesso: a migliorare sarà, quindi, l'abilità linguistica, non il sistema di conoscenza. In questo senso, la dotazione biologica umana è risvegliata dall'esperienza e affinata nel corso delle interazioni del bambino con il mondo umano e materiale.

Secondo la teoria benjaminiana dell'esperienza, l'idea è che il soggetto non sia mai trasparente a sé stesso (Benjamin 1976). Questo perché, durante la nostra vita, ne siamo sempre i co-protagonisti: le nostre azioni si iscrivono in una trama di relazioni con le esperienze di altri individui. L'esperienza non è soltanto ciò che viviamo, ma il processo che collega ciò che abbiamo vissuto, retrospettivamente, a una sorta di "risveglio", una riappropriazione dell'esperienza stessa come nostra. Il processo che Benjamin stesso definisce come esperienziale è, quindi, la scoperta di cose che in fondo sono sempre state lì, a portata di mano, senza che ce ne accorgessimo: quasi un ritorno del soggetto a sé stesso (Smorti 2007). In questo senso, "[l'] esperienza è incompleta, a meno che uno dei suoi «momenti» non sia […] un atto creativo di retrospezione, nel quale agli eventi e alle parti dell'esperienza viene attribuito un «significato»" (Turner 1986: 43). Definiamo, dunque, come esperienza tanto il "vivere attraverso" quanto la capacità di riconsiderare ciò che si è vissuto ("pensare all'indietro"). In ogni caso, il racconto non è l'unica modalità in cui l'esperienza si realizza. Essa si compie anche nella forma di una "incorporazione" di abilità che, maturate in noi attraverso l'esercizio, ci orientano senza che la riflessività che il linguaggio consente svolga necessariamente una funzione. Molti aspetti dell'elaborazione dell'esperienza coinvolgono le pratiche narrative: raccontare e raccontarsi possono offrire specifiche prestazioni, come quella di organizzare la conoscenza entro una grammatica e una sintassi che, di per sé, sono già modalità di far proprie tali conoscenze, poiché consentono di inserire il proprio vissuto entro un sistema di coordinate condivise. La modalità specifica di utilizzare lo strumento linguistico, ovvero il discorso narrativo, dà ordine al materiale narrato attribuendogli una trama, collega fra loro elementi che altrimenti apparirebbero sconnessi, stabilisce nessi causali e li dispone secondo un ordine temporale e sequenziale. In questo modo, il soggetto è in grado di orientarsi entro la serie di accadimenti di cui è (co-) protagonista.

Se l'autoracconto consente all'io di farsi tessitore di una storia (Demetrio 1996), allora recuperare l'esperienza autobiografica come cura di sé significa raggiungere una nuova consapevolezza del presente grazie alla scoperta di modalità interpretative che prima non si coglievano. Le autobiografie narrative equivalgono alla nostra identità. Eppure, i racconti su di noi sono

tutt'altro che un resoconto obiettivo. Al contrario, rappresentano una narrativa colma di dimenticanze strategiche e significati elaborati. Ciò accade perché la memoria umana è uno "storico inaffidabile" e quel bisogno di autorappresentarsi come gli eroici combattenti delle nostre epiche distorce il proprio senso del sé. Un resoconto narrativo inadeguato di sé stessi può dar luogo, nel caso di bambini con DSA o con disturbi del linguaggio, a una scarsa autostima o a una distorsione della percezione di sé in termini psicologici. La parola è uno strumento "contagioso", in quanto ha la possibilità di contrastare l'incorrere di questo fenomeno ponendosi come valido ingrediente educativo. Pertanto, la narrazione come terapia rappresenta una strategia efficace per convertire un resoconto inadeguato in una "storia unica" o alternativa, in grado di ridefinire il problema dopo la sua esternalizzazione (White 1992: 36). La consapevolezza del racconto nel "qui e ora" non consente di arrestare il tempo, ma ci permette di creare uno spazio in cui inserire l'ascolto di sé e far riemergere la storia di ciò che siamo, o meglio la *storia raccontata* di ciò che siamo. A tal fine, l'autoracconto dispiega "il processo con cui attraversiamo la vita, e il ritmo con cui a tratti prendiamo coscienza di ciò che stiamo attraversando" (Jedlowski 2008: 147).

3. Le funzioni della narrazione nei processi inferenziali

Bruner (2006) sostiene che le storie sono strumenti insostituibili per promuovere lo sviluppo linguistico e la conoscenza del mondo dal punto di vista culturale ed emotivo. In altri termini, lo sviluppo di un'adeguata capacità narrativa rappresenta una tappa evolutiva fondamentale ai fini dell'organizzazione del pensiero logico e del ragionamento verbale.

Lo *storytelling* nasce precocemente nei bambini affinandosi nel corso dei primi anni di vita, per emergere in modo più decisivo a partire dai 5-6 anni di età. La comprensione e la riproduzione dello schema delle storie compaiono intorno ai 4 anni a uno stato ancora rudimentale, ma solo negli anni successivi il consolidamento delle competenze cognitive e linguistiche consente un'efficace comprensione delle trame che legano gli eventi di una storia e il loro ordine logico e linguistico. Inoltre, le abilità narrative in età evolutiva rappresentano "l'anello di congiunzione tra le competenze orali e quelle scritte" (Pinto e Bigozzi 2002: 33). Sebbene non incidano sulle fasi iniziali di apprendimento della lingua scritta in termini di decodifica, quindi, questi apprendimenti sostengono in modo significativo le competenze correlate allo svolgimento delle funzioni di comprensione e produzione di testi scritti. La comprensione del testo narrativo non implica solo l'utilizzo di funzioni linguistiche (lessicali e morfosintattiche). Si tratta, al contrario, di un complesso meccanismo che comporta l'esercizio di un gruppo di funzioni che appartengono al nostro sistema cognitivo, quali la capacità di selezionare informazioni provenienti dal mondo esterno e trattenerle nella memoria, la facoltà di cogliere tanto le informazioni testuali quanto quelle inferenziali – implicite e dedotte dal contesto – così come la capacità di integrare tali informazioni con conoscenze pregresse sullo stesso argomento, ricavate direttamente dal nostro bagaglio esperienziale sul mondo, le quali hanno il compito di attivare il sistema cognitivo favorendo l'elaborazione delle informazioni. Una delle funzioni principali del sistema cognitivo è la capacità di integrare tutte queste informazioni in una rappresentazione mentale coerente e organizzata. Nell'universo infantile, le informazioni referenziali che generalmente intervengono in modo automatico nel corso della costruzione del significato di un testo, hanno bisogno dell'apprendimento di regole della grammatica e della pragmatica della lingua. La coerenza del testo mette in relazione le informazioni pregresse con le nuove: pertanto, richiede inferenze più complesse che, attraverso l'integrazione linguistica e cognitiva, conducono alla creazione di significati nuovi e non espliciti nel testo. I bambini che presentano una comprensione del testo incompleta producono una rievocazione espressa attraverso strutture morfosintattiche semplici

e frasi del tipo soggetto-verbo-complemento, tendenzialmente coordinate dalla costruzione "e poi… e poi…". In questi casi, se la produzione testuale è ampia, spesso non sarà adeguata in termini di contenuti. Al contrario, se la comprensione del testo è medio-bassa rispetto alla norma, allora la produzione di contenuti sarà più adeguata, ma limitata alle informazioni testuali e scarsa dal punto di vista delle abilità inferenziali. Infine, se la comprensione del testo è buona, allora la rievocazione in una struttura narrativa potrebbe non essere soddisfacente. Sarà comunque necessaria una valutazione specifica delle abilità linguistiche per escludere la presenza di disturbi del linguaggio.

4. Un caso di studio: il Laboratorio di Scrittura e Poesia per bambini alla Bottega della Pedagogista

L'identità è nel tempo e nell'intreccio di storie: il rapporto con la dimensione fisica della scrittura, infatti, ha un forte legame con la questione del tempo di immersione prolungata nell'universo narrativo. La memoria dell'esperienza umana giace nel tempo ed è sempre soggetta a una qualche trattazione narrativa. Ciò non significa solo che il discorso e la conoscenza derivino dall'esperienza umana, ma anche che per l'elaborazione dell'esperienza occorre "darne conto seguendo più o meno la storia del suo nascere ed esistere, immersa dunque nel flusso del tempo" (Ong 1986: 198).

Per valutare gli aspetti cognitivi e linguistici coinvolti nella pratica narrativa, è utile osservare e analizzare le "azioni linguistiche" dei bambini in risposta ai propri bisogni narrativi e alle proposte educative: il luogo privilegiato per questo tipo di valutazione può essere un laboratorio di scrittura, che diventa un'autentica miniera linguistica dove, prima del prodotto, è possibile compiere un ampio monitoraggio sulle procedure che lo hanno sotteso. Tra l'idea e la realizzazione del progetto è nato il Laboratorio di Scrittura e Poesia per bambini alla Bottega della Pedagogista Vania Rigoni, organizzato in cicli di cinque incontri dedicati ai più piccoli. Un'officina di scrittura creativa è stata allestita nell'open space della Bottega, in quanto "la spiegazione educativa del tutto è favorire la crescita di spazi comuni e privati, come tanti piccoli cosmi che si incontrano" (Rigoni 2018: 57). La proposta è stata quella di sperimentare la produzione testuale attraverso l'uso della poesia. Imparare a confrontarsi con la poesia è considerato da sempre uno strumento efficace ad allenare la memoria, ecco perché schiere di autori hanno contribuito a sostenere il valore di questo tipo di narrazione nella vita dei bambini. La poesia, infatti, non attiva le stesse aree cerebrali che operano per la prosa. Ad attivarsi, in questo caso, è l'emisfero destro del cervello, quello preposto alla memoria autobiografica. Ciò significa che essa mescola la nostra esperienza sensoriale con quella emotiva, ponendoci di fronte alle parole che ascoltiamo ogni giorno. La poesia, però, è molto più che "parole": è immagine, ritmo e gioco, attraverso i quali si impara a manipolare il linguaggio. È un modo per far capire ai bambini che non c'è una distanza incolmabile tra linguaggio poetico e linguaggio quotidiano. La poesia si può abitare, affinché la memorizzazione avvenga in modo spontaneo e sia alimentata dal piacere della scoperta che se ne può disporre in qualsiasi momento. La precocità narrativa (Bruner 2006) emerge nei testi attraverso l'uso del "facciamo finta che...", tipico indicatore di evoluzione dallo stadio dell'intelligenza senso-motoria a quello dell'intelligenza rappresentativa e del pensiero simbolico. Pertanto, quando si avvicinano alla narrazione, i bambini potenziano la magia della lingua e la sua funzione rappresentativa e simbolica: il contatto con la narrazione ha un notevole impatto tanto sul piano cognitivo quanto su quello psicologico. I bambini imparano ad autorappresentarsi e rappresentare scenari di realtà possibili e verosimili, a immaginare eventi nuovi nello spazio e nel tempo. In questo modo, potenziano la capacità di interiorizzare nuovi copioni o "canovacci" di ragionamento, di arricchire le proprie conoscenze sul mondo e

imparano a immedesimarsi lungo i fili della narrazione, sempre più consapevoli che esiste una distinzione tra le "cose reali" e le "cose fittizie", arrivando a cogliere il patto di finzione scandito dal *C'era una volta…*

Attraverso l'uso del linguaggio i bambini sperimentano in varie forme il potere rappresentativo-simbolico ed evocativo delle parole, comprendono la distanza tra ciò che raccontano e la realtà e cominciano a impadronirsi delle caratteristiche della lingua e della "sospensione" che separa l'atto di scrittura dal contesto esterno. Grazie all'espediente narratologico della ripetizione, invece, imparano che è possibile narrare e ri-narrare un evento che non c'è più, o che non c'è ancora, vivendo la narrazione come una palestra di addestramento, un'opportunità per anticipare nuove esperienze emotive sul piano del possibile, affinché diventi più facile, un domani, accettarle. Parafrasando Bruner, la narrativa ci offre il modo di addomesticare l'errore e la sorpresa (2006). Ciò nondimeno, per i bambini, raccontare non è un'operazione semplice: non è ancora del tutto evoluta la capacità di organizzare i propri pensieri in un testo. Non sono, quindi, trascurabili i processi che intervengono in un'attività tanto complessa come quella di narrare. Per gli adulti, il rapporto dialettico fra tempo e bisogno di narrazione diventa complicato, ma non accade lo stesso per i bambini, per i quali il tempo ha il valore dell'eternità e la lentezza della narrazione rappresenta la chiave di accesso a più significati, oltre a coincidere con le tappe della crescita e la possibilità di costruire il proprio futuro in un'epoca in cui, per poter ragionare senza fretta, riflettere sulle proprie idee e sviluppare le abilità cognitive dei processi inferenziali, occorre "dilatare i tempi". L'atto di creazione del racconto, quindi il momento della sua stesura, necessitano di tempi larghi perché i pensieri possano organizzarsi lungo il filo del racconto, un filo ormai saldo grazie a quelle strutture e formule fisse che governano la logica narrativa. Dopo il momento creativo, è tempo di leggere a voce alta e condividere con gli altri le proprie esperienze: nell'ascolto reciproco e nella mutua lettura si intrecciano le conoscenze, le emozioni e la disponibilità a negoziare ciò che già si conosce su di sé e sul mondo, per essere pronti ad accogliere visioni nuove e di più ampio respiro. Dentro l'esperienza educativa i bambini intervengono, elaborano, interpretano e sperimentano gli artifici retorici e i congegni narrativi interiorizzati con la ricezione delle storie, scontrandosi concretamente con questioni di tipo formale e problemi legati alla struttura del testo. Ma il testo scritto è per sua natura decontestualizzato. Richiede, quindi, l'intervento di capacità di distanziamento e di esplicitazione forse non ancora assorbite dai bambini. La deriva narrativa, ovvero il mancato controllo della trama in un racconto, fa supporre che non siano ancora sufficientemente acquisite le capacità di focalizzare altri aspetti della narrazione, quelli della coerenza e della coesione testuali (Degasperi e Calliari 2007).

Tanto il pensiero narrativo quanto quello logico-formale si avvalgono di processi metacognitivi di tipo inferenziale, che nel caso della narrazione consentono di unire le parti del discorso e di attribuire coerenza e senso. Stando a ciò, nella costruzione di una storia i principi del pensiero formale, di causalità e di non contraddizione non vengono mai sospesi. Talvolta, benché infranti, la trasgressione avviene dentro la cornice della logica finzionale, costituita dalla formula "violazione della canonicità + patto di finzione". Il potere dei testi liberi sta nell'immediatezza e nella freschezza espressiva, aspetti che soddisfano l'urgenza narrativa pur nella limitatezza dei mezzi linguistici a disposizione. I bambini "si arrangiano" con i pochi strumenti in loro possesso e attraverso questa genuinità condensano, ripetono e riducono la complessità della loro scrittura. Poiché utilizzano semplici combinazioni di frasi, spesso con approssimazione, una strategia è stata quella di porli nella condizione di revisionare i propri testi e le proprie bozze. L'operazione di revisione coinvolge un aspetto educativo importante nell'apprendimento individuale e cooperativo: la pratica relazionale, infatti, predispone i bambini a parlare di

lingua per risolvere questioni linguistiche. Se è vero che l'accostamento di due singole parole sufficientemente lontane tra loro possono bastare per inventare una storia, è altrettanto vero anche che la lunghezza dei testi non è un parametro di valutazione delle competenze narrative.

Le narrazioni dei bambini sono state registrate, trascritte e impaginate allo scopo di diventare materiale di consapevolezza e di memoria di sé, confluendo in una piccola raccolta all'interno della quale i ricordi di ogni singolo bambino si legano in una "storia fatta di storie". I piccoli scrittori consegnano così non una singola, ma un intero intreccio di storie, tante quante potrebbero nascere dall'incontro strategico fra il racconto-testo e il lettore-interprete.

5. Analisi dei testi

Osservare da vicino il racconto che di sé fanno i bambini significa accorgersi che le loro espressioni sono attraversate da una vasta quantità di emozioni. A dimostrarlo sono, prima di tutto, l'intervento costante della prima persona singolare in posizione di soggetto e il fitto ricorso a parole che rimandano alla sfera sensoriale e svolgono una funzione enfatica all'interno dei processi cognitivi (1):

(1) a. 'Di solito non faccio tanto ridere la gente, ma una cosa che mi viene di mia *spontanea* volontà è che a scuola quando sbaglio a pronunciare una parola mi metto in *imbarazzo* e faccio una faccia buffissima e tutta la classe ride […]. Comunque non mi sento un tipo che fa ridere la gente'

b. 'Mi piace leggere il libro di mia madre perché è vecchio e *mi esprime*'

c. 'Che da piccolo quando avevo quattro anni avevo fatto la pipì sul letto di mio fratello e lui si era *arrabbiato*'

d. 'Io ero *felicissimo*. È stata una cosa super facile'

e. 'Mi sentii come *stranito* dalla sensazione di essere piccolissimo'.

Una proposta fatta ai bambini nel corso del primo incontro di laboratorio è stata la redazione di una "Lettera a un amico". La struttura della lettera è un esperimento efficace per familiarizzare con l'atto narrativo e per confrontarsi con il codice scritto. Essendo la narrazione intrisa di relazionalità e giacché i bambini sperimentano il bisogno di mettersi in rapporto con gli altri, è stato chiesto loro di immaginare un interlocutore. Alcuni hanno dedicato il proprio testo a un destinatario specifico (2a), altri hanno preferito scrivere a un amico generico (2b) oppure indirizzare la lettera a un membro della famiglia in particolare (2c):

(2) a. 'Marta lo sai che…', 'Ciao Pietro', 'Cara Lulù', 'Ciao Niccolò'
b. 'Cara amica ti vorrei raccontare…', 'Caro amico oggi ti racconto…'
c. 'Caro babbo come stai?', 'Cara sorella oggi mentre…'

Uno degli elementi più significativi emersi dai testi epistolari è il prevalente ricorso al campo semantico della famiglia, insieme con i temi della scuola e del gioco: le principali agenzie educative nella vita dei bambini (3):

(3) a. 'Io mi ricordo quella volta che a *scuola*…'

b. ‘*Giocavo* a calcio con *mio babbo*…’
c. ‘Tante me le consiglia *mio nonno*, dico le battute di Pierino’
d. ‘Mi piace leggere il libro di *mia madre*’
e. ‘Io sono molto bravo a *giocare* a basket!’.

I termini che si riferiscono ai campi semantici menzionati compaiono nella raccolta di testi il numero di volte che segue in tabella (4):

(4)

‘mamma’ o varianti	‘babbo’ o varianti	‘nonno/nonna’	‘genitori’ e altri componenti	‘scuola’ e varianti	‘gioco’ e sema sport
15	19	8	50	22	82

Tabella 1. Termini riferiti ai principali campi semantici emersi dai testi

Alcuni accorgimenti hanno incoraggiato i bambini a sviluppare un primo racconto di sé: ti piace leggere e scrivere? In che cosa ti senti bravo? Nella relazione educativa, queste domande svolgono una funzione cognitiva importante per sviluppare l’*empowerment* e la percezione di sé. Per di più, consentono di ripensare alla propria esperienza in termini euristici, rappresentando un gancio in grado di convertire un resoconto inadeguato di sé in una storia alternativa (White 1992).

Le produzioni riportano quanto segue in (5):

(5) a. ‘Ti scrivo questa lettera perché voglio parlarti un po’ di me, […] non ti ho detto che mi appassiona la lettura […] mi sento *super bravissimo* nel calcio […]. Mi piace scrivere le mie avventure, le mie partite e le mie migliori giornate passate con la mia *famiglia*’

b. ‘A me piace leggere i fumetti e anche i libri scritti dagli Youtubers oppure dei libri di fantasia. Inoltre a me piace molto scrivere i testi di fantasia dove mi invento io la storia’

c. ‘Ti scrivo questa lettera perché ti voglio parlare dei miei gusti. A me piace leggere i fumetti di Topolino. A me piace scrivere l’analisi grammaticale’

d. ‘Lo sai che mi piace leggere il libro di *mia madre* […] lo sai anche che mi piace scrivere più o meno i romanzi […] lo sapevi che mi sento *super bravissima* nella materia storia?’

e. ‘Caro *babbo* […] mi piace scrivere le avventure […] mi sento *super bravissimo* a esplorare, arrampicare, tirare’.

Gli ultimi esempi mostrano, innanzi tutto, l’uso consapevole dell’aggettivo superlativo: *mi sento super bravissimo nel calcio* (5a); *mi sento super bravissima nella materia storia* (5d); *mi sento super bravissimo a esplorare* (5e). Compare di nuovo il sema della famiglia, presente come un ritornello nell’intera raccolta: *mia madre* (5d), *Caro babbo* (5e), *con la mia famiglia* (5a). Si evidenzia

la consapevolezza che esiste una distanza tra l'atto di scrittura e la realtà (finzione narrativa) in espressioni come *mi piace scrivere più o meno i romanzi* (5d). Non mancano, quindi, riferimenti alla dimensione narrativa (*mi appassiona la lettura*, 5a) e indizi sulla presenza di un linguaggio iconico nelle narrazioni quotidiane, necessario ad arricchirne l'apprendimento: *i fumetti* (5b) *di Topolino* (5c) e *i libri scritti dagli Youtubers* (5b), imprescindibili nell'era digitale. Marcati sono anche il bisogno di comunicare i propri stili e *gusti* (5c), di *parlare un po'* di sé (5a), come il piacere della scoperta (5e). Da un lato, la curiosità di conoscere la grammatica di una lingua e il valore della cultura: *a me piace scrivere l'analisi grammaticale* (5c); dall'altro, l'acquisizione di conoscenze che derivano dall'esperienza del gioco e del movimento libero nello spazio: *esplorare, arrampicare, tirare* (5e). Un'analogia nell'uso dell'espressione *mi piace scrivere le mie avventure* (5a, e) pone l'accento sull'intimo desiderio, tipico nell'infanzia, di sperimentare contesti nuovi e interiorizzare l'esperienza individuale. Lo stesso bisogno di esprimersi e di autorappresentarsi che ha portato uno dei bambini a definire la lettura come un'attività che lo *appassiona* (5a), e un altro a concludere la propria lettera con espressioni che confermano la presenza di una capacità immaginativa all'interno dei processi creativi: *a me piace molto scrivere i testi di fantasia dove mi invento io la storia* (5b).

Le parole che i bambini scelgono per raccontare sé stessi avvalorano l'idea che la pratica narrativa sia il principale strumento cognitivo per processare dati esperienziali. L'elaborazione cognitiva restituisce alla rappresentazione globale degli eventi una forma narrativa, che si attiva per la costruzione del sé. Il fatto stesso che la narrazione investa il dominio cognitivo delle capacità di comprensione e produzione di un testo, significa che gli individui compiono uno sforzo cerebrale importante per rappresentare gli eventi in una struttura coerente: il pensiero-bambino, con la sua modalità animistica di percepire la realtà, rappresenta l'azione del processo creativo e una misura di conoscenza del reale ancora parziale (*mi piace scrivere più o meno i romanzi*, 5d) su cui formulare le prime teorie (6):

(6) a. 'Ho scoperto molte cose reali sulla natura e non è per nulla scontato (*per il mio parere*)'

b. 'Questo oggetto risale a centinaia di anni fa (*non è vero scherzo*)'

c. 'Ho fatto un esperimento scientifico che consiste in grattare la penna sulla testa. L'appoggi sopra un foglio di carta e la carta viene su perché attira dell'energia'.

Essere autori e padroni del testo, autori e padroni della propria esperienza individuale e narrativa, significa anche scegliere di inventare e caricare un racconto esplicitando la propria opinione, relegata comunque ai margini del testo (6a, b): *(per il mio parere)*, *(non è vero scherzo)*. In questo ultimo caso, le parentesi svolgono una funzione contenitiva rispetto a una porzione di testo, come se appartenesse a un altro livello della narrazione tale da essere definito "patto con il lettore". Lo sforzo di impadronirsi di certe conoscenze (*Ho scoperto molte cose reali*, 6a) è evidente anche in passaggi testuali in cui i bambini si cimentano nella spiegazione di un fenomeno "scientifico" (6c).

Un elemento che accomuna le narrazioni è il *fil rouge* dell'esperienza passata: il passato scandisce i desideri e le paure del presente, manifestandosi nella fretta di crescere. I bambini scrittori rielaborano retrospettivamente frammenti della memoria, mescolando i propri "ricordi sfrondati" (Gottschall 2018: 183) con l'esperienza creativa. La traccia "Una cosa buffa" descrive questi ricordi (7):

(7) a. 'Io mi ricordo *quella volta* che a *scuola* con altri miei *amici* si fece una

recita insieme e si fece ridere tutta la *scuola* con battute e versi strani'

b. '*Quando* avevo quattro anni mio *fratello* eravamo in spiaggia e mio *fratello* mi ha fatto una cosa davvero imbarazzante mi aveva levato il costume letteralmente e poi *quando* sono uscita mi hanno visto tutti!!!'

c. '*Una volta* ero in montagna con i miei *amici*, stava piovendo e per fare più veloce siamo passati da una stradina scivolosa e piena di *fango* bagnato e un mio amico (o meglio un amico del mio babbo) è cascato nel *fango*, era sporco di *fango* dalla testa ai piedi e abbiamo riso quasi tutti. Poi è stato il mio turno e sono caduto nel *fango* anch'io e mi sono sporcato le chiappe di *fango* e tutti hanno riso'.

Oltre all'uso, ricorrente in tutta la raccolta, di marcatori temporali come *quella volta* (7a), *una volta* (7c) e *quando* (7b), gli ultimi esempi risaltano per l'elemento della ripetizione: *scuola* – *scuola* (7a), *fratello* – *fratello* (7b), la parola *fango* ribadita per ben cinque volte (7c). Ancora il tema della famiglia, della scuola e del divertimento (*si fece ridere*, 7a e *tutti hanno riso*, 7c) con gli *amici* (7a, 7c). Da un lato, l'urgenza di ricordare un episodio che ha provocato imbarazzo se in (7b) si insiste con il soggetto della proposizione. Dall'altro, il desiderio di ripetere sequenze di suoni che solleticano la sfera sensoriale, che entrano a far parte del lessico e che consentono a quel ricordo di entrare a pieno titolo nel proprio bagaglio esperienziale (7c). La figura della reiterazione sottolinea la necessità di ripercorrere sentieri già noti e di sperimentarli in varie forme, con l'obiettivo di raggiungere un uso più consapevole di lessico e sintassi oltre che per impadronirsi di nuovi significati, aggiungendo parole adatte a diversi contesti e registri. Compare quattro volte in poche righe anche la parola *cappelli* in (11c), oggetto di analisi in seguito. La ripetizione ricorre, inoltre, nell'uso del termine *bulli* in un altro testo ben strutturato. Nell'esempio (8) la figura sociale del bullo si staglia, attraverso una percezione animistica tipica dell'universo infantile, in un racconto sempre più popolato da personaggi inventati:

(8) 'Mattia invitò i suoi amici al campetto per giocare a calcio. Arrivarono i *bulli* del quartiere per rubargli la palla e mentre Mattia evitava un membro del gruppo dei *bulli* un suo amico propose di fare una partita. Mentre giocavano il capo dei *bulli* fece una scivolata e Mattia lo mandò *a gambe all'aria*. Mentre i *bulli* se la ridevano arrivò *l'eroe Saponetta* che risolse la situazione. L'eroe Saponetta era arrivato al parco giochi dove si accorse del pericolo. Mattia ringraziò l'eroe Saponetta, ma ecco che arriva *il supercattivo Devastator* che diede il via a una battaglia. Si aggiunsero anche *Timothy* l'eroe del Pallone e *Martyn* il cattivo super veloce. Tutti e quattro si ammassarono formando una montagna. Vinsero la battaglia l'eroe del Pallone e l'eroe Saponetta, che però fece arrabbiare delle persone che giocavano a basket, ma Timothy riuscì a tranquillizzarli e a mettere al sicuro Mattia, che andò al parco giochi a fare palestra. Poi salutò l'eroe Saponetta e Timothy dopo tornò a casa'.

Questo testo, intitolato dall'autore "La brutta", risalta per l'accostamento di espedienti narratologici che indicano il tentativo di acquisire certi schemi narrativi. Un esempio è l'utilizzo dell'espressione idiomatica *a gambe all'aria*, assorbita tanto nell'ascolto di conversazioni spontanee quanto nel contatto con l'universo narrativo, sia in accezione letterale che figurata. Osservando l'architettura della storia, che procede per accumulo di immagini, emerge la presenza di alcune delle 31 funzioni interne alla fiaba di Propp (2000). La narrazione, infatti, rispetta in modo quasi puntuale la struttura interna delle storie d'invenzione: Infrazione/Trasgressione

(*arrivarono i bulli del quartiere per rubargli la palla*), Ricognizione (*si accorse del pericolo*), Mediazione (*risolse la situazione*), Danneggiamento (*però fece arrabbiare delle persone*), Lotta (*diede il via a una battaglia*), Salvataggio (*ma Timothy riuscì a mettere al sicuro Mattia*), Amico magico (*Timothy*), Nemico (*bulli*), Arrivo in incognito (*ma ecco che arriva il super cattivo Devastator*), Prova (*tutti e quattro si ammassarono formando una montagna*), Vittoria (*vinsero la battaglia l'eroe del Pallone e l'eroe Saponetta*), Lieto fine (*Poi salutò l'eroe Saponetta e Timothy dopo tornò a casa*). L'impiego delle costruzioni morfosintattiche semplici *e – poi* / *e – dopo* indica la necessità di scandire gli eventi in una successione temporale. L'uso della temporalità è dato anche dalla ripetizione dell'avverbio *mentre* con funzione di connettivo. Realizzando in modo efficace alcuni parametri di coerenza e coesione testuali richiesti dai processi ideativi con funzione inferenziale, il setting narrativo e le scelte linguistiche del testo (8) consentono di definire il suo autore un bambino narrativo (Smorti 1994).

Gli scenari e gli scripts dei primi libri letti riemergono durante il momento creativo, permettendo ai bambini di interpretare e orientare la complessità dell'esperienza narrativa. La descrizione di un evento consente al discorso di procedere per "stringhe" di immagini, per aggiunzione o accumulo di frasi frammentarie spesso prive di nessi temporali o causali. Riferendosi a esperienze già elaborate da parte dei bambini, i contenuti restano spesso impliciti. Lo stile è quello tipico del discorso orale, colloquiale e paratattico, che procede per una sfilza di *e… e… e…* rievocando le caratteristiche dell'intreccio episodico fiabesco (9):

(9) a. 'Ero in camera mia *e* stavo giocando con i miei pupazzi *e* ho lasciato un secondo il mio pupazzo preferito *e* stavo giocando con Riccioli d'oro *e* ho visto che Teddy si era mosso *e* io sono uscita subito dalla stanza le sapevi tutte queste cose? *E* io spero che ti sei spaventata ma non troppo'

b. 'Ho fatto un brutto sogno *e* sono caduto da un'altezza di 180 metri *e* mi sono spaventato. *Poi* i miei genitori sono corsi subito ad aiutarmi *e* mi sono messo il ghiaccio *e* sono andato a letto alle 00:30 di sera'.

L'organizzazione cronologica della storia è quella degli eventi del mondo. Ciò significa che l'ordine testuale segue quello reale. I testi, caratterizzati da giustapposizioni di enunciati in coordinate e dall'uso frequente dell'operatore *e – poi/dopo*, avanzano attraverso liste di azioni e catene di eventi in sequenza in modo lineare (10):

(10) a. '*Un giorno* dovevo andare a una partita di calcio *e* ho fatto un goal, *poi* la mamma mi ha portato al parco divertimenti *e* mi sono divertito un sacco *e poi il giorno dopo* sono andato a vedere delle persone che giocavano a basket'

b. '*C'era una volta* io e la mia famiglia *e* eravamo in montagna *e* abbiamo fatto un igloo a casa mia in montagna. *Poi* abbiamo fatto una buca dandole una forma di un divano *e* ci abbiamo messo un telo per riscaldarci *e* sul telo ci abbiamo fatto un buco per fare un fuoco all'interno dell'igloo. *Poi alla fine* ci siamo divertiti'.

L'ordine naturale con cui i bambini operano non impedisce, però, l'intervento di una

sospensione narrativa, una sorta di rottura inaspettata incastrata in una struttura canonica, comunque riconoscibile: la violazione della canonicità (Bruner 1991), un espediente narratologico che i bambini sembrano avere acquisito durante la fruizione delle storie (11):

(11) a. '*Una sera* mentre ero in camera mia sentii un rumore che mi spaventò molto. La porta si stava aprendo *e* io indietreggiai di qualche passo *e in quel momento* la porta si spalancò. *Poi a un certo punto* il mio libro colorato, la mia lente di ingrandimento e il mio segnapiante si alzarono in aria e andarono sopra il letto *e* iniziarono a muoversi io non stavo capendo però sentii degli urli: era un cattivo invisibile! *Alla fine* i miei oggetti riuscirono a sconfiggerlo e io me ne tornai tranquillo a giocare'

b. 'Abbiamo scherzato, riso, giocato *fino a un certo punto*… è arrivato a tutta velocità ad avvisarci che dentro l'area giochi c'era una persona con una maschera… orribile! Con coraggio mi feci avanti *e* […] architettammo uno scherzo per far paura ai miei amici. Lo scherzo riuscì alla perfezione con una magia e una pozione perfida e i miei amici si spaventarono *un monte*'

c. '*A un certo punto* il cielo diventò rosso e i cappelli cominciarono a piovere miliardi di cappelli, *dopo* dieci minuti Milano fu sommersa di cappelli *ma dopo* un'ora tutto il mondo fu ricoperto di cappelli'

d. 'Io te lo consiglio perché ci sono molte avventure e *colpi di scena*'.

L'evento inatteso e i *colpi di scena* (11d) sono scanditi dalla locuzione avverbiale *a un certo punto*, che accomuna i testi di (11a), (11b) e (11c). Come per l'idiomatismo *a gambe all'aria* di (8), gli ultimi esempi mostrano l'impiego di espressioni in uso nella comunicazione quotidiana dei bambini: *un monte* (11b), *un sacco* (10a), *miliardi di* (11c), *alle calcagna* (oggetto di analisi in 15b). Si tratta di costruzioni linguistiche che rivelano una tendenza a iperboleggiare i concetti: la funzione enfatica carica la narrazione con coloriture espressive e attiva le capacità cognitive riferite alla sfera emotiva. Un ulteriore dato da segnalare è l'uso ricorrente delle formule di incipit ed explicit: dalle più convenzionali e stereotipate quali il *C'era una volta* (10b), alle più colloquiali come *una sera…* e *alla fine…* (11a). Sempre più presenti sono gli elementi che indicano gli snodi temporali del racconto, come *in quel momento* (11a) e il più marcato *in quello stesso istante* (oggetto di analisi in 19a); e ancora le isotopie della fiaba: Sconfitta (11a), Fornitura dell'oggetto magico e successivo Smascheramento: *con una magia e una pozione perfida* e *con una maschera… orribile!* (11b). I testi mostrano il ricorso agli stessi riferimenti temporali con funzione di marcatori per costruire parti del discorso. Lo schema (12) riporta un sommario del numero di volte in cui gli indicatori temporali utilizzati dai bambini compaiono all'interno della raccolta di testi:

(12)

'Una volta'	'Quella volta'	'Un giorno'	'Quando'	'In questi tempi'
20	4	19	39	1

Tabella 2. Indicatori temporali presenti nella raccolta dei testi

Altri esempi evidenziano anche l'impiego della deissi, quindi il ricorso a elementi referenziali e anaforici espressi attraverso l'uso di: aggettivi dimostrativi *questo*, *questa*, *queste*, *questi*, *quello*, *quella*, *quelle*, *quelli*; pronomi personali *io*, *mi*, *tu*, *te*, *ti*; avverbi spazio-temporali *ora* e *adesso*, *ieri* e *oggi*, *qui* e *lì*, presenti nella raccolta il numero di volte che segue in (13):

(13)

'questo/a/e/i' 'quello/a/e/i'	'io', 'me/mi' 'tu/te', 'ti', 'ci'	'ora', 'adesso'	'oggi' e 'ieri'	'qui' e 'lì'
32	218	10	9	5

Tabella 3. Altri marcatori testuali presenti nella raccolta dei testi

(14) a. '*Ora io ti* racconto di *questo* oggetto rosso che *me* lo ha dato un mio fidanzato mercoledì scorso, *questa* cosa *mi* è piaciuta tanto perché non *ci* vediamo da tanto tempo'

b. '*Ora ti* dico che cosa *mi* piace leggere […] *Ora ti* dico che cosa *mi* piace scrivere! […] Adesso, prima di salutar*ti*, *ti* dico anche in che cosa sono bravo'

c. 'Ciao Marta *questo* è sempre per *te ora ti* racconto una cosa buffa su di *me*'

d. '*Questo* racconto è per mia mamma'

e. 'Ma proprio *lì* ho visto che un topo grigio…'.

In (14) si nota come gli elementi deittici adoperati dai bambini per riferirsi a un'esperienza passata siano interpretabili solo tenendo conto del contesto extralinguistico. Si parla di componibilità ermeneutica (Bruner 1991), ovvero della necessità di fare riferimento al contesto per comprendere e valutare gli eventi narrati.

Le espressioni utilizzate nei testi evidenziano la consapevolezza della distanza tra linguaggio scritto e linguaggio parlato e la presenza di uno scarto temporale necessario allo sviluppo della narrazione. I bambini sono ora in grado di cogliere il patto di finzione tra narratore e lettore, ma ciò non significa che abbiano già adeguatamente imparato a separare il tempo della scrittura da quello del racconto (fabula/intreccio). La stessa funzione che svolge l'uso delle parentesi in (6a) e (6b), le quali isolano porzioni di testo per introdurre un sottolivello narrativo, interviene in (15a):

(15) a. 'E poi la mamma mi ha raccontato la sua storia (*quella che ho raccontato io in questo testo*)'

b. '*Mi sono dimenticato di dire che* dovei rifugiarmi però *sapete* un diavolo così non si lascia per vinto e quindi mi inseguì per tutto il tempo ***io*** mi rifugiavo ma era inutile ce l'avevo sempre *alle calcagna* ma per fortuna si stancò e quindi andò a casa sua'

c. ‘Ciao Marta *come hai visto dal titolo* in rosso sì oggi verrà una persona insolita a casa mia, *senti devi sapere che* ho una voglia di fare una videochiamata con te pazzesca. Allora iniziamo! Un gatto maschio di nome Rudolph, *un secondo devi sapere come è arrivato*. Col treno! Gli ho chiesto come si chiamava e lui mi ha risposto in lingua italiana non in gattese”.

L’urgenza narrativa e il bisogno di costruire la propria identità si manifestano nel costante uso del pronome soggetto *io* e delle sue varianti sintattiche. Una ricerca quantitativa dell’uso delle parole all’interno della raccolta mostra il fitto impiego della congiunzione *e* con funzione di connettivo, la quale ricorre 269 volte; anche gli avverbi temporali *poi*, *dopo*, il pronome *che*, la congiunzione *quindi* e l’avversativa *ma* ricorrono con decisa intensità (16):

(16)

‘e’ connettivo	‘poi’ e ‘dopo’	‘che’ pronome	‘quindi’	‘ma’
269	64	132	24	44

Tabella 4. Altri marcatori testuali presenti nella raccolta dei testi

Il tentativo di arricchire la narrazione è evidente dall’accostamento dell’aggettivo qualificativo al sostantivo, come nell’esempio di (15c): *videochiamata pazzesca*; anche l’uso ridondante dei connettori ha la stessa funzione: *e poi* (15a), *e quindi* (15b), *allora* (15c), come anche l’uso di modi di dire convenzionali di cui bambini si servono per operare un’estensione ideativa: *un diavolo così non si lascia per vinto* (15b).

Nella mente umana, l’esperienza è rappresentata come una catena di eventi reali che gli individui hanno bisogno di ripercorre per progettare il proprio futuro (prefattualità), imparando a elaborare scelte talvolta diverse rispetto al passato (controfattualità). I testi della raccolta sono carichi di tempi al passato (prossimo, imperfetto, remoto del modo indicativo). Nei bambini, più che negli adulti, diventa necessario attingere all’esperienza passata per riprogrammare le scelte del presente e del futuro; l’uso dei tempi al passato, quindi, ha la funzione di dare senso all’esperienza controfattuale: *ho superato*, è stato (17a), *fece*, *abbiamo messo* (17b), *era stregata*, *viveva* (17c), *scrivo*, *ho letto* (17d):

(17) a. ‘*Ho trovato* un cappellino e mia madre me lo *ha preso* […] e lui è stato con me quando mi *hanno dato* il distintivo d’oro degli esploratori e così *ho superato* la mia paura’

b. ‘È un portapenne dell’antichità lo *fece* mio nonno che *era* un pellettiere e lo *ha regalato* a me e al mio fratellino di sei anni e ci *abbiamo messo* dentro alcuni dei nostri pennarelli’

c. ‘Una gattina di nome Coraline *viveva* in una villa sul mare, solo che *era stregata*. Un giorno ci *venne* un gatto persiano lungo…’

d. ‘È da un po’ di tempo che non *trovo* cose da fare e quindi ti *scrivo* questa lettera. *Ho* voglia di raccontarti del libro che *ho letto*…’.

Le scelte linguistiche degli ultimi esempi pongono l'accento su alcuni temi, ormai consolidati: la famiglia (*mia madre*, *nonno* e *fratellino* in 17a e 17b), l'uso retorico della personificazione di un oggetto per mezzo del pronome che sostituisce il sostantivo (17a) e la tendenza narrativa a seguire una sequenzialità, collocando il proprio racconto entro limiti temporali ben precisi. In (17c), per esempio, compare lo scenario della *villa sul mare* che fa da ambientazione agli eventi della storia. L'uso dei tempi al passato è, quindi, dominante. Ripensare a un'esperienza passata è utile a organizzare narrativamente i dati dell'esperienza in una relazione di causa-effetto: *e così ho superato la mia paura* (17a). Meno frequente, invece, all'interno della raccolta, è il ricorso ad altri tempi verbali. Le sole eccezioni riguardano, in particolare, l'uso di modi che esprimono la controfattualità (congiuntivo e condizionale), correlata alla capacità di fare inferenze e di collegare gli eventi della propria vita insieme (18):

(18) a. 'Se io fossi'
b. 'Se lo leggerai spero che ti piaccia'
c. 'Vorrei – vorrei', 'Camminerei senza una meta', 'Spargerei la voce'
d. 'Che io abbia mai visto'.

Nuove ipotesi possibili sulla base di eventi reali sono espresse dall'uso del passato indicativo: d'altro canto, nel patto di finzione istituito dal "facciamo che io ero…" è un imperfetto indicativo a trasportare i bambini in un'altra dimensione fattuale. La controfattualità si realizza nella ricostruzione ipotetica di un evento, preparandoci ad affrontare situazioni diverse rispetto a quanto è già accaduto: ecco che la narrazione diventa un "simulatore di volo" (Oatley 2008), quell'esercitazione alla vita che per Bruner significa "addomesticare l'errore e la sorpresa" (2006: 35):

(19) a. '*C'era un bambino* di undici anni di nome Stephan, che ebbe un giorno che nessun altro bambino abbia mai avuto. Si svegliò alle 8:00 di mattina […]. Mentre stava tornando a casa arrivò mister ciambellone che combatté contro tontolone e vinse mister ciambellone toccandolo con un dito, in quello stesso istante Stephan si svegliò, ma non si svegliò annoiato, si svegliò felice e in quella giornata raccontò a tutti che fece una giornata in un sogno'

b. '*C'era un ragazzo* che non è apprezzato da nessuno e ad un certo punto viene aggredito da dei ragazzi e si fa molto molto male, a un certo punto è stanco di essere messo da parte o di essere picchiato se ne libera di tutte queste cose e vive felice'

c. 'Babbo Natale stava consegnando i regali quando si trasformò in un gatto, uomo, gatto, uomo, gatto, uomo, e poi tornò a casa e trovò una sua amica e si sposarono ma poi un po' di giorni dopo si separarono'

d. 'Poi la moglie del ragionier Bianchini scese in piazza e disse al marito: "Perché non sei a lavoro? Che cosa stai facendo?" e lui rispose: "Ora vado me ne sono scordato". Quando arrivò, il signor Bianchini fu licenziato dal suo capo e se ne andò via'.

In questi ultimi esempi si segnalano: l'uso consapevole della punteggiatura e del discorso diretto in (19d); l'uso del connettivo in stringa *e… e… e…* (19b) e della struttura *e – poi* (19c); il ricorso all'incipit della tradizione fiabesca (19a, b); la costruzione di personaggi di una storia dentro una storia (*Stephan*, *mister ciambellone*, *tontolone* 19a) e la scelta delle ambientazioni (19c) e (19d). Sono di nuovo presenti gli scripts delle funzioni di Propp (2000): Lotta e successiva Vittoria (*combatté* e *vinse*, 19a), Lieto fine (*e vive felice*, 19b), Matrimonio (*si sposarono*, 19c). Nel complesso, questi testi realizzano efficacemente i parametri di consequenzialità richiesti dai processi inferenziali. Il testo dei *bulli* dell'esempio (8) riportava a una realtà sociale descritta nel modo in cui la percepisce e rappresenta un bambino. Le parole dei bambini consentono, in questo senso, una valutazione rispetto ai processi inferenziali che provengono dalla sfera senso-percettiva. Grazie a questi meccanismi, gli individui sono in grado di attribuire un significato agli stimoli sensoriali in ingresso: questo conferma che la nostra percezione della realtà influisce notevolmente sulla rappresentazione che facciamo sugli eventi dell'esperienza. I testi menzionati pongono l'accento sul naturale bisogno di dare senso agli eventi: evocarli e organizzarli, significa prepararsi al fatto che una situazione analoga possa verificarsi nella propria vita. La narrazione controfattuale contribuisce a elaborare episodi vissuti dai bambini in modo diretto o indiretto: per esempio, in contesti sociali (*viene aggredito da dei ragazzi*, 19b) oppure attraverso esperienze di insuccesso (*fu licenziato dal suo capo*, 19d) e fallimento (*Si sposarono ma poi un po' di giorni dopo si separarono*, 19c). Per sfuggire allo spessore della realtà, i bambini ricorrono all'immaginazione, escogitando un piano fittizio ben rappresentato e servendosi di un prodigio metamorfico (*si trasformò in un gatto, uomo, gatto…*, 19c) oppure scegliendo di concludere i propri racconti con un vitalistico *happy ending*: *se ne libera di tutte queste cose e vive felice* (19b), *ma non si svegliò annoiato, si svegliò felice* (19a). Si nota, però, che solo due testi su quattro concludono con un lieto fine. Gli altri due, invece, si esauriscono in un finale più triste: *si sposarono ma […] si separarono* (19c) e *fu licenziato […] e se ne andò via* (19d). In uno di questi testi è presente anche un nuovo elemento narratologico, mai emerso nel corso delle produzioni dei bambini, che riguarda propriamente l'architettura del testo. Si noti l'esempio (19a), che intitoleremo "Una giornata in un sogno". Questo testo si compone di elementi che svolgono una duplice funzione: da un lato l'alternanza di sonno/veglia – o meglio *sogno*, come cita il testo – ci riporta allo stesso concetto della controfattualità espressa attraverso lo schema polare di realtà e finzione. D'altro canto, due livelli temporali diversi che percorrono gli snodi del racconto si intrecciano in una sorta di struttura metanarrativa: la storia del sogno nella la storia della realtà, caratterizzate dalla contrapposizione *si svegliò annoiato/si svegliò felice*. Nondimeno, si attiva l'elemento del sogno anche come intimo desiderio: l'autoracconto favorisce una ricapitolazione delle esperienze, consentendo di esternalizzare certi bisogni profondi di cui la comprensione, da parte del bambino, può essere determinante per la gestione delle proprie emozioni.

Immerse dentro narrazioni spontanee, le parole dei bambini sono attraversate da emozioni che possono cominciare a riconoscere e interpretare. Per questa ragione, elaborare narrativamente le esperienze permette altresì di comprendere quanto l'ambiente esterno e una realtà sociale permeata di bullismo, licenziamenti e separazioni, compresi i sentimenti che ne derivano, possano condizionare la percezione della realtà in modo profondo. Le emozioni descritte attraverso il racconto consentono di sviluppare un'altra capacità cognitiva, l'empatia, che altro non è che l'immedesimazione. Tali processi mentali ci aiutano a comprendere le emozioni degli altri per sperimentarle e imparare a organizzare le proprie. La sfera sensoriale si attiva durante il processo narrativo e l'incontro con le storie narrate attraverso la scrittura avviene tramite un'esperienza viva con la corporeità (Frasnedi 1999). Quando si compie lo sforzo di pensare a sé stessi nei panni di qualcun altro, o qualcos'altro (20), ad attivarsi è una speciale categoria di neuroni specchio (Dehaene 2009):

(20) a. 'Salve a tutti io sono il mestolo Gabriele e ho 8 anni. Mi hanno appena detto che stasera ci sarà la minestra per cena, quindi devo andare a scolare la minestra e quindi mi scotterò un pochino. E scusate se urlo troppo è un mio difetto'

b. 'Io sono Pietro, una frusta elettrica. | Starei nelle uova sempre lì | a girare, girare e rigir*are* | dopo due minuti mi ritrovo a mescol*are*'

c. 'Ciao io sono il mattarello | io mi muovo saltellando | e aiuto le persone a fare | la pizza o in gener*ale* | a stendere la pasta per i dolci e le cose con il s*ale*'.

In alcuni passaggi, l'immedesimazione in un oggetto e la personificazione dello stesso hanno guidato i bambini verso i primi tentativi poetici. L'idea è stata proprio quella di incoraggiare i bambini a parlare come se loro stessi fossero quell'oggetto, o come se facessero parlare l'oggetto stesso. Che emozioni provano un *mestolo* (20a), una *frusta elettrica* (20b) o un *mattarello* (20c)? L'espediente della metamorfosi ha permesso i primi accostamenti di parole in rima: *rigirare – mescolare* (20b), *generale – sale* (20c). E dato che i bambini hanno mostrato di ricorrere spontaneamente all'uso delle rime, la proposta di introdurre similitudini e giochi di parole è stata accolta dal gruppo. I componimenti nati da questo momento creativo raccontano la storia di un oggetto (21):

(21) a. 'Ciao Marta riiniziamo con un'altra avventura un po' in rima sì lo so che è un po' strano sarà ma iniziamo con le rime'

b. 'C'*era una volta* una patat*ina* | che aveva comprato una macchin*ina*. | Un giorno mentre era in vi*aggio* | incontrò il suo amico s*aggio*. | Si fermò a salut*are* | poi riprese a viaggi*are*'

c. 'La mela è tond*ina* | *come* una pall*ina*. | La mela è color*ata* | come una limon*ata*. | La mela ha il gamb*ino* | *come* il suo alber*ino*. | La mela è una bon*tà* | come sua maes*tà*. | *Come* la mela non esiste ness*uno* | neanche il numero *uno*!'

d. 'Arancia, sei rotonda *come* la terra. | Il tuo colore è *come* l'arancione del tramonto. | Quando ti lancio in aria *mi sembri* una navicella spazi*ale*, | ma quando torni giù *mi sembri* un meteorite. | Il tuo succo è frizzante *come* un tempor*ale*. | Ma sei sempre bellina'

e. 'La noce *assomiglia a* un ciambell*one*! | La noce *assomiglia a* un peper*one*! | La noce *diventa* un pall*one*! | La noce *diventa* un mel*one*! | La noce *si trasforma* in un rotol*one*! | La noce *si trasforma* in un dr*one*!'

f. '*C'era una volta* un formagg*ino* | birich*ino* che giocò un po' tant*ino*. | Un giorno il formagg*ino* giocò tant*ino* | che un giorno si annoiò un po' tantino. | Un giorno il formagg*ino* | assaggiò un pan*ino* | così buon*ino* | che tutta la gente lo assaggiò. | Poi un giorno disse a sua mamma e suo babbo | Di andare a vedere tutta la gente che andava a vedere. | Alla fine il formagg*ino* tornò nel suo lett*ino*'

g. ‘C’era un tempo uno zuccherino danzerino | che rallegrava un bambino piccolino. | Lo zuccherino era bianco come la neve lieve’.

È presente in tutti i testi la distinzione tra poesia e prosa, forte soprattutto nella struttura del testo: pertanto, *riiniziamo con un’altra avventura un po’ in rima* (21a). La comparazione è espressa con l’uso dell’avverbio di paragone *come* (21c, d, g) e con l’impiego delle varianti verbali *mi sembri* (21d), *assomiglia a*, *diventa*, *si trasforma in* (21e). Dal punto di vista linguistico emerge un uso strategico delle rime, dominate da un gioco di parole con protagonista il diminutivo: *gambino*, *alberino*, *piccolino*, *danzerino*, *melina*, *macchinina*, *patatina*, *formaggino*, *tantino*, *buonino*, *panino*, *lettino, zuccherino*, *birichino* in (21b, c, f, g). La ripetizione di espressioni tradisce da un lato, una deriva narrativa, dall’altro forse un intenzionale ricorso al gioco poetico: *un formaggino* […] *che giocò un po’ tantino.* | *Un giorno il formaggino giocò tantino* | *che un giorno si annoiò un po’ tantino.* | *Un giorno il formaggino* (21f). Torna l’impiego della formula convenzionale fiabesca *C’era una volta* (21b, f), che ricorre ben tredici volte all’interno della raccolta in forma originale e per mezzo di strutture alternative, come *C’era un tempo* (21g). L’isotopia del *viaggio* (21b) si ripresenta insieme con il tema dell’*avventura* (21a). Si segnalano nell’esempio (21d): l’uso del vocativo (*Arancia, sei rotonda*), la percezione della distanza spaziale (*quando ti lancio in aria – ma quando torni giù*) e la scelta di preparare l’explicit del componimento con una proposizione avversativa (*Ma se sei sempre bellina*). Negli altri testi si notano: l’identificazione dell’autore con il protagonista della poesia: *Un giorno il formaggino* […] *disse a sua mamma e suo babbo* (21f) e *uno zuccherino* […] *rallegrava un bambino piccolino* (21g); la presenza di figure foniche nel ricorso alla consonante *g* anche lunga *gg* (*formaggino*, *giocò*, *giorno*, *assaggiò*, 21f); l’accostamento di suoni affini e rime interne (*neve lieve*, 21g), che crea assonanze dominate dall’uso del diminutivo (*alla fine il formaggino*, 21f); l’anaforico accostamento dell’avverbio *come* posizionato ogni due versi (21c); infine, la ripresa della similitudine in posizione finale: *Come la mela non esiste nessuno* | *neanche il numero uno!*

L’operazione di immedesimazione ha guidato i bambini anche nella costruzione di un racconto leggendario, come mostra l’esempio (22). Questo procedimento, cioè quello di collegare l’oggetto a uno scenario epico, ha dato luogo a esiti inaspettati dal punto di vista narrativo. Si tratta di racconti che giungono da luoghi distanti (*sotto le rovine di Troia*, 22b), ambientati in tempi remoti (*C’era una volta tanto tempo fa*, 22a), popolati da *guerrieri*, *invasori* (22a) e permeati di *combattimenti* (22a) e *ira funesta* (22b):

(22) a. ‘*C’era una volta tanto tempo fa* un *guerriero* mestolo che proteggeva il suo popolo insieme al suo gruppo di *guerrieri*. Un giorno arrivarono degli *invasori* e così il *guerriero* mestolo e i suoi *guerrieri* si prepararono. Poi ci furono i *combattimenti*. L’intero popolo era invaso da *guerrieri* buoni e cattivi e infine con molta sofferenza e morti vinsero i buoni e quindi quel paese tornò ad essere tranquillo e sereno’

b. ‘Il mattarello era la *spada* di Achille che infiniti lutti *inflisse* negli Achei, compreso Ettore il grande *guerriero* principale di Troia. Tutto *infuriato* Achille con Ettore per la morte di Patroclo lo uccise e però l’*ira funesta* contro i troiani *non cessò*. Alla fine, la *freccia* scoccata da Paride uccise Achille e il suo mattarello finì a terra. E ancora il suo mattarello *giace* sotto le *rovine* di Troia’

L'uso consapevole del lessico mitico tanto nei sostantivi, per es. *guerrieri*, *invasori*, *combattimenti* (22a), quanto nelle azioni verbali, per es. *inflisse*, *infuriato*, *non cessò*, *giace* (22b), l'uso dei nomi propri dei personaggi epici (Achille, Ettore, Patroclo) sono elementi che derivano dal contesto scolastico, culturale e ambientale i quali, grazie a una elaborazione ipotetica delle esperienze, influenzano in modo decisivo il vocabolario dei bambini: *con molta sofferenza e morti e quel paese tornò a essere tranquillo e sereno* (22a). In quest'ultimo esempio è presente anche un'eco del topos "E vissero tutti felici e contenti", di cui l'explicit segue lo schema del Lieto fine descritto nelle funzioni di Propp. Il ricorso alle formule di incipit ed explicit conferma l'acquisizione degli schemi narrativi già menzionati e appresi durante la fruizione delle storie: il *C'era una volta tanto tanto tempo fa* di (22a) mostra un tentativo di espansione del discorso; le locuzioni *Un giorno*, *e così*, *Poi* (22a), le formule di explicit *Infine* (22a) e *Alla fine* (22b) ricalcano l'ossatura e lo sviluppo delle storie: inizio, svolgimento e fine.

Un esempio dell'uso di procedimenti stilistici è già fornito dalla *neve lieve* di (21g). A questo proposito, anche la traccia intitolata "La neve in città" ha prodotto esiti significativi dal punto di vista narrativo: non solo avvalora l'ipotesi di un'evoluzione delle abilità di costruzione del testo rispetto alle produzioni iniziali, ma mostra anche il desiderio di esprimere le emozioni sollecitate dal momento creativo (23):

(23) a. 'La neve a Torino è *come* una decorazione per i numerosi palazzi. | La neve a Milano è *come* un'enorme nuvola bassa inquinata dallo smog. | La neve a Roma è *come* un ghiacciaio sul Colosseo. | La neve a Costantinopoli è uno spettacolo "scoppiettante" in onore di Costantino. | La neve a Washington è un'accoglienza al nuovo presidente Biden e una lontananza dal mediocre Trump. | La neve a Nairobi è il richiamo di freschezza degli africani. | E infine, la più speciale, la neve a Pistoia, quasi invisibile, molto veloce e densa. | Per me è la più magica'

b. '*C'era una volta* un bamb*ino* | allegro allegr*ino*, | era avvenuta una nevic*ata* | bella come una casc*ata* | con i miei nonni siamo usciti | davvero felici | insieme a mio nonno facevamo a pall*ate* | riempivamo la via di mille ris*ate*. | Mio nonno, mon*ello* | mi fece uno scherz*ello*: | fece una grossa *palla* | e me la buttò dietro la s*palla*. | Io caddi a terra tutto bagn*ato* | Ma a casa mi sono poi asciug*ato*'.

Queste ultime poesie rivelano l'impiego di nuove categorie grammaticali che hanno l'obiettivo di estendere la narrazione. L'estensione narrativa è ottenuta dall'accostamento di parole: gli avverbi di quantità accompagnano gli aggettivi (*quasi invisibile* e *molto veloce*, 23a); l'uso di aggettivi qualificativi sostantivati (*mille risate*, *grossa palla*, 23b, e *numerosi palazzi*, *spettacolo "scoppiettante"*, 23a), nella sequenza giustapposta di aggettivo-nome-aggettivo: *enorme nuvola bassa* (23a). Non manca il ricorso al campo semantico della famiglia (*con i miei nonni*, 23b), ma soprattutto è notevole l'uso di parole più ricercate come *freschezza*, *accoglienza*, *scoppiettante*, *mediocre*, *richiamo*, *lontananza*, *densa* (23a). Significativo anche l'utilizzo di metafore e similitudini (23a, b), *è come un ghiacciaio sul Colosseo*, *è un'accoglienza al nuovo presidente*, *bella come una cascata*, che compaiono in aggiunta a un uso giocoso delle rime: *nevicata – cascata*, *scherzello – monello*, *pallate – risate*.

Molti componimenti presentano versi che giocano sulla ripetizione, sull'ironia e ancora sull'uso della rima, come nell'esempio (24):

(24) ‘Io gioco a un videogioco | che era un gioco che sembrava | tanti colori […] | un gioco che | ti fa impazzire | e mi fa divertire | però la mamma fa ingrullire’.

Per i bambini, la funzione educativa della narrazione è duplice: non solo diventano protagonisti e fruitori attivi delle storie, ma imparano anche ad ascoltare le voci della memoria e dell’immaginazione, a estendere le proprie conoscenze sul mondo e, infine, a elaborare quel marasma di emozioni che l’ambiente circostante e il contesto in cui vivono procura loro (25).

(25) a. ‘Successe un fatto incredibile, che nessuno se lo aspettava. Arrivò il coronavirus, un virus letale, mortale che si diffuse in tutto il mondo e quindi la distanza, le zone gialle, arancioni, rosse, vaccini e blablabla… Insomma, eravamo come in una prigione, però è andata così’

b. ‘Allora una volta ti ricordi che se n’era andato Quentin per me è stato difficile lasciarlo ma dopo un po’ è stato facile piangevo senza sosta non mi fermavo mai era difficile lasciarlo come ho già detto ma sai come mi sono tranquillizzata? Con mamma si è messa accanto a me e ha iniziato a farmi coccole’.

Gli scarti improvvisi del pensiero e la deriva narrativa, talvolta, funzionano come nel linguaggio parlato, quando il pensiero corre più veloce delle parole: *C’erano una volta un maiale che sapeva pedalare aveva tanti amici e insieme pedalano. Il righello sta giocando su un arcobaleno*. Ma se adeguatamente coinvolti nello scambio narrativo, i bambini sono capaci di diventare sempre più consapevoli delle tre incredibili funzioni dell’esperienza narrativa, che sono l’Evasione, l’Affabulazione e la Scoperta.

6. Riflessioni conclusive

Per dimostrare quanto la pratica narrativa rappresenti un’attività conoscitiva fondamentale, in particolare all’interno di percorsi formativi, è stata proposta un’idea di educazione al racconto e all’autoracconto come processo di costruzione identitaria. L’obiettivo è stato quello di individuare il potenziale pedagogico che risiede nel pensiero narrativo, correlato alla capacità squisitamente umana di elaborare storie. Lo *storytelling* è considerato il principale strumento cognitivo coinvolto nel meccanismo di elaborazione di dati dell’esperienza e di organizzazione mentale degli eventi della vita. L’individuo è un animale che racconta storie (Gottschall 2018), capacità innata di analisi e gestione della realtà esterna riutilizzabile in qualsiasi contesto. Le proprietà cognitive attivate dalla narrazione generano il pensiero narrativo, un intreccio di elementi di razionalità e fantasia: la prima, agisce attraverso la presenza di rapporti logici di causa-effetto e di una struttura coerente, la seconda, invece, emerge con caratteristiche non reali e magiche all’interno dei racconti. Se è vero che la narrazione costituisce uno spazio di ricapitolazione delle esperienze nelle fasi di sviluppo cognitivo, è altrettanto vero che la realizzazione di un laboratorio di scrittura rivolto a un gruppo di bambini con fragilità neurologiche, consente di evidenziare – grazie a un’interpretazione dei processi inferenziali interessati durante l’esperienza della narrazione e a un’osservazione delle scelte linguistiche compiute durante l’atto narrativo – alcuni aspetti che indicano un’evoluzione della competenza narrativa in relazione al bisogno naturale di esprimersi. L’autoracconto favorisce l’acquisizione di un sapere di tipo pratico, in grado di condizionare le nostre azioni: un sapere che, diversamente dalla funzione

che svolgono le competenze logico-scientifiche, promuove una maggiore conoscenza di sé e l'attribuzione di senso agli eventi della realtà. Per sua natura, la narrazione propone modelli di interpretazione della realtà che aiutano gli individui a interagire con il mondo sociale in cui sono immersi. Il racconto presenta una sequenza di eventi che accadono e personaggi che agiscono, articolandosi e modificandosi sulla scorta delle reazioni degli stessi personaggi a tali eventi: in questo modo, gli universi narrativi si intrecciano con l'esperienza umana, diventando uno strumento fondamentale per costruire contesti di significato.

Il gruppo che ha preso parte alle attività del laboratorio si è distinto per la presenza di caratteristiche e dinamiche particolari. La presenza di fragilità sociolinguistiche ha evidenziato alcune difficoltà, talvolta con la necessità di intervenire sul progetto per adeguarlo alle esigenze dei soggetti. Tuttavia, dal punto di vista narrativo, si segnalano notevoli progressi. Gli esiti narrativi hanno mostrato un miglioramento nella costruzione del testo o nello sviluppo degli snodi del racconto. Ciò conferma che il costante contatto con la narrazione contribuisce a una più adeguata organizzazione delle idee e allo sviluppo dei processi inferenziali. Inoltre, la narrazione è una competenza fondamentale per la costruzione dell'intelligenza emotiva, ovvero la capacità di monitorare le emozioni e i sentimenti propri e altrui. Il bisogno di raccontare e di raccontarsi è centrale nella vita di ogni individuo: il pensiero narrativo, attraverso storie vere o inventate, rappresenta uno strumento imprescindibile al fine di interpretare la realtà e sollecitare il recupero del senso esistenziale, relazionale, cognitivo e affettivo della propria storia di vita.

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Quaderni di Linguistica e Studi Orientali- QULSO
Working papers in Linguistics and Oriental Studies

Firenze University Press
https://oajournals.fupress.net/index.php/bsfm-qulso

Citation: (2023) Contributors. *Qulso* 9: pp. 379-382. doi: 10.13128/QULSO-2421-7220-15208

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DIPARTIMENTO DI FORMAZIONE, LINGUE, INTERCULTURA,
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BIBLIOTECA DI STUDI DI FILOLOGIA MODERNA: COLLANA, RIVISTE E LABORATORIO

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