# ABSTRACT

Title of Dissertation: OVERT-COVERT MOVEMENT, COPY DELETION, AND CHAIN REALIZATION IN VALDÔTAIN PATOIS

Luisa Seguin
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Dissertation Directed by: Professor Maria Polinsky
Department of Linguistics

This dissertation investigates patterns of chain realization in Valdôtain Patois, an understudied Francoprovençal language spoken in Aosta Valley (Italy), which permits some degree of optionality in wh-fronting: wh-phrases can occur sentence-initially or clause-internally (CIwh-phrases). Using several diagnostics (including binding and parasitic gap licensing), I argue that CIwh-phrases are in fact the result of movement in narrow syntax with deletion of higher copies in the chain. All wh-phrases move to their scope position in narrow syntax. The optionality arises post-syntactically, when the decision of which copy to pronounce is taken. Therefore, Valdôtain Patois constitute new evidence of the underexplored phenomenon of movement in narrow syntax with deletion of higher copies in the chain or overt-covert movement (Bobaljik, 1995, 2002; Bobaljik and Wurmbrand, 2012; Bianchi, 2019; Amaechi and Georgi, 2020). I argue that the patterns of optionality in copy pronunciation are reflexes of successive-cyclic movement, and follow from a specific and partly free ordering of (internal) Merge and upward Agree operations.

Moreover, I discuss the pragmatic licensing of wh-questions in Valdôtain Patois. CIwh-phrases are pragmatically marked: they act as strong presupposition triggers (Kripke, 2009; Abrusán, 2011; Abusch, 2010) and need contextual activation to be licensed. Therefore, we are faced with a very intriguing relation between the copy the grammar selects for pronunciation and the pragmatics of the question, which is problematic for more traditional models of grammar (e.g. the Y-model), where LF and PF are independent from each other and only get input from narrow syntax. In my analysis, I argue that these differences in use can still be accounted for by a purely syntactic feature-based account, with the pragmatic restrictions coming from an LF operator that restricts the possible answers to the question.

Finally, I discuss the island-insensitivity of CIwh-phrases and their matrix scope. Using interveners and parasitic gaps licensing, I show that wh-phrases move to the matrix CP area, but choosing to pronounce a lower copy in the chain voids the island effect. I adopt Fox and Pesetsky's (2005a) account of successive-cyclicity as a linearization requirement and argue that, in Valdôtain Patois, choosing to pronounce a lower copy in the chain lifts the linearization requirements for subsequent steps of movement to happen successive-cyclically through each phase edge (including the island edge), and the island violation never occurs.

# OVERT-COVERT MOVEMENT, COPY DELETION, AND CHAIN REALIZATION IN VALDÔTAIN PATOIS

by

Luisa Seguin

Dissertation submitted to the Faculty of the Graduate School of the
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Advisory Committee:
Professor Maria Polinsky, Advisor, Chair
Assistant Professor Aron Hirsch, Co-Advisor
Assistant Professor Gary Thoms, Co-Advisor
Professor Howard Lasnik
Associate Professor Paolo Santorio, Dean's Representative

# Preface

埏埴以器, 其, 有器之用.
牖以室, 其, 有室之用.
故有之以利, 之以用.

*Shape clay into a vessel;*
*It is the space within that makes it useful.*
*Cut doors and windows for a room;*
*It is the holes which make it useful.*
*Therefore benefit comes from what is there;*
*Usefulness from what is not there.*

Lao Tzu
TAO TE CHING

Valsavarenche, July 28th 2025

## Dedication

*A mamma e papà,*

*per avermi dato la vita*

*e molto altro.*

# Acknowledgments

Despite the significant social progress of the past fifty years, pursuing a career in science as a woman remains far from easy. The struggle begins early. In rural Italy, a curious girl was—and, in many ways, still is—seen as a nuisance, someone destined for trouble rather than success. I heard this narrative countless times during my youth—from teachers, from the priest, from the parents of my classmates. Fortunately, I was lucky enough to encounter a few remarkable adults who saw me for who I was and chose to nurture my curiosity rather than silence it. Their support, both past and present, made all the difference. The first part of these acknowledgements is dedicated to them—in reverse chronological order, beginning with my thesis committee.

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Howard Lasnik—you are an institution. Your passion for teaching and linguistics is truly inspiring. I loved being in your class (your assignments were so much fun!) and experiencing your unique approach to teaching syntax—LING610, for us Marylanders. I feel incredibly fortunate to have had you on my committee. If I ever become even half as dedicated and passionate teacher as you are, I will consider myself truly blessed.

Paolo Santorio. It must be hard to receive a 441-page dissertation on the syntax of wh-questions with only 10 days to read it. Thank you for being part of my dissertation committee and giving me precious feedback on the pragmatic analysis, which to this day remains quite exploratory.

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*Laggiù conobbi pure un vecchio aedo*
*Che si accecò per rimaner nel sogno*
*Con l'occhio azzurro invece ho visto e vedo*
*Con l'occhio blu mi volto e ti ricordo*
Roberto Vecchioni *L'ultimo spettacolo*

# Foreword

I acknowledge funding from the National Science Foundation during the course of my PhD through grant BCS-2116344 to Maria Polinsky.

The content of this thesis has been (in part) published. Here is a list of publications that originated from this work:

- Parts of Chapter 6 have appeared in the following publication:

  Seguin, L. in press. The (in)compatibility of wh and focus in root and embedded questions in Romance and beyond. In *The Oxford Handbook of Syntactic Cartography*, Sam Wolfe (Ed.), Oxford University Press.

- The main part of Chapter 7 and a fraction of Chapter 8 constitute the main body of the following publication:

  Seguin, L. 2025. Choose me! Optionality in wh-movement and PF copy deletion: evidence for overt-covert movement in Valdôtain Patois. *Glossa: a journal of general linguistics* 10(1), 1-44, DOI: 10.16995/glossa.17077.

- Part of Chapter **??** has appeared as the following publication:

  Seguin, L. in press. The syntax and pragmatics of clause internal wh-phrases in Valdôtain Patois, *Linguistic Variation: Theoretical and empirical issues in Italo-Romance varieties*, 25(2).

- Chapter 10 is in preparation for a submission. A very short version of it will soon appear in the WCCFL42 proceedings as:

  Seguin, L. in press. Deletion of higher copies voids island effects: Evidence from Valdôtain Patois, *Proceedings of the 42nd West Coast Conference of Formal Linguistics (WCCFL 42), Berkeley*.

# Table of Contents

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# List of Abbreviations

This is a comprehensive list of abbreviations and glosses used in this dissertation. For conventional notations, I follow the Leipzig Glossing Rules.

| | |
|---|---|
| 1, 2, 3 | 1st, 2nd, 3rd person |
| ACC | accusative |
| ACT | activated |
| AdvP | Adverb Phrase |
| BP | Brazilian Portuguese |
| CF | Contrastive Focus |
| CIwh-phrase | clause internal wh-phrase |
| CL | clitic |
| COMP | complementizer |
| CorrF | Corrective Focus |
| CP | Complementizer Phrase |
| D-linked | Discourse-linked |
| DAT | dative |
| DEF | definite |
| DET | determiner |
| DO | Direct Object |
| DP | Determiner Phrase |
| DS | Deep Structure |
| EPP | Extended Projection Principle |
| F | feminine |
| FOC | focus |
| FocP | Focus Projection |
| FUT | future |
| GER | gerund |
| HLP | High Left Periphery |
| IMP | imperative |
| IND | indicative |
| INDEF | indefinite |
| INF | infinitive |
| IO | Indirect Object |
| LF | Logical Form |

| | |
|---|---|
| LLP | Low Left Periphery |
| M | masculine |
| NEG | negation |
| NegP | Negation Phrase |
| NIF | New Information Focus |
| NOM | nominative |
| NPA | Nuclear Pitch Accent |
| PART | partitive |
| PF | Phonological Form |
| PG | parasitic gap |
| PIC | Phase Impenetrability Constraint |
| PL | plural |
| PP | Prepositional Phrase |
| PS | Phrase Structure |
| PST | past tense |
| PTCP | participle |
| Q | question particle |
| QembP | Question embedded Phrase |
| QR | Quantifier Raising |
| REFL | reflexive |
| S | Subject |
| SC | Serbo-Croatian |
| ScoT | Scope Transparency |
| SS | Surface Structure |
| SUBJ | subjunctive |
| SVO | Subject-Verb-Object |
| TopP | Topic projection |
| TP | Tense Phrase |
| ValPa | Valdôtain Patois |
| vP | ‘little’ verb Phrase |
| VP | Verb Phrase |
| VSO | Verb-Subject-Object |
| whP | Wh Phrase |

# Chapter 1: Introduction

This dissertation deals with wh-movement, more specifically, the conditions, rules, and constraints involved in the realization of movement chains in wh-questions. Languages display a number of long-distance dependencies, among which we find wh-movement. For instance, in (1), the wh-word *who* is base-generated in the embedded clause, as the subject of *win*, yet it surfaces at the beginning of the question.[1]

(1) a. [**Who** do you ~~who~~ think [~~who~~ will ~~who~~ win the Stanley Cup this year]]?

b. *[~~Who~~ do you ~~who~~ think [~~who~~ will ~~who~~ win the Stanley Cup this year]]?

c. *[**Who** do you **who** think [~~who~~ will ~~who~~ win the Stanley Cup this year]]?

d. *[**Who** do you **who** think [**who** will **who** win the Stanley Cup this year]]?

Since the advent of Minimalism (Chomsky, 1993) and the Copy Theory of Movement, it became clear that a moved element leaves behind a copy of itself in each position it transits through, as in (1). Yet, of all the available copies, most languages only overtly realize one.[2] This is shown in (1) for English, where *exactly one copy* in the movement chain (no more, no less than that) is pronounced. In English, this copy happens to be the structurally highest one, also called the

[1] For reference, the 2025 Stanley Cup was won by the Florida Panthers, who had already won in 2024.

[2] There are exceptions to this, among which some varieties of German (Felser, 2004; McDaniel, 1986), Romani (McDaniel, 1986), and certain northern Italian varieties, like the one spoken in La Strozza Valle Imagna (Manzini and Savoia, 2005).

head of the chain. Nunes (2004) argues that this pattern can be captured by stating that the formal properties of the copies have an influence on Phonological Form (PF) choosing them for realization. In (1-a), the head of the chain is the copy that has entered the most Agree relations, in virtue of being the highest, and hence has more formal features than other copies in the chain. The same pattern is witnessed in Italian and Spanish, a.o., but it is not universal.

For instance, in Romanian it is possible to pronounce a lower copy in a wh-chain to avoid a sequence of homophonous wh-phrases in multiple wh-questions (Bošković, 2002). In (2), in the chain $ce_k$-$ce_k$ the head of the chain is pronounced, whereas in the chain $ce_i$-$ce_i$ a lower copy is pronounced instead. The decision on copy pronounciation is driven by the need to avoid what Bošković (2002) defined a PF-constraint; otherwise Romanian is a strictly wh-fronting language. Yet, Bošković is not explicit as to *how* the decision to pronounce a lower copy in the $ce_i$-$ce_i$ chain is taken. Some of the questions that arise at this point are: is the decision on which copy to pronounce taken in (narrow) syntax or at PF? Which copies can be pronounced as an alternative to the head of the chain: the copy in situ and/or any other copy in the chain? Why is this possible in Romanian but not in English?[3]

(2) a. **Ce**$_k$ ~~ce~~$_i$ precede ~~ce~~$_k$ **ce**$_i$? **Romanian**
what precedes what
'What precedes what?'

b. ***Ce**$_k$ **ce**$_i$ precede ~~ce~~$_i$ ~~ce~~$_k$?

(Bošković, 2002, p. 365)

Moreover, the decision on which copy to pronounce has important consequences in Romanian.

[3]Here I am only considering information-seeking questions and disregarding echo questions.

Pronouncing a lower copy in the wh-chain can void island effects, cf. (3-a) and (3-b). Islands are constructions from which extraction is banned (Ross, 1967; Huang, 1982; Merchant, 1999). The complex noun phrase *the rumor that...* is a prototypical kind of island and, as shown in the English example (4), extracting a wh-phrase out of it leads to an ungrammatical sentence.

(3) a. ~~Ce~~ Ion a ausit [ zvonul că Petru a cumpărat **ce** ] ?
what Ion has heard the-rumor that Petru has bought
'Ion has heard the rumor that Petru has bought what?'

b. ***Ce** Ion a ausit [ zvonul că Petru a cumpărat ~~ce~~ ]?

(Bošković, 2002, p. 374)

(4) ***What** Ion has heard [the rumor that Petru has bought ~~what~~ ]?

Nevertheless, the Romanian data suggest that perhaps islands are not the result of violation on constraints on movement, but on overt copy realization. The questions that arise are several: how exactly is the violation voided in (3-a)? Are we dealing with a case of amelioration by deletion or simply the violation never occurs? Are islands a syntactic or a post-syntactic (e.g. PF) phenomenon? Once again, why is this effect witnessed in Romanian but not in English?

Optionality in copy pronunciation in wh-chains, like in (2), is only noted in a handful of languages: Romanian, Bulgarian, Serbo-Croatian (Bošković, 2002), and Igbo (Amaechi and Georgi, 2020). Moreover, how and why the grammar might choose to pronounce a lower copy in a wh-chain, as well as the consequences of this decision, remain a grey area. Our knowledge of how a movement chain is overtly realized, namely which copy (or copies in some cases) is pronounced and how this decision is taken by the grammar (even for languages like English), is limited. Patterns of optionality in copy pronunciation along the lines of (2) and how they interrelate to other phenomena, such as island effects, remain severely underexplored and poorly accounted for in syntactic research. This is precisely where this dissertation comes in, as the next section will outline.

## 1.1 Aim and overview of this dissertation

This dissertation brings forth novel data on the realization of wh-chains in Valdôtain Patois (Glottolog code: vall1249), an understudied Francoprovençal language spoken in Aosta Valley (Italy). Valdôtain Patois displays (some degree of) optionality in wh-fronting. As shown in (5), wh-phrases can occur clause-initially, (5-a), or clause-internally, (5-b). In both (5-a) and (5-b), the wh-phrase has matrix scope.

(5) a.

| | | | | | |
|---|---|---|---|---|---|
| **Qui** | t' | à | vù | ì | martsà? |
| who | CL.2SG | have.PRS.2SG | see.PST.PTCP | at.DET.DEF.M.SG | market |

'Who did you see at the market?'

b. T'à vù **qui** ì martsà?

Throughout this dissertation, I will show that (5-a) and (5-b) are structurally identical. The optionality, therefore, does not arise in the syntax but rather post-syntactically. (5-a) and (5-b) merely differ in which copy in the chain is pronounced. Therefore, the present work brings forth new evidence in support of the understudied phenomenon of movement in narrow syntax with deletion of higher copies in the chain (Bobaljik, 2002; Bošković, 2002; Bianchi, 2019; Amaechi and Georgi, 2020), as in (5-b). However, (5-a) and (5-b) are not freely interchangeable and the word order in (5-b) is pragmatically marked and restricted to contexts where the propositional content of the question is activated in previous discourse or inferable. The data discussed in this dissertation highlight a very tight connection between where we pronounce the wh-phrase (i.e. how we linearized the chain) and the pragmatics of the question, which is problematic for traditional models of grammar, such as the inverted Y-model (Figure 1.1), where interpretation (Logical Form; LF)[4] and sound (PF, broadly speaking) components are independent from each other.

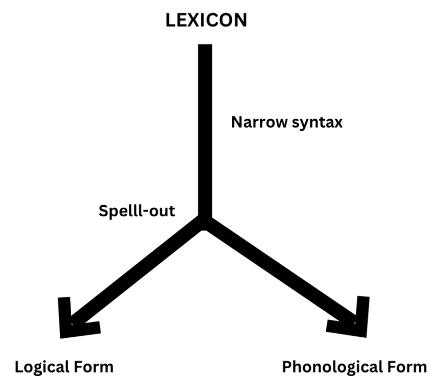



Figure 1.1: The inverted Y-model (Chomsky and Lasnik, 1977; Chomsky, 1993)

But even without factoring in the pragmatic facts, previous theories and models of grammar fail to properly account for the optionality in copy pronunciation witnessed in Valdôtain Patois wh-questions. Here, I will argue that the copy pronunciation patterns in (5) are the result of syntactic operations, which have an effect on phonological realizations. In particular, I will argue that copy pronunciation is a reflex of successive cyclic movement and results from specific ordering of (internal) Merge and Agree operations (pace Georgi 2014a; 2014b; 2017). The difference in copy pronunciation patterns in Valdôtain Patois and English-like languages stems from the kind of features present on various projections. The pragmatic restrictions are accounted for by the anaphoricity to the Question Under Discussion of questions with a clause-internal wh-phrase. Moreover, this dissertation will provide the first detailed discussion of island constructions in

[4] As I will ponder in Chapter 9, it is not clear whether the pragmatic restrictions witnessed in these wh-questions are encoded at LF.

Valdôtain Patois. Crucially, choosing to pronounce a lower copy in the wh-chain voids island effects. I argue that (at least some) islands are a post-syntactic phenomenon that arise because of a violation in linearization requirements and, by overtly realizing a lower copy in the wh-chain, the grammar prevents the island violation from occurring.

The dissertation is structured as follows. Chapter 2 and Chapter 3 set the foundation for the whole work. Chapter 2 provides an overview of how the different models of grammar (inverted Y-model, T-model, linear) inform the theories of (wh-)movement. Chapter 3 provides a description of Valdôtain Patois and its most relevant characteristics, among which strategies that affect word order (Chapter 3.1) and verb movement (Chapter 3.2).

In Chapter 4, I discuss a wide array of wh-questions in Valdôtain Patois and the extent to which the language allows clause-internal wh-phrases (CIwh-phrases). Then, I show that CIwh-phrases in Valdôtain Patois are not surfacing in-situ. Resorting to word order patterns, weak crossover effects (with some caution), parasitic-gap licensing, and adverb placement, I show that CIwh-phrases in fact surface at the edge of vP. In Chapter 5, I discuss various previous analyses on non-fronted wh-phrases in Romance languages (Chapter 5.1), multiple wh-fronting languages (Chapter 5.2), and SOV languages: Persian (Kahnemuyipour, 2001), Malayalam (Jayaseelan, 1996, 2001), Basque (Arregi, 2002, 2003), and Georgian (Borise, 2023) (Chapter 5.3). The Chapter wraps up with a comparison of the different analyses put forth to explain non-fronted wh-phrases in these languages. Despite differing in substantial ways, all these analyses agree on one point: that wh-phrases undergo Focus-movement.

Chapter 6 investigates which position wh-phrases target in Valdôtain Patois, arguing that they undergo wh-movement and not Focus-movement. Exploring the phenomenon from a cartographic perspective, I consider the position targeted by CIwh-phrases as situated in an area rich in A'-positions (Focus and Topics) at the edge of vP: the Low Left Periphery (Belletti, 2004; Baunaz and Bonan, 2023). In Valdôtain Patois, wh-phrases and contrastively focalized constituents can felicitously co-occur within the Low Left Periphery. Based on data from Valdôtain Patois and (my variety of) Italian, I argue that this restriction is nonexistent in the High Left Periphery (former CP) either, contra the mainstream claim in the cartographic literature (Rizzi, 1997; Rizzi and Bocci, 2017). By resorting to Rizzi's (1990; 2004) Featural Relativized Minimality, I show that previous analyses of wh-phrases as targeting a FocusP are not suitable for Valdôtain Patois (nor Italian) and call for a re-evaluation of wh-movement and Focus-movement as distinct and driven by different features. Moreover, I show that the wh-phrases target projections at different heights in the Low and High Left Periphery. In the former, they target a dedicated whP at the top end of the periphery, thus preceding all other A'-elements (Contrastive Focus and Topics). On the other hand, in the High Left Periphery, wh-phrases target a dedicated position in the bottom part of the periphery, allegedly the lowest A'-position available. I also briefly discuss data from Hungarian (Cable, 2008) and San Lucas Quiaviní Zapotec (Lee, 1999, 2001, 2005) that also call for a re-evaluation of wh-movement as Focus-movement, further confirming that -at least for some languages- the theory is outdated. Finally, in Chapter 6.4 I discuss the distribution of D-linked wh-phrases like *quin livro* 'which book'. In Valdôtain Patois, the latter are much freer in their occurrence within one periphery. I frame these findings in the broader picture of D-linked wh-chains, connecting their freer distribution in Valdôtain Patois to other widely attested behaviour of D-linked wh-phrases, such as lack of superiority effects and failure to give rise to wh-island violations (at least in Italian and Valdôtain Patois). In the end, I argue that these facts are all expected if D-linked wh-phrases do pattern like Topics and target a topic position as it has been argued for other languages (Lipták, 2001; Polinsky, 2001; Grewendorf, 2012).

In Chapter 7, I analyse the derivation of wh-questions in Valdôtain Patois with fronted and CIwh-phrases. Using a variety of diagnostics (inverse scope, intervention effects, binding, and parasitic-gap licensing), I show that CIwh-phrases undergo successive-cyclic movement to their scope-taking position *in narrow syntax*. The crucial evidence comes from binding and parasitic gaps. Since only A'-chains formed in narrow syntax are able to create new binding opportunities and license parasitic gaps (Engdahl, 1983; Culicover, 2001; Nunes, 2004), it follows that CIwh-phrases undergo movement before Spell-out. This means that the difference between fronted and CIwh-phrases in Valdôtain Patois is only apparent: there is no structural ambiguity. The different word orders are the consequence of the choice to pronounce different copies in the chain.

In Chapter 8, I propose an analysis for the chain realization patterns discussed thus far. In Valdôtain Patois, it is not the case that just any copy in a wh-chain can be pronounced. Regardless of the length of the dependency, only the head of the chain and the copy in the most local Low Left Periphery to the extraction site can be pronounced. In the first part of the Chapter, I analyze the chain realization patterns in terms of reflexes of successive-cyclic movement, following Georgi (2014a,b, 2017). In particular, I argue that the optionality in copy pronunciation can be accounted for with a specific ordering of (internal) Merge and upward Agree operations. WhP in the matrix High Left Periphery and the most local Low Left Periphery to the extraction site host a [WH] feature. Merge operations driven by [WH] feature are ordered before upward Agree and therefore feed Agree, which results in reflexes of movement in the form of copy pronunciation. Contrastively, the other intermediate positions only host an edge feature, [EPP]. Movement driven by this feature is ordered after upward Agree and therefore counter-feeds Agree, which results in no reflexes in the form of copy pronunciation. This analysis allows us to account for the optionality in copy pronunciation by ascribing the mechanisms to a purely syntactic (feature-based system). In the second part of the Chapter, I start a relatively exploratory investigation of how the constraints regulating copy pronunciation interact with prosody mapping (syntax-prosody interface) and the pragmatic restrictions. In Chapter 8.2 I investigate the interplay between syntactic structure and prosody in wh-questions. The syntax-prosody mapping is not a novel topic in linguistic literature (Selkirk, 1995, 2008; Truckenbrodt, 1995; Elfner, 2012, 2015, 2018; Bocci, 2013; Bocci and Avesani, 2015; Bocci and Cruschina, 2018; Bocci et al., 2021), but the question of how chain realization affects prosody is relatively underexplored. I bring forth new evidence that syntactic structure feeds prosodic mapping, which is sensitive to the existence of movement chains. Following work on the syntax-prosody interface in Italian (Bocci, 2013; Bocci and Avesani, 2015; Bocci and Cruschina, 2018; Bocci et al., 2021), I argue that, in bare wh-questions, the assignment of sentential stress in Valdôtain Patois is dependent on the underlying syntactic structure and falls on the rightmost overt elements bearing a {[WH],[FOCUS]} bundle. In case of CIwh-phrases, that is the wh-phrase itself. On the other hand, in the case of fronted wh-phrases, the rightmost overt elements bearing a {[WH],[FOCUS]} bundle is the lexical verb, which inherits the feature bundle from the wh-phrase transiting through the Low Left Periphery. Yet, the Valdôtain Patois data also shows that the weight of the wh-phrase has an impact on the stress assignment patterns: 'heavy' wh-phrases (both D-linked and non-D-linked ones) always bear the main sentential stress, which is unexpected under previous theories (Bocci et al. 2021; a.o.). Finally, in Chapter 9 I analyse the pragmatic restrictions of CIwh-phrases, highlighting that they pattern like strong presupposition triggers in the sense of Abusch (2010) and Abrusán (2016): they introduce a strong existential presupposition (Beaver and Denlinger, 2020) which needs to be locally licensed in the context. Upon a closer inspection, I show that Valdôtain Patois CIwh-phrases are only licensed when the propositional content of the question is either activated in the preceding discourse or it is inferable from the linguistic and extra-linguistic context and the interlocutor's knowledge of the world. From a typological standpoint, Valdôtain Patois finds itself between modern-day French, where there is true optionality and non-fronted wh-phrases are also licensed in non-activated contexts (Larrivée, 2019; Garassino, 2022; Baunaz and Bonan, 2023; Baunaz et al., 2023), and the very restricted Italian, where they are only licensed in activated contexts. In the last part of the Chapter, I argue that the difference lies in the relation to the Question Under Discussion (QUD): wh-questions with a fronted wh-phrase introduce a new QUD, whereas wh-questions with a clause-internal wh-phrase are anaphoric to the current QUD.

Finally, Chapter 10 discusses chain realization in island constructions. If CIwh-phrases undergo movement to their scope-taking position in narrow syntax, then is should be predicted that they display island sensitivity. I show that this is not the case: CIwh-phrases never display island sensitivity, despite having matrix scope, whereas their fronted counterparts do. Following Kotek (2014, 2016) I use the placement of an intervener inside and above the island boundary and resort once again to parasitic-gap licensing to diagnose the movement path of wh-phrases and show that wh-phrases move out of the island and into the matrix High Left Periphery, from where they take matrix scope. However, deletion of higher copies in the chain voids the island effect. In Chapter 10.4, I argue that successive-cyclicity is a linearization requirement and hence enforced post Spell-out (Fox and Lasnik, 2003). Since in Valdôtain Patois at most one copy in a chain can be overtly realized, deciding to pronounce a lower copy in the wh-chain (the wh-phrase in the island Low Left Periphery) automatically marks that chain as linearized. Therefore, I argue that the fact that movement did not proceed in a successive-cyclic fashion through the island's edge is not an issue and hence the island violation never occurs. This sets the 'island amelioration' facts witnessed in Valdôtain Patois on another plane as the salvation by deletion witnessed is sluicing constructions (Merchant 2008; Van Craenenbroeck and Lipták 2013; Lipták and Saab 2016; a.o.), if indeed there is such a thing as salvation by deletion (see Barros et al. 2014 and Wu 2022; a.o.).

# Chapter 2: A (brief) history of wh-movement and its core questions

As early as Chomsky (1957, 1965), it was clear that languages display instances of displacement, namely expressions that are overtly realized (heard) in one position, while also being interpreted in other positions (Cheng and Corver, 2006). An example of displacement is found in English wh-questions, as in (1), where the wh-phrase *what* is displaced from its base position as a complement of V (where $\_{}_{i}$ is) to the left periphery of the clause. It thus follows that *what* is interpreted in two positions. It is interpreted in the complement of V as the object of *drop*, which assigns the theta role of theme (also *drop* selects for a DP complement) to its complement, as well as case.[1] Moreover, *what* is interpreted at the left periphery of the clause, CP, for scope purposes: (1) has the interpretation “For which x such that x is object you dropped x?”. Another example of displacement is focalization, as in (2). Crucially, elements can be displaced across a clause boundary, as can be seen in (3), although with some limitations (see Ross 1967 and Chapter 10).

(1) What$_{i}$ did you drop $\_{}_{i}$?

(2) THE HAM$_{i}$ you dropped $\_{}_{i}$!

(3) What$_{i}$ did you say [that Mary dropped $\_{}_{i}$]?

[1] The accusative case assigner in more modern approaches is v. See Hornstein et al. (2005) for details on the evolution of case assignment.

In the earlier days of generative syntax in the '50's, linguists were not yet talking about a theory of movement. In Chomsky (1957), cases of displacement like (1) were analyzed as transformations which applied to the Phrase Structure rules (PS rules). I will not delve deep into the details of this earlier framework (I refer the reader to Chomsky (1957) for the whole set of rules and discussions), and just briefly explain how PS rules accounted for cases of displacement. PS rules are, in short, rewrite rules that derive well-formed sentences, while also capturing the core characteristic of human language: recursion. In (4), I report a few rules to exemplify the rationale. The first rewrite rule, (4-a) states that a sentence, S, like (5), can be rewritten (signalled by $\rightarrow$) as a noun phrase, NP, followed by an optional auxiliary and the verb phrase, VP. NP can then be rewritten as T (which originally stood for determiner, e.g. *the*) and the noun, while VP as verb plus optional NP, and so on. In the early days of generative syntax, this is how basic declarative sentences like (5) were derived.

(4) a. S $\rightarrow$ NP - (Aux) - VP

b. NP $\rightarrow$ T - N

c. VP $\rightarrow$ Verb (NP)

(5) The man hit the ball.

Within this framework, changes to the basic (unmarked or default) word order, including dependencies like (1)-(2)-(3), were analyzed as transformations. Transformational rules define the string they apply to and the type of structural changes they introduce, which include reordering rules. This is precisely what was proposed for wh-questions like (1). Based on their similarity with Y/N questions, in that both include subject auxiliary inversion, Chomsky (1957) proposed to analyze sentences like (6-c) as deriving from (6-b), through the application of a specific transformation. This transformation operates on strings of the form X - NP - Y (where X and Y can be any string, even null ones), by first inverting the order X - NP, which results NP - X - Y, and then converting NP into *what* (or *who*, depending on animacy), so that the order ended up being *what* - X - Y, as in (6-c).

(6) a. The man can hit the ball.
    b. Can the man hit the ball?
    c. What can the man hit?

The introduction of transformations made is necessary to reconceptualize syntactic derivations as having two distinct levels of representation: Deep Structure (DS) and Surface Structure (SS). DS arises after all PS rules and lexical insertion applied, but before any other transformation. On the other hand, SS is the level of representation that results from applying all the relevant transformations (Chomsky, 1965).

Not even a decade later, however, it became clear that rules of transformation like the ones just outlined were not enough to describe the formation of wh-questions and other constructions, in part because displacements are in fact subject to constraints, such as Ross's (1967) island constraints (see Chapter 10). This is when displacements were reanalyzed as syntactic movement of the displaced item, which leaves behind a gap. Shortly after, linguists realized that this type of movement was, however, also inadequate to depict the duality in the semantic interpretation of moved elements mentioned above. Therefore, movement was reanalyzed as leaving behind a trace, namely a syntactic object. At the time, linguists proposed a clear division between A-and A'-movement, namely movement to argument (namely a position where arguments can be base-generated, e.g. in the '60s movement to SpecTP) and non-argument positions, including wh- and focus-movement (1) and (2).[2] Since this thesis deals with wh-movement, in this chapter, I will focus primarily on wh-movement, although I will discuss other types of movement where relevant. The following sections will discuss wh-movement in the various mainstream models of the architecture of the grammar.

## 2.1 Movement in the Y-model

In Chomsky (1965) proposed the Standard Theory, in which the grammar comprises three components: a syntactic component, a phonological component, and a semantic component. The syntactic component specifies an infinite set of abstract formal objects and operations (namely the transformations discussed above). In short, the syntactic component generates a structure. The phonological component, or phonological form (PF),[3] of the grammar determines the phonetic form of a sentence generated by the syntactic rules, by relating the generated structure to a phonetic object. On the other hand, the semantic component, logical form (LF), determines the semantic interpretation of the sentence, by relating the generated structure to a semantic representation. Crucially, in Chomsky (1965), both the phonological and the semantic components are purely interpretive: they take a structure produced by the syntactic component and interpret it. Therefore, at the time, it was conceived that the two components operate on different levels

[2] This strict division was destined to be revisited many times. For instance, Chomsky (1973, 1977, 1981) redefined the difference as a difference in the locality constraints that the two movement types abide. See Keine (2018), Safir (2019), and Hewett (prep), among others for a discussion of the differences between A- and A'-movement and the evolution of the divide. Throughout this thesis, I will use the term A'-movement to generally refer to wh- and focus-movement, without directly including Topicalization. The reason is that the latter differs in several ways from wh- and focus-movement, as will be discussed in Chapter 6.

[3] In Chomsky and Lasnik (1977), this component was actually named Universal Phonetics (UP).

of representation: the semantic interpretation on the output of the DS and the SS by the phonological component. This is illustrated in Figure 2.1. What is crucial about this early model of the grammar, and very relevant for the evolution of the theory, is that the syntax is the unique component of the grammar that communicates with the other components. PF and LF do not communicate; everything is mediated by the syntax.

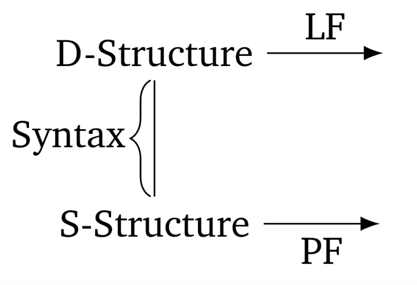



Figure 2.1: The architecture of the grammar in the Standard Theory (Chomsky, 1965)

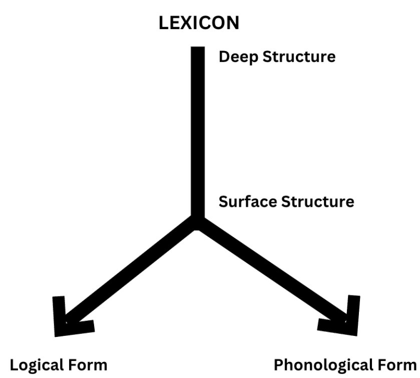



Figure 2.2: The architecture of the grammar in the Extended Standard Theory, also known as the (inverted) Y-model (Chomsky and Lasnik, 1977)

In Chomsky and Lasnik (1977), the grammar model proposed in the Standard Theory evolved into the Extended Standard Theory, later renamed the (inverted) Y-model of grammar, reported in Figure 2.2. The crucial difference between the two is that, in the Y-model of grammar, SS feeds both LF and PF. With the development of the theory and the advent of minimalism, the distinction between these two levels of representation became superfluous (Chomsky, 1995, 2000; Hornstein et al., 2005): it all became narrow syntax. All operations happen as soon as possible, in a cyclic manner. Once the derivation in narrow syntax is complete, the derivation is sent to the interfaces. This point in the derivation is known as Spell-out, as shown in Figure 2.3. From this moment onwards, I will resort to the term narrow syntax to refer to things that happen before Spell-out.

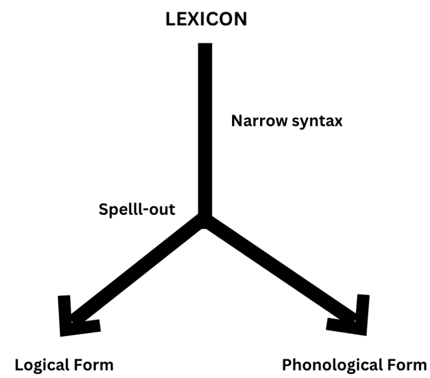
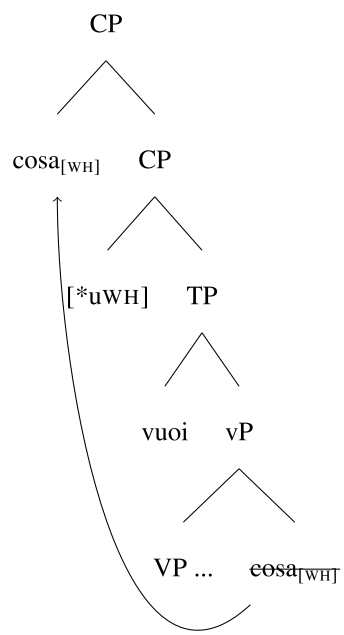



Figure 2.3: The architecture of the grammar in the Minimalist framework (Chomsky, 1993, 1995, 2000)

Within the Y-model, wh-movement, like in the English (1), happens in narrow syntax, namely in the vertical portion of Figure 2.2 and Figure 2.3. Starting from the '70s, movement, including wh-movement, has been argued to be driven by features. Wh-movement specifically is triggered by a [WH] feature, hosted in the head in C, which forces the movement of an XP bearing the same feature. In the early minimalist days (Chomsky, 1993, 1995), the theory got revisited and feature strength was introduced in the picture. Hence, the presence of a strong uninterpretable feature in the C head, [*uWH] (the astherisk marks the strength), forces movement to its specifier of a goal carrying an interpretable [WH] feature, as outlined in (8) for the Italian example (7).

(7) **Cosa**$_i$ vuoi $\_\_{i}$ ?
what want.PRS.2SG
'What do you want?'

(8)




Like in English, wh-movement in Italian, (8), happens in narrow syntax, therefore before Spell-out. This came to be known as *overt movement*, as in Figure 2.4. Overt movement has syntactic, phonological, and interpretive reflexes, as can be seen in (1) and (7).

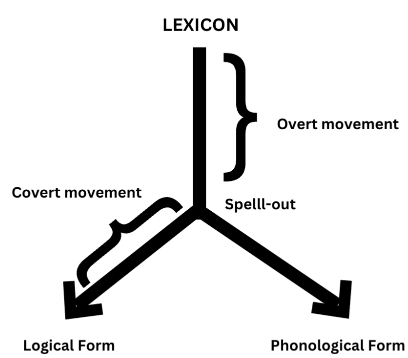



Figure 2.4: Overt and covert movement in the Y-model of grammar

As the work on the syntax of questions expanded and linguists started to look at typologically diverse languages, it occurred that not all languages form questions through displacement of the wh-phrase, like English and Italian do. As Huang (1982) showed, in Mandarin wh-phrases remain in their external merging position, that is in-situ. This can be seen in (9).

(9) a. Lisi mai-le **shenme**?
Lisi buy-ASP what
'What did Lisi buy?'

b. ***Shenme** Lisi maile?

c. Lisi maile **shenme** ?

Huang's (1982) seminal work on Mandarin has shown that wh-phrases that appear in situ in fact also undergo displacement, but at a different stage in the derivation, namely post Spell-out. Mandarin wh-in-situ undergoes movement at LF. This is shown in (9-c), where LF movement is marked in a dashed line. Since, unlike overt movement, LF movement happens post Spell-out (see Figure 2.4), it only gives rise to syntactic (broadly defined, to include LF) and interpretive reflexes, but no phonological reflexes. For this reason, it became known as *covert movement*, because very simply put we 'don't hear it'.

At LF, Mandarin wh-phrases undergo movement to the matrix CP (Huang, 1982; Chomsky, 1995; Sulemana, 2019), where scope relations are established and the composition of the question can be taken care of. What accounts for the difference in timing of movement (narrow syntax vs LF) is the strength of the [WH] feature driving movement. Unlike strong features, weak ones (e.g. [uWH]) do not force movement of a goal with a [WH] in narrow syntax. Besides a uniform account of how wh-phrases obtain matrix scope in questions, LF movement of wh-phrases in wh-in-situ languages also explains the existence of island effects in fronted and wh-in-situ languages alike. This is illustrated below for English and Bùlì, a Gur language spoken in Ghana. In the English example (10-b), we see that extracting a wh-phrase from a *because* adjunct clause results in an ill-formed sentence (baseline declarative is reported in (10-a)). Crosslinguistically, *because* adjunct clauses disallow *overt* extraction of elements out of them: they are islands for extraction (Ross, 1967; Merchant, 2008; Sprouse et al., 2016; Rodríguez, 2022), together with other constructions (see Chapter 10 for more details).

(10) a. Nicole is laughing [because Arianna bought the book].

b. ***What**$_i$ is Nicole laughing [because Arianna bought _$_i$]?

(11) a. Bíká à lā [John ali dà gbáká la ī].
child.DEF IMPF laugh John ALI buy book.DEF book.DEF PRT body
'The child is laughing because John bought the book.'

b. *Bíká à lā [John ali dà **ká bʷā** la ī]?
child.DEF IMPF laugh John ALI buy Q what PRT body
'What x is such that the child is laughing because John bought x?'

(Sulemana, 2019, p. 9)

(12) *Bíká à lā [John ali dà **ká bʷ**ā la ī]

The same pattern is witnessed in the Bùlì paradigm in (11). Sulemana (2019) points out that, despite overtly surfacing inside the island, the in situ wh-phrase causes an island violation, suggesting that it has undergone movement. The same patterns are reported for countless of wh-in-situ languages, starting from Mandarin (Huang, 1982).[4] I will return to island violations in Chapter 10.

Despite both triggering island violations, narrow syntactic movement and LF movement

[4]However, as Huang (1982) argued, in Mandarin there is an asymmetry between argument and adjunct extraction (see also Lasnik and Saito, 1992; Aoun and Li, 1993; Tsai, 1994 a.o.) For experimental evidence, see Tian et al. (2022) (and Lu et al. (2020a) who claim there is no such asymmetry). While the former is allowed, the latter isn't.

differ in some respects, the most widely acknowledged probably being parasitic-gap licensing (Engdahl, 1983; Culicover, 2001; Nunes, 2004). Narrow syntactic A'-movement licenses parasitic gaps, whereas LF movement does not. A parasitic gap is a gap whose existence depends on the presence of another gap, more specifically, in an A'-chain. Crucially, only wh-movement happening in *narrow syntax*, that is before Spell-out (cf. Figures 9.1 and 2.5), license parasitic gaps (Engdahl, 1983; Culicover, 2001; Nunes, 2004) (see also a discussion of parasitic gaps in Chapters 4.3 and 7.3). This is illustrated in the English examples in (13): only overt movement of *what* in (13-a) licenses the parasitic gap *pg* in the adjunct clause. In the absence of overt wh-movement, like in (13-b), or of covert wh-movement (13-c), it is impossible to have a parasitic gap, and the pronoun becomes necessary.

(13) a. What$_k$ did you eat $\_{k}$ [after warming *pg* up] ?

b. You ate pizza [after warming it/**pg* up].

c. Who ate what [after warming it/**pg* up] ?

Likewise, wh-in-situ in Mandarin does not license parasitic gaps, despite undergoing movement at LF, as can be seen in (14).

(14) *Laowang [zai du-guo *pg* zhihou] jiu diudiao-le **sheme wenjiani**?
Laowang at read-EXP after then throw-PERF what document
'Which document did Laowang throw away right after reading?'

(Lin, 2005, p. 299)

Another type of LF movement is quantifier raising (QR) (May, 1978; Reinhart, 1997; Barker, 2020). An example of QR is shown in (15), where Reading 2 is obtained by raising the quantifier phrase *a biscuit* over the negation, from which it can take wide scope.[5]

(15) Sarah didn't try a biscuit .

a. Reading 1: There is a biscuit x such that Sarah didn't try x $\exists >$ not

b. Reading 2: There isn't any biscuit x such that Sarah tried x not $> \exists$

Within the same languages, both overt and covert movement are witnessed, as can be seen in English multiple wh-questions, where the structurally higher wh-phrase overtly moves to SpecCP, while the others remain in-situ, undergoing covert movement at LF. This is illustrated in (16).

(16) Which student talked to which professor ?

However, cases of covert movement like (16), in which an element is pronounced in one position but interpreted in another, are not the only type of mismatches between the surface and the interpretive position of a constituent. With the advent of Minimalism, it was proposed that moved elements leave behind copies rather than traces (Chomsky, 1993, 1995, 2000). These copies are objects of the syntactic computation. A movement chain, thus, consists of a sequence of copies of the moved element, which *technically* could all be chosen for interpretation at the interfaces. In the wh-chains we have seen so far, the copy being interpreted for scopal purposes is the head of the chain, the one in SpecCP. However, this is not necessarily the case. Consider

[5] Quantifier phrases are not interpretable in object position: a type-mismatch arises when a quantifier phrase like *every x* or *a x*, which is of type $< et, t >$ remains in the complement of V, which is of type $< e, et >$. Therefore, they must raise regardless of the presence of a scopal element in the clause. However, in (15), the need for QR is visible because of the presence of the negation. See May (1978); Reinhart (1997); Barker (2020); and Wurmbrand (2018) a.o. for discussion on QR.

the example in (17), which has ambiguous scope and the two possible LFs in (17-a) and (17-b). The surface scope is *someone* $>$ *likely*, which is the reading in (17-a). However, the reading in (17-b) is also possible, where the lower copy in the chain was interpreted at LF.

(17) Someone from New York is likely to win the lottery.

a. Context: There is a person, who (whether or not we know their identity) is from New York, and who has purchased more than 50% of the lottery tickets.

LF: [Someone from NY] is likely ~~[someone from NY]~~ to win the lottery.

**Scope**: $\exists$ $>$ likely

b. Context: More than half of the lottery tickets were sold to people from New York, though no single person purchased more than 5% of the tickets.

LF: ~~[Someone from NY]~~ is likely [someone from NY] to win the lottery.

**Scope**: likely $>$ $\exists$

It was thus clear from very early on that LF has a choice in which copy to interpret. On the other hand, starting with Chomsky (1993), the standard assumption has long been that PF would by default choose, that is overtly realize (or pronounce), the highest copy in the chain. As we will see in the next section, this has been questioned, although not at large, by researchers in the mid ’90s and early ‘2000s (Brody, 1995; Bobaljik, 1995, 2002; Groat and O’Neil, 1996).

To sum up, in the inverted Y-model of grammar, there is a distinction in the timing of movement: movement that happens *overtly* before Spell-out, that is in narrow syntax, and movement that happens *covertly*, after Spell-out, at LF. In this section, I have presented data from both kinds. Moreover, while LF has some leeway on which copy to interpret, PF has been assumed to, by default, overtly realize the head of the chain. This assumption will be challenged in the next section.

## 2.2 Movement in the T model

In the mid '90s and leaping into the new millennium, Bobaljik (1995, 2002) a.o. proposed a different model of grammar, the Single Output Syntax or T-model, as outlined in Figure 2.5. In this model, the syntax module produces a single representation, which is interpreted by both interfaces, LF and PF.

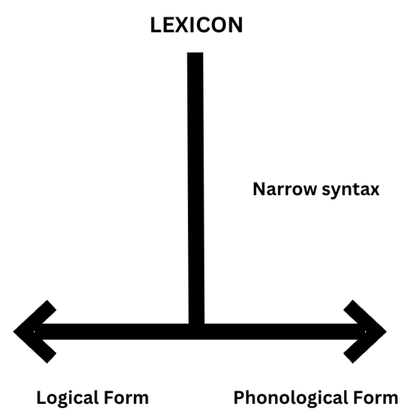



Figure 2.5: The Single Output Syntax or T-model (Bobaljik, 2002)

The theoretical reason put forth by Bobaljik (2002) for proposing the T-model is that, in traditional models of grammar, operations are determined locally. That is, operations in one component "cannot 'look ahead' to be decided by factors at a subsequent stage" (Bobaljik, 2002, p.198). Therefore, the decision on whether a given element must move in narrow syntax or at LF must be taken in narrow syntax, prior to Spell-out. The T-model gets rid of this timing issue: all movement happens in narrow syntax. The distinction between what up until now I have defined *overt* and *covert* movement is not based on timing (that is as happening before or after Spell-out), but rather by which copy gets pronounced. All movement happens in narrow syntax, but then, given a movement chain, the grammar can choose whether to overtly realize the head of the chain or a lower copy. In this section, I will briefly discuss the typology of chain interpretation as in Bobaljik (2002), and the supporting data.

Let us imagine that we have a chain that comprises only two copies, as in (18). In such case, Bobaljik (2002) argues that there are four possible scenarios, outlined in Table 2.1.

(18) $[_{XP}$ copy$_1$ $[_{WP}$ ... $[_{YP}$ ... $[_{ZP}$ copy$_2$ $]]]]$

Table 2.1: Patterns of copy interpretation in the T-model (Bobaljik, 2002)

| | | |
|---|---|---|
| **Pattern 1** | copy$_1$ ... copy$_2$<br>PF LF | 'overt movement'<br>no reconstruction |
| **Pattern 2** | copy$_1$ ... copy$_2$<br>PF LF | 'overt movement'<br>+ reconstruction |
| **Pattern 3** | copy$_1$ ... copy$_2$<br>LF PF | 'covert movement' |
| **Pattern 4** | copy$_1$ ... copy$_2$<br>PF LF | 'covert movement'<br>+ reconstruction |

In cases where both LF and PF privilege the head of the chain, copy$_1$, then we end up with Pattern 1, where the moved element is interpreted where it is pronounced. This is the 'old school' overt movement, as in the English example in (1). Pattern 3 results in cases where PF pronounces the head of the chain, copy$_1$, while LF interprets a lower copy, copy$_2$. This phenomenon, known as reconstruction, is exemplified by the reading (17-b) for (17). Bobaljik (2002) argues that Pattern

3 is what is traditionally labeled 'covert movement', encompassing cases of QR, as in (15). Moreover, wh-questions in so-called wh-in-situ languages like Mandarin, (9), are reanalyzed as a case of overt movement, that is movement in narrow syntax with pronunciation of a low copy in the chain. Pattern 3 became known as 'overt-covert' movement: because it is overt movement disguised as covert movement through the pronunciation of a lower copy in the chain. Finally, in Pattern 4, a low copy is privileged by both PF and LF. Despite looking like a topologically rare pattern, Bobaljik (2002) argues that it is found in certain raising constructions. Since this thesis is concerned with wh-movement and Bobaljik (2002) discusses exclusively cases of A-movement, here I shall make reference to a more recent study on Focus and constructions in Igbo (Benue-Congo) by Amaechi and Georgi (2020), which proves the existence of both Patterns 3 and 4.

In Igbo, both wh-phrases and New Information Focus (henceforth NIF), namely focalized elements that constitute the answer to a question, can surface in-situ or fronted (also known as ex-situ). This is illustrated in (19) and (20) respectively.

(19) Wh-questions Igbo

a. Òbí hụ̀-rụ̀ **ònyé** n'-áhị́á
Obi see–rV who P-market
'Who did Obi see at the market?' $\text{wh}_{\text{DO}}$ in-situ

b. **Ònyé** kà Òbí hụ̀-rụ̀ n'-áhị́á
who FOC Obi see–rV P-market
'Who did Obi see at the market?' $\text{wh}_{\text{DO}}$ ex-situ

(Amaechi and Georgi, 2020, p. 300)

(20) New information focus (answers to (19) Igbo

a. Òbí hụ̀-rụ̀ **Àdá** n'-áhị́á
Obi see–rV Ada P-market
'Obi saw Ada at the market.' Focus$_{DO}$ in-situ

b. **Àdá** kà Òbí hụ̀-rụ̀ n'-áhị́á
Ada FOC Obi see–rV P-market
'Obi saw Ada at the market?' Focus$_{DO}$ ex-situ

(Amaechi and Georgi, 2020, p. 300)

Amaechi and Georgi (2020) show that the optionality in focus- and wh-fronting in Igbo, (19-a)-(19-b) and (20-a)-(20-b), is actually not accounted for in the syntax, but post syntactically. The main piece of evidence supporting their claim comes from the fact that both fronted and in-situ focus license parasitic gaps. Both focus and wh-fronting in Igbo display the typical characteristics of A'-movement, among which island sensitivity, variable binding, and parasitic-gap licensing.[6] Here I will report the parasitic gab data to illustrate the point and refer the reader to Amaechi and Georgi (2020) for the whole set of data. The fronted wh-phrase in (21-a) licenses the parasitic gap in the adjunct clause, but crucially so does the in-situ one in (21-b). Wh-in-situ and wh-ex-situ behave alike as far as island sensitivity and variable binding are concerned. Based on these data, the authors argued that wh-in-situ as in (19-a) is actually the result of movement in narrow syntax with deletion of higher copies in the chain, but interpretation for scope purposes of the head of the chain. A similar pattern is reported for focus-chains, as in (20-a). This is precisely Pattern 3 in Bobaljik's typology in Table 2.1, whereas the fronted counterpart, (19-b) and (20-b), is a case of Pattern 1.

[6]Igbo also displays a phonological reflex of cyclic movement, namely in tone assignment. The final tone-bearing unit on the subject becomes a high tone when an XP undergoing A'-movement is moved across it (Nwachukwu, 1995). I will come back to this in Chapter 8 and for the time being I refer the reader to Amaechi and Georgi (2020) for a discussion of the patterns

(21) a. **Gị́nị̄** kà Àdá kwè-rè _ ọ́nụ̄ [túpú ọ̀ zụ́-rụ́ *pg*]
what FOC Ada agree–rV mouth before she buy–rV
What did Àdá price before buying?'

b. Àdá kwè-rè **gị́nị̄** ọ́nụ̄ [túpú ọ̀ zụ́-rụ́ *pg*]
Ada agree–rV what mouth before she buy–rV
'What did Àdá price before buying?'

(Amaechi and Georgi, 2020, p. 311)

Amaechi and Georgi (2020) also bring forth evidence in favor of Pattern 4, whereby a lower copy is favored at both LF and PF. Let us consider the examples with NIF in (20). As the authors show, there is a clear difference in the pragmatics of in-situ (20-a) and ex-situ (20-b) focus in Igbo. The former is used in answers to questions, but not exhaustively. On the other hand, fronted focus constituents express exhaustivity, indicating that the predicate holds only for the focalized XP and none of the contextually salient alternatives. In (20-a), Òbí saw Àdá but might have seen also other people at the market, while in (20-b) Àdá is the only person that Òbí saw at the market. This is in line with other analyses of focus in various languages (Kiss, 1998; Vallduví and Vilkuna, 1998; Cable, 2008). Amaechi and Georgi (2020) argue that there is a communication channel between LF and PF and that in focus chains there is a strong preference to interpret the same copy at both interfaces, following Bobaljik's (1995) Minimize Mismatch, (22). Therefore, if the lower copy is interpreted at LF, then that copy is also selected for pronunciation at PF, as in (20-a).

(22) Minimize Mismatch (Bobaljik, 2002, p. 251)

(To the extent possible) privilege the same copy at PF and LF.

This means that (20-a) is actually a case of Pattern 4 in Bobaljik's (1995) typology in Table 2.1. On the other hand, if the high copy is interpreted at LF, then that copy is also selected for pronunciation at PF, as in (20-b), as in Pattern 1 in Table 2.1.

The claim that there is a communication channel between LF and PF is a powerful and controversial one, which requires us to rethink the architecture of the grammar. Nevertheless, Amaechi and Georgi's (2020) work is fundamental as it presents very strong evidence that overt-covert movement (that is Pattern 3) is in fact attested in A'-chains as well, thus providing strong support for the T-model in Figure 2.5 (Bobaljik, 1995).

## 2.3 A linear model of grammar

Another model of grammar, which stems from Bobaljik's (2002) T model is the linear model proposed in Bobaljik and Wurmbrand (2012), which is shown in Figure 2.6. In this model, there is a communication channel between LF and PF, but it is unidirectional: narrow syntax feeds LF, which then provides the input to Spell-out and feeds PF. Therefore, the PF representation and therefore linearization of structure is determined based on the previously established LF.

In their analysis, the authors focus on the relationship between word order and interpretation, especially scope relations. In many languages, we notice that there is a correspondence between precedence and scope, see Bobaljik's (2002) Minimize Mismatch in (22). They re-brand Minimize Mismatch as a soft faithfulness constraint labelled Scope Transparency (ScoT):

(23) Scope Transparency (ScoT)

If the order of two elements at LF is A>B, the order at PF is A>B.

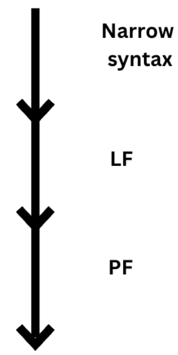



Figure 2.6: The linear model (Bobaljik and Wurmbrand, 2012)

ScoT is not "universally surface-true; rather it should be respected to the extent that a language's resources allow for it, and violated only as a last resort" (Bobaljik and Wurmbrand, 2012, 373).

Considering two elements A and B, there are four possibilities, outlined in Table 2.2. At LF there are two interpretive possibilities: A takes scope over B (marked by $>$) or B takes scope over A. Similarly, at PF, there are two possibilities: A precedes B (also marked by $>$) or B precedes A. In the linear model of grammar in Figure 2.6, LF precedes PF. Therefore, the authors consider a variety of LF orders crosslinguistically and the possible PF orders that follow from the available LF. As can be seen in Table 2.2, there are two possible LFs: $A > B$ and $B > A$. Languages allow the latter to be expressed by two PF orders ($B > A$, Pattern III which respects ScoT, and $A > B$, Pattern IV which violates ScoT). On the other hand, the LF $A > B$ can only be expressed by one PF order, namely $A > B$. The authors call this distribution the $^3/_4$ signature, because of the four available patterns, only three are attested crosslinguistically.

Table 2.2: The $^3/_4$ signature: Precedence and scope combinations in the linear model

| | LF | PF | ScoT | attested? |
|---|---|---|---|---|
| Pattern I | $A > B$ | $A > B$ | ✓ | yes |
| Pattern II | $A > B$ | $B > A$ | * | no |
| Pattern III | $B > A$ | $B > A$ | ✓ | yes |
| Pattern IV | $B > A$ | $A > B$ | * | yes |

Recall that, in this model, the LF representation is built first. The LF, then, constitutes the input based on which best possible PF representation is chosen. The authors argue that ScoT interacts with other soft language-specific constraints. In what follows, I shall briefly illustrate how the system works based on the interaction of the raising predicates *likely* and an existentially quantified DP like (24). If the DP *(exactly) one student* undergoes raising, then the sentence is ambiguous as two scope readings are available, as in (24-a).

(24) a. (Exactly) one student is likely to be absent. *likey* $> \exists, \exists >$ *likey*

b. There's likely to be (exactly) one student absent. *likey* $> \exists$, *$\exists >$ *likey*

c. *Is likely to be (exactly) one student absent.

(Bobaljik and Wurmbrand, 2012, p. 387)

On the other hand, if the DP remains in the embedded clause, then the expletive *there* is inserted and the sentence is not ambiguous anymore, (24-b): the reading $\exists >$ *likey* is not available. This is in fact surprising, since English normally allows QR. Example (24-c) shows that in the absence of raising, an expletive pronoun must be inserted. This follows from the fact that English respects the Extended Projection Principle (EPP): the finite subject position must be occupied by an overt element. Bobaljik (2002) suggests that this is, in fact, a condition on PF representations rather than on narrow syntactic ones: *there* is inserted at PF to save the derivation from crashing. The EPP is a hard constraint in English and cannot be violated, but the insertion of an expletive is a matter of last resort, as outlined by the economy condition DEP in (25).

(25) DEP

Don't insert expletive pronouns.

Bobaljik and Wurmbrand (2012) argue that the data in (24) are the result of the interaction of two economy conditions: ScoT and DEP. Recall that we are first analyzing the LFs of these constructions. If at LF the existential takes wide scope, as in the first row in Table 2.3, then there is only one possible PF order. $\exists > likey$, as in (24-a), satisfies both ScoT and DEP. On the other hand, in case of narrow scope of the existential quantifier, then either PFs are possible. As can be seen in the second row of Table 2.3, both PF orders violate just one condition, as neither is more economical than the other. This neatly explains the facts in (24).

Table 2.3: English raising patterns

| | LF | PF | ScoT | DEP | attested? |
|---|---|---|---|---|---|
| ✓ | $\exists >$ *likely* | $\exists >$ *likely* | ✓ | ✓ | yes |
| * (QR) | $\exists >$ *likely* | *there likely* $> \exists$ | * | * | no |
| ✓ | *likely* $> \exists$ | *there likely* $> \exists$ | ✓ | * | yes |
| ✓ (reconstruction) | *likely* $> \exists$ | $\exists >$ *likely* | * | ✓ | yes |

Here I chose the raising data to explain the rationale behind Bobaljik and Wurmbrand's account, but the authors also present data from Heavy NP Shift and Focus in English and A'-scrambling in Dutch. A similar account has been proposed by Bianchi (2019) to account for the realization of focus chains in Italian.[7]

In short, in the linear model of grammar, PF and LF are not independent from each other: the LF representation is built first and then fed to PF for linearization. Therefore, word order is established based on the available LF representation. Crucially, Bobaljik and Wurmbrand (2012) argue that there is a possibly universal economy condition favoring transparent reflection of LF scope relation in PF precedence, although it might get overridden by other economy conditions, e.g. EPP in English.

[7] I shall not delve deeper into this study here, but I will briefly return to it in Chapter 8.

## 2.4 Chapter summary

In this chapter, I outlined how generative grammar has accounted for movement over the last seven decades. For each mainstream model of grammar (Standard Theory, inverted Y-model, T-model, linear model), I have presented the key points of the analyses and how they account for the variation in movement patterns across languages. The key takeaways are the following: timing, direction, patterns of interpretation/realization. The Y-model of language (Chomsky and Lasnik, 1977) distinguished between movement that happens in narrow syntax (overt movement) from movement that happens post Spell-out, at LF (covert movement). Subsequent models (T-model and linear model) got rid of this distinction by arguing that all movement happens in narrow syntax: the different word orders are the result of pronouncing different copies in the chain (pronounce head of chain $\rightarrow$ old school overt movement; pronounce lower copy in the chain $\rightarrow$ old school covert movement). However, the T-model and the linear model have very different architectures: in the T-model syntax feeds both LF and PF, whereas in the linear model syntax feeds LF, which in turn feeds PF. The last crucial point that I want to stress once again is that the T-model and the linear model highly prefer interpretation of the same copy at both LF and PF, through an economy condition (called Minimize Mismatch and Scope Transparency, respectively).

The T-model and the linear models provide a unified theory of movement, which does not distinguish between the timing of movement, which looks extremely appealing. However, adopting either one of them raises a few empirical and theoretical considerations. First, given a chain with more than two copies, it is not clear which lower copy PF can choose for realization: the one in base position or one of the intermediate copies? How is this decision taken by the grammar? What other things influence this decision: nearby items (e.g. complementizer, like in the *that-trace* effect), length of dependency, clause types, prosody? The linear model suggests that these decisions are mediated by 'soft' constraints (some universal, some language-specific) that operate on the PF strings. Moreover, getting rid of covert movement altogether makes certain predictions, namely that phenomena traditionally correlated to the existence of overt movement chains should also be witnessed in traditionally wh-in-situ languages. The most pressing issue is definitely parasitic-gap licensing. Under the T- and the linear model, wh-in-situ languages like Mandarin are actually cases of movement in narrow syntax with deletion of higher copies in the chain, which predicts that parasitic gaps should be licensed as they are in English, contrary to facts (Lin, 2005). The same line of reasoning applies to QR, which does not license parasitic gaps (Culicover, 2001), although see Nissenbaum (2000) for a different take on the matter.

Finally, the theoretical concern is that these models push for a fundamental revision of the architecture of the grammar. Amaechi and Georgi (2020) argue that there must be a communication channel between LF and PF so that an economy condition like Minimize Mismatch can be enforced. On the other hand, Bobaljik and Wurmbrand (2012) argue for a complete revision of the directionality of the model. Throughout this dissertation, I use Valdôtain Patois data to argue that we don't have enough evidence to adopt the T-model or the linear model *tout court*, although I firmly argue that there is such a thing as overt-covert movement (movement in narrow syntax with deletion of higher copies in the chain). Therefore, for the time being, the inverted Y-model of language remains our safest bet.

# Chapter 3: About Valdôtain Patois

Francoprovençal Valdôtain (Glottolog code: vall1249), or Valdôtain Patois (ValPa),[1] is a language from the Francoprovençal group, which includes varieties spoken in France, Switzerland, and Italy, as shown in Figure 3.1.[2] Despite being recognized as a group in the late XIX century by the Italian linguist Ascoli (1874), Francoprovençal languages have not been legally recognized as minority languages until very recently. In Italy, this happened in 1999 with the law number 482 ”Norme in materia di tutela delle minoranze linguistiche storiche”, published in the *Gazzetta Ufficiale* 297 in December 1999.[3]

ValPa is spoken by 61.000 speakers (estimated in 2003 (Cavalli and Coletta, 2003)) in the northwest Italian region Aosta Valley (Brocherel, 1958). Despite its small size (roughly around 3000 square kilometers - the size of New York City), Aosta Valley displays rich linguistic variety. Moreover, ValPa varieties have grown in a contact situation, in particular with Italian and French. The former is the official language of the region, while the latter is spoken by the neighboring

[1]In the scarse literature on the language, the name Valdôtain is often used, e.g. Zanuttini (1997). I refer to it as Valdôtain Patois, because *patuoé* or *patois* is the name native speakers use to refer to their language. The use of this name is therefore a tribute to the inhabitants of Aosta Valley and their heritage. Furthermore, the term francoprovençal is sometimes reported with and other times without the hyphenation. Here, I am resorting to the non-hyphenated version, following the decision of the scientific community, among which the Centre d'Études Francoprovençales René Willien, working on languages of this group (Tuaillon, 1992).

[2]Note that this map does not include the Francoprovençal communities of Faeto and Celle di San Vito, in Apulia (Italy) (Nagy, 1993, 1996, 2011).

[3]In France, where there actually are no more native speakers of Franco-Provençal varieties, and in Switzerland, this acknowledgement is much more recent. For a detailed story of the acknowledgment of Franco-Provençal varieties, I refer the reader to resources of the Centre d'Études Fracoprovençales in Saint-Nicholas (Aosta Valley, Italy).

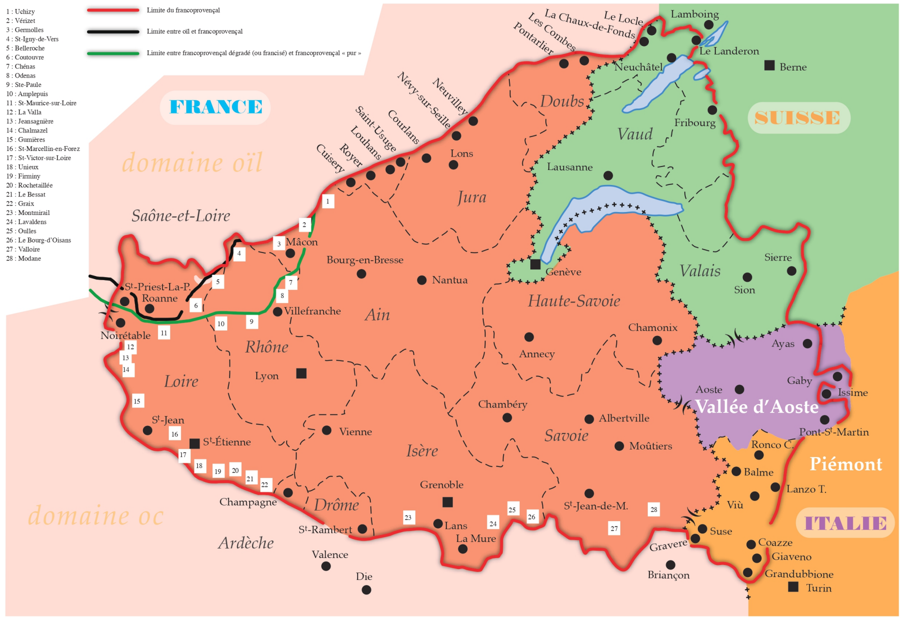



Figure 3.1: The geographical distribution of the Francoprovençal languages across France, Switzerland, and Italy. Source: Centre d'Études Francoprovençales René Willien, after (Tuaillon, 1992, p. 337).

communities and learned as a second language from kindergarten through high school. ValPa is also in contact with other non-official languages spoken by neighboring communities, such as Piemontese (Romance; Glottolog code: piem1238) and Walser (Germanic; Glottolog code: wals1238). For the present research, I will make reference to the variety spoken in Morgex, a town of around 2000 inhabitants in the northwest part of the region. This section will outline some characteristics of the language that will be relevant for the present research: strategies that influence word order, including Topicalization, Focalization, and verb movement.

## 3.1 Word order

The unmarked word order in ValPa is subject-verb-object, SVO, as can be seen in (1) and in presentational constructions (Bentley, 2018; Cruschina, 2022). Yet, the unmarked word order with unaccusative and intransitive verbs is VS, as in (3) and (4) (see Biberauer et al. (2010); Leonetti (2017); Bentley and Cruschina (2018); Cruschina (2022) for a detailed analysis of the patterns across Romance languages).

(1)

| | | | | | |
|---|---|---|---|---|---|
| Dz’ | ì | atist-ò | lo | pan. | **SVO** |
| CL.NOM.1SG | have.PRS.1SG | buy-PST.PTCP | DET.DEF.M.SG | bread | |

‘I bought the bread.’

(2)

| | | | | | |
|---|---|---|---|---|---|
| Coutcheun | m’ | à | floqu-ò | la | bicicletta! |
| someone | CL.CAT.1SG | have.PRS.3SG | steal-PST.PTCP | DET.DEF.F.SG | bike |

‘Someone stole my bike!’

(3)

| | | | | |
|---|---|---|---|---|
| L’ | è | mor | lo | Sen Pée. |
| CL.NOM.3SG | be.PRS.3PL | die-PST.PTCP-M.SG | DET.DEF.M.SG | Pope |

‘The Pope died.’

(4)

| | | | |
|---|---|---|---|
| L’ | à | queri-à | Tcheunne. |
| CL.NOM.3SG | have.PRS.3SG | call-PST/PTCP | Tcheunne |

‘Tcheunne called.’

Furthermore, similarly to other languages spoken in Northern Italy (see Manzini and Savoia (2005) and Terenghi (2022) for the different patterns), ValPa is a (partial) pro-drop language. For example, with lexical verbs, first and third-person subject pronouns can be omitted, as in (5), while second-person pronouns can never be dropped, (6).[4] The default argument order is DO>IO (7)-(8). The unmarked order of arguments of locative verbs, like *betté* ’to put’, is DO>PP, (9).

[4] However, the pro-drop pattern is quite complex, and might vary based on person and number, type of verb, onset of the verb, and presence of other clitic pronouns. See the work by Nagy et al. (2011) on the presence of subject clitics in the Francprovençal varieties spoken in Apuglia, as well as Ermacora (2022) on the variety spoken in Fénis (Aosta Valley).

(5) T' attegn-o bà desò.
CL.ACC.2SG wait-PRS.1SG down below
'I'll wait for you downstairs.'

(6) *(Te) me port-e le pomm-e deman?
CL.NOM.2SG CL.DAT.1SG bring-PRS.2SG DET.DEF.PL apple-PL tomorrow
'Will you bring me the apples tomorrow?'

(7) Dz' ì baill-à la machina à Beppe. **DO>IO**
CL.NOM.1SG have.PRS.1SG give-PST.PTCP DET.DEF.F.SG car to Beppe
'I gave the car to Beppe.'

(8) L' à regal-ò le looufie à Nelly. **DO>IO**
CL.NOM.3SG have.PRS.3SG gift-PST.PTCP DET.DEF.PL blueberry.PL to Nelly
'(S)he gifted the blueberries to Nelly.'

(9) L' an bett-ò le looufie su **DO>PP**
CL.NOM.3PL have.PRS.3PL put-PST.PTCP DET.DEF.PL blueberry.PL on
la tabla.
DET.DEF.F.SG table
'They put the blueberries on the table.'

In case there are temporal and locative adjuncts, they follow the other arguments -if present- and the unmarked word order is ADV/PP$_{place}$>ADV/PP$_{time}$, (10)-(11)-(12).

(10) L' à predj-à avouë Clara en quemena delon.
CL.NOM.3SG have.PRS.3SG speak-PST.PTCP with Clara in city hall Monday
'(S)he spoke with Clara at the city hall on Monday. '

(11) Port-o la posta en veulla deman.
carry-PRS.1SG DET.DEF.F.SG post to.DET.DEF.F.SG city tomorrow
'I will bring the post to Aosta tomorrow.'

(12) L' à baill-à le fleur à la feuille
CL.NOM.3SG have.PRS.3SG give-PST.PTCP the flower.PL to DET.DEF.F.SG girl

ì casotto ier.
at.DET.DEF.M.SG hut yesterday
'(S)he gave the flowers to the girl at the rangers' hut yesterday.'

So far, I have only discussed word order patterns with definite DPs. The pattern is the same with indefinites. The unmarked word order is DO>IO, both when the DO is indefinite, (13), and when the IO is indefinite, (14). When both the DO and IO are indefinite, the unmarked word order is also DO>IO, (15).

(13) L' à baill-à eun livro à **DO>IO**
CL.NOM.3SG have.PRS.3SG give-PST.PTCP DET.INDEF.M.SG book to
la métra.
DET.DEF.F.SG teacher
'He gave a book to the teacher.'

(14) L' à baill-à lo livro à **DO>IO**
CL.NOM.3SG have.PRS.3SG give-PST.PTCP DET.DEF.M.SG book to
eun ami.
DET.INDEF.M.SG friend
'He gave the book to a friend.'

(15) L' à baill-à eun livro à **DO>IO**
CL.NOM.3SG have.PRS.3SG give-PST.PTCP DET.INDEF.M.SG book to
eun ami.
DET.INDEF.M.SG friend
'He gave a book to a friend.'

If we look at examples with an argument PP (16), as well as PPs and adverbial adjuncts, (17)-(18)-(19), we see that the unmarked word order is the same as that witnessed above with definite DPs: DO>IO>ADV/$PP_{loc}$>ADV/$PP_{time}$.

(16) L' à bett-ò eun livro su **DO>PP**
CL.NOM.3SG have.PRS.3SG put-PST.PTCP DET.INDEF.M.SG book on
la tabla.
DET.DEF.F.SG table
'He put a book on the table.'

(17) L' à predj-à avouë an feullie en
CL.NOM.3SG have.PRS.3SG speak-PST.PTCP with DET.INDEF.F.SG girl in
quemena delon.
city hall Monday
'(S)he spoke with a girl at the city hall on Monday. '

(18) Port-o an lettra en veulla deman.
carry-PRS.1SG DET.INDEF.F.SG letter to.DET.DEF.F.SG city tomorrow
'I will bring a letter to Aosta tomorrow.'

(19) L' à baillà an fleur à la
CL.NOM.3SG have.PRS.3SG give-PST.PTCP DET.INDEF.M.SG fleur to DET.DEF.M.SG
feuille ì casotto ier.
girl at.DET.DEF.M.SG hut yesterday
'(S)he saw a kid at the rangers' hut yesterday.'

Note that in ValPa there is no difference in word order between animate and inanimate arguments, regardless of whether they are definite or indefinite, as can be seen in (11) and (18) and the following example pair:

(20) a. L' à pos-ò lo gosse su la
CL.NOM.3SG have.PRS.3SG put.PST.PTCP DET.DEF.M.SG kid on DET.DEF.F.SG
fenna.
woman
'(S)he put the kid on the woman.'

b. L' à pos-ò lo livro su la
CL.NOM.3SG have.PRS.3SG put.PST.PTCP DET.DEF.M.SG book on DET.DEF.F.SG
machina.
car

‘(S)he put the book on the car.’

(21) S > Aux > V > DO > IO > ADV/PP$_{loc}$ > ADV/PP$_{time}$

There are two strategies that heavily influence word order: Topicalization and Focalization. Through this thesis, I will define Topics as identifying ”the entity or set of entities under which the information expressed in the comment constituent should be stored in the C[ommon] G[round] content” (Krifka, 2007, p. 41). The common ground, in Krifka’s (2007) terminology, refers to the information shared by those participating into the conversation, and the Topic indicates for which element in the common ground should be updated based on the information in the comment. Topics in ValPa are very common. They can be either fronted or, in some cases, appear clause-internally (25). Based on extensive research on Italian and German corpora, Frascarelli and Hinterhölzl (2007) show that Topics are subject to hierarchical ordering. Aboutness and Contrastive Topics are restricted to the High Left Periphery. The former, also knows as Hanging Topics, bring a new referent into the conversation, (22) and are notoriously restricted to sentence initial positions (Frascarelli and Hinterhölzl, 2007; Stark, 2022; Catasso, 2022). Contrastive Topics, on the other hand, induce alternatives and create oppositional pairs with respect to other topics (Büring, 1999; Frascarelli and Hinterhölzl, 2007). Finally, Familiar Topics, a given constituent in the discourse and used for topic continuity (Givón, 1983), can appear in both peripheries (24). Topics are in italics in the examples.

(22)

| | | | | | |
|---|---|---|---|---|---|
| *L’* | *ultim-a* | *unit* | la | sto | face-ndo. |
| DET.DEF.F.SG | last-F.SG | unit | CL.ACC.F.SG | be.PRS.1SG | do-GER |

‘The last unit, I am doing it.’

(23) Invece *a lei* non l' ha pre-s-a come
on the contrary to her NEG CL.ACC.F.SG have.PRS.3SG take-PST.PTCP-F.SG as
speaker.
speaker

'On the contrary he didn't choose her to be the speaker.'

(24) a. *E su quest-a, loro*, *i gladiator*-i lotta-va-no.
and on DEM-F.SG they DET.DEF.M.PL gladiator-PL fight-PST-3PL

'And gladiators, they would fight on this.'

b. Magari non me la... non riesc-o a
maybe NEG CL.DAT.1SG CL.ACC.F.SG NEG manage-PRS.1SG COMP
da-r-me-la da sola *la conferma*.
give-INF-CL.DAT.1SG-CL.ACC.F.SG by myself DET.DEF.F.SG confirmation

'Maybe I cannot make this check on my own.'

As far as ValPa is concerned, *Marco* in (25) and *à Marco* in (26) are familiar Topics and, hence, can occur fronted and clause internally. In the former example, the presence of the resumptive clitic pronoun is obligatory, which suggests that the word order in (25) is a case of Clitic Left (and Right) Dislocation (Cecchetto, 2000). Note that when the Topicalized constituent is not a DO, the clitic is not obligatory, see (26) with a recipient PP and (27) with a locative PP. This asymmetry suggests that ValPa has two separate strategies for dislocation: Clitic Left (and Right) Dislocation Cecchetto (2000); Cardinaletti (2002, 2016), which we witness in (25), and Left (or Right) Dislocation (Cinque, 1990, 1977). DOs can only undergo Clitic Left (and Right) Dislocation, as outlined in (25), whereas IOs like *à Marco* 'to Marco' in (26) and locative PPs in (27) can undergo both Clitic Left (and Right) Dislocation both and Left (and Right) Dislocation.

(25) a. *Marco* *(lo) encontr-o deman.
Marco CL.ACC.M.SG meet-PRS.1SG tomorrow

'Marco, I will meet him tomorrow.'

b. *(Lo) encontro deman *Marco*.

(26) a. Me *à Marco* ('lli) ballie-r-io eun livro.
NOM.1SG to Marco CL.DAT.M.SG give-COND-1SG DET.INDEF.M.SG book
'To Marco, I would give a book.'

b. Me ('lli) ballierio eun livro *à Marco*.

(27) a. Me *à l' écoula* (lei) vo à pià.
NOM.1SG to DET.DEF.F.SG school CL.LOC go.PRS.1SG on foot
'I walk to school.'

b. Me (lei) vo à pià *à l' écoula*.

Finally, Topicalized adverbs never allow the presence of a resumptive clitic pronoun: they can only undergo Left (and Right) Dislocation. This is better demonstrated with examples with one level of embedding. In (28-a), *deman* 'tomorrow' undergoes long distance Rigth Dislocation to the matrix HLP, whereas is (28-b) it undergoes Left Dislocation. There is no clitic in either case.

(28) a. *Deman* pensa-v-o d' all-éi ì martsà avouë Nelly.
tomorrow think-PST-1SG COMP go-INF to.DET.DEF.M.SG market with Nelly
'I was thinking that tomorrow I'll go to the market with Nelly.'

b. Pensavo d' allé ì martsà avouë Nelly *deman*.

On the other hand, the other two categories discussed by Frascarelli and Hinterhölzl (2007), Aboutness-Shift Topics, or Hanging Topics (29), and Contrastive Topics (30), can only appear fronted.

(29) E *Gianni*, t' a-ye pe decid-ò de lo
and Gianni CL.NOM.2SG have-PST.2SG then decide-PST.PTCP COMP CL.ACC.M.SG

eunvit-éi ì mariadzo?
invite-INF to.DEF.M.SG wedding
'About Gianni, did you decide to invite him to the wedding?'

(30) a. *Le platt-e* le lav-e Nelly, *le vejo* le lav-e
DET.DEF.PL dish-PL CL.ACC.PL wash-PRS.3SG Nelly DET.DEF.PL glass.PL
pe Beppe.
CL.ACC.PL wash-PRS.3SG FUT Beppe
'The dishes Nelly will wash them, while Beppe will wash the glasses.'

b. *Le lave Nelly *le platte*, le lave pe Beppe *le vejo*.

Another strategy that can influence word order is Focalization. There is a fundamental distinction between broad and narrow Focus (Kiss, 1998; Büring, 2010; Cruschina, 2022). Broad Focus structures are found in answers to questions like *What's happening?*, whereby it is assumed that the whole answer conveys new information. These types of constructions display the unmarked work order discussed above: SVO for transitive verbs, (31), and VS for intransitive and unaccusative verbs (32).

(31) Coutcheun m' à floqu-ò la bicicletta!
someone CL.CAT.1SG have.PRS.3SG steal-PST.PTCP DET.DEF.F.SG bike
'Someone stole my bike!'

(32) L' è mor lo Sen Pée.
CL.NOM.3SG be.PRS.3PL die-PST.PTCP-M.SG DET.DEF.M.SG Pope
'The Pope died.'

As far as narrow Focus is concerned, following Rizzi (1997); Frascarelli (2000); Belletti (2004); Benincà and Poletto (2004); Bianchi (2013) and Bianchi et al. (2015) a.o., I will distinguish between four types of Foci: New Information Focus, Mirative Focus, Contrastive Focus, and

Corrective Focus. New Information Focus are constituents that answer a question, as in the Italian example (33), where the New Information Focus must be post-verbal (Belletti, 2004, 2018). ValPa patterns like Italian: in (34) the New Information Focus *lo pan* can only be post-verbal.

(33) A: Chi ha parla-to?
who have.PRS.3SG speak-PST.PTCP
'Who spoke?'

B: Ha parla-to un ragazzo.
have.PRS.3SG speak-PST.PTCP DET.INDEF.M.SG boy.
'A boy spoke.' (Belletti, 2018, p. 39)

(34) A: Dequé t' atsit-e?
what CL.NOM.2SG buy-PRS.2SG
'What are you buying?'

B1: Dz' atsit-o lo pan.
CL.NOM.1SG buy-PRS.1SG DET.DEF.M.SG bread
'I am buying bread.'

B2: *Lo pan dz'atsito.

Mirative Focus expresses that a given piece of information that the speaker is asserting has been very recently acquired and is not yet part of their system of beliefs (Cruschina, 2012). Mirative Focus in ValPa can be both pre- and post-verbal, (36).

(35) **Context**: Anna is telling you about a customer who complained for no reason

a. Pens-a te! CO-L DIRETTORE vole-v-a
think-PRS.2SG CL.NOM.2SG with-DET.DEF.M.SG manager want-PST-3SG
parla-re!
speakINF
'Guess what! He wanted to speak with the manager!'

b. Pensa te! Voleva parlare COL DIRETTORE!

(Cruschina, 2012, p. 117)

(36) a. Pens-a te! AVOUË LO SEN PÉE
think-PRS.2SG CL.NOM.2SG with-DET.DEF.M.SG DET.DEF.M.SG Pope
vull-i-e predj-éi!
want-PST-3SG speak-INF
'Imagine! He wanted to speak with the manager!'

b. Pensa te! Vullie predjéi AVOUË LO SEN PÉE!

Contrastive and Corrective Focus might appear similar at first sight. However, as Bianchi et al. (2015) argue, they are different semantically, pragmatically, and syntactically. Corrective Focus can be described as expressing a contrast across utterances: the background of the Focus-containing utterance repeats the background of the corrected assertion, and cannot contain additional material (Bianchi, 2013; Bianchi et al., 2015). Contrastive Focus, on the other hand, involves an utterance-internal contrast between a focused element and another element, which can be reported in a negative tag, but there is no obligatory contrast with a previous utterance, as in (38). Unlike Corrective Focus (37), in the variety of Italian discussed by Bianchi et al. (2015), Contrastive Focus can only be post-verbal, (38).

(37) A: Hanno invita-to Marina.
have.PRS.3PL invite-PST.PTCP Marina
'They invited Marina.'

B1: GIULIA hanno invita-to (, non Marina).
Julie have.PRS.3PL invite-PST.PTCP NEG Marina
'They invited Julie (, not Marina).'

B2: Hanno invita-to GIULIA (, non Marina).
have.PRS.3PL invite-PST.PTCP Julie NEG Marina

'They invited Julie (, not Marina).'

(Bianchi et al., 2015, p. 3)

(38) A: Io vi salut-o, dev-o rientra-re a casa.
NOM.1SG CL.DAT.2PL greet-PRS.1SG must-PRS.1SG go.back-INF to home
'I'm off, I have to go back home.'

B1: Ti convien-e prende-re IL TAXI, non la metro...
CL.DAT.2SG be.better-PRS.3SG take-INF DET.DEF.M.SG taxi not DET.DEF.F.SG underground
'You'd better take the taxi, not the underground...'

B2: *IL TAXI ti conviene prendere, non la metro...

(Bianchi et al., 2015, p. 4)

There is, however, more leeway than what Bianchi et al. (2015) argue. For instance, in my variety of Italian, Contrastive Focus is preferably placed in a pre-verbal position, although it can also occur post-verbally, as in (39).

(39) **Context**: Your parents are talking and talking about the gift they will give to your cousin Maria. You think they are way too partial and want to know what they plan on giving to your other cousin Sandra, whom they have not even mentioned yet, so you ask:

a. E A SANDRA cosa regali-amo invece?
and to Sandra what gift-PRS.1PL instead
'And to Sandra what will we give?'

b. E cosa regali-amo A SANDRA invece?

Similarly to New Information Focus, Corrective Focus in ValPa must be post-verbal, (40). On the other hand, ValPa Contrastive Focus patterns like its counterpart in Italian and can be either fronted or appear clause internally, (41). Yet, in cases like those reported by Bianchi et al. (2015), where there is a contrast with a negated item in the same utterance, ValPa patterns like Italian and Contrastive Focus is limited to a post-verbal position (42).

(40) A: N' en invit-ò Nelly.
CL.NOM.1PL have.PRS.1PL invite-PST.PTCP Nelly
'We have invited Nelly.'

B1: Na, n' en invit-ò Clara (, pò Nelly)
no CL.NOM.1PL have.PRS.1PL invite-PST.PTCP Clara NEG Nelly
'No, we have invited Clara (not Nelly).'

B2: ?? Na, Clara n'en invitò (, pò Nelly)

(41) **Context**: Your parents are talking and talking about the gift they will give to your cousin Maria. You think they are way too partial and want to know what they plan on giving to your other cousin Sandra, so you ask:

a. E A SANDRA dequé no regal-en?
and to Sandra what we gift-PRS.1PL
'And to Sandra what will we give?'

b. E dequé no regal-en A SANDRA?

(42) A: Se t' à de place, te pou
if CL.NOM.2SG have.PRS.2SG PART space CL.NOM.2SG can.PRS.2SG
lo prende te lo boouque deman.
CL.ACC.M.SG take.INF NOM.2SG DET.DEF.M.SG wood tomorrow
'If you have time, you can take the wood tomorrow.'

B1: Ma me deman vo bò avouë LA MACHINA, pò
but NOM.1SG tomorrow go.PRS.1SG down with DET.DEF.F.SG car NEG
avouë lo porter.
with DET.DEF.M.SG truck

'But tomorrow I will take the car to go down, not the truck.'

B2: ??Ma me deman avouë LA MACHINA vo bò, pò avouë lo porter.

As this section has shown, despite the word order in ValPa being SVO, with the unmarked argument order being DO>IO, Topicalization and Focalization can heavily influence the word order. I will come back to Topicalization and Focalization in Chapter 6. The next section will discuss another phenomenon related to word order: verb movement.

## 3.2 Verb movement

In most Romance languages, finite and non-finite verbs do not remain in situ but move out of VP, although there is notable variation in the height of movement, as will be discussed shortly (see Ledgeway and Lombardi (2005), Schifano (2018) and references therein). Before moving to the different movement patterns witnessed across Romance languages, it is important to introduce Cinque's (1999) adverb hierarchy, reported in (43), which is resorted to in the literature to diagnose verb movement.

(43) a. **High Adverb Space**: [ frankly $\text{Mood}_{\text{speech act}}$ [ unfortunately $\text{Mood}_{\text{evaluative}}$ [ apparently $\text{Mood}_{\text{evidential}}$ [ probably $\text{Mod}_{\text{epistemic}}$ [ now $\text{T}_{\text{(past/future)}}$ [ perhaps $\text{Mood}_{\text{irrealis}}$ [ necessarily $\text{Mod}_{\text{necessity}}$ [ usually $\text{Asp}_{\text{habitual}}$ [ again $\text{Asp}_{\text{repetitive(event)}}$ [ often $\text{Asp}_{\text{frequentative(event)}}$ [ intentionally $\text{Mod}_{\text{volitional}}$ [ slowly $\text{Asp}_{\text{celerative(event)}}$

b. **Low Adverb Space**: [ not $\text{Neg1}_{\text{presuppositional}}$ [ already $\text{T}_{\text{(anterior)}}$ [ anymore $\text{Asp}_{\text{terminative}}$ [ still $\text{Asp}_{\text{continuative}}$ [ always $\text{Asp}_{\text{perfect}}$ [ hardly Neg2 [ just $\text{Asp}_{\text{retrospective}}$ [ soon $\text{Asp}_{\text{proximative}}$ [ briefly $\text{Asp}_{\text{durative}}$ [ typically $\text{Asp}_{\text{generic/progressive}}$ [ almost $\text{Asp}_{\text{prospective}}$

[ completely $Asp_{SgCompletive(event)}$ [ everything $Asp_{PlCompletive}$ [ well Voice [ fast $Asp_{celerative(process)}$ [ again $Asp_{repetitive(process)}$ [ often $Asp_{frequentative(process)}$ [ completely $Asp_{SgCompletive(process)}$ [vP ...]...]

Adapted from (Cinque, 1999, p. 106) and (Schifano, 2018, p. 2)

Schifano's (2018) recent analysis of variation in verb movement across Romance languages, including several Italian dialects, highlights a certain degree of variation. For instance, in Sardinian (variety spoken in the province of Cagliari) the main verb can occur either before or after *forsisi* 'perhaps' (44), situated in the High Adverb Space, thus exemplifying an instance of particularly high verb movement. In Standard Italian as well as several Northern varieties (including mine), on the other hand, finite verbs do not move past *forse* 'perhaps', (Cinque, 1999; Ledgeway and Lombardi, 2005; Schifano, 2018). In (46), I report a sketch of Schifano's movement patterns.

(44) Gavinu (connosciri) **forsisi** (connosciri) sorri tua
Gavinu perhaps knows sister your=
**Sardinian**

'Perhaps Gavinu knows your sister.'

(Schifano, 2018, p. 24)

(45) Gianni (*confonde) **forse** confond-e questa poesia con un' altra **Italian**
G. perhaps confuse-PRS.3SG DEM.M.SG poem with DET.INDEF.F.SG other

'Perhaps G. confuses this poem with another.'

(Schifano, 2018, p. 8)

(46) **Targets of Romance verb movement** (Schifano, 2018)

a. **High** (to the MOOD field): French, Romanian, Sardinian

b. **Clause medial** (to the TENSE field): northerh regional Italian, central regional Italian, northern Italian dialects

c. **Low** (to the ASPECT field): European Portuguese, southern regional Italian, southern Italian dialects

d. **Very low** (just outside v-VP): Spanish, Valencian Catalan

I will resort to the adverbial spine in (43) to diagnose verb movement in ValPa. As shown in (47), the finite verb *vo* 'go' must precede the temporal adverb *todzor* 'always'. Given that temporal adverbs like *todzor* 'always' are located below the Tense projection -in the Low Adverbial Space in (43)- (Cinque, 1999; Schifano, 2018), the word order in (47) is evidence that the finite verb *vo* has risen to T, or the TENSE field in Schifano's terms. Yet, we see that it must follow high habitual adverbs like *de couteumma* 'usually', which is located above TP. This evidence suggests that the main verb *vo* in (48) does not move to a position in the HLP of the clause, but remains in T. The same pattern is witnessed with auxiliaries, (49). Furthermore, in (48) and (50), we see that the main verb as well as auxiliaries must precede the negation *pò*. As (Zanuttini, 1997) has shown, in ValPa, *pò* is merged in the specifier of a NegP just below T, as shown in (51)[5] for (50).

(47) a. Dze v-o **todzor** à l' écoula à pià.
CL.NOM.1SG go-PRS.1SG always to DET.DEF.F.SG school on foot
'I always walk to school.'

b. ***Todzor** dze vo à l'écoula à pià.

[5] Here and in the following tree, I am representing *l'à* in T for ease of exposition, leaving aside for the time being where auxiliaries might be externally merged in the derivation.

(48) a. **De couteumma** dze v-o (**pò**) à l' écoula à pià.
usually CL.NOM.1SG go-PRS.1SG NEG to DET.DEF.F.SG school on foot
'Usually I (don't) go to school on foot'

b. *Dze vo (**pò**) **de couteumma** à l'écoula à pià.

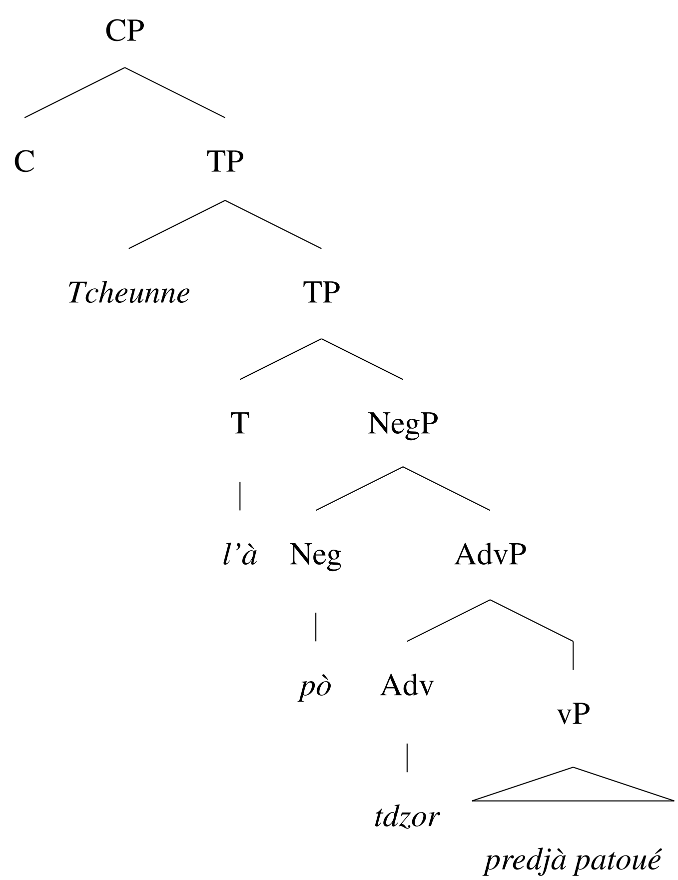
(49) a. Si **todzor** all-ò à l' écoula à pià.
be-PRS.1SG always go-PST.PTCP to DET.DEF.F.SG school on foot
'I have always walked to school.'

b. ***Todzor** si allò à l'écoula à pià.

(50) a. Tcheunne l' à **pò todzor** prédg-à patoué
Tcheunne CL.NOM.3SG have.PRS.3SG NEG always speak-PST.PTCP patois.
'Tcheunne hasn't always spoken patois.'

b. *Tcheunne **todzor** l'à **pò** prédgà patoué.

(51)



Romance past participles also move out of the vP/VP, primarily to acquire or check participial morphology (D'Alessandro and Roberts, 2008).[6] Here as well, we notice variation across different languages (Schifano, 2018). In Spanish and Valencian Catalan, for instance, the past participle moves to a lower position in the Low Adverb Space, one which is situated above the low manner adverb *well* but below *always* (Schifano, 2018). On the other hand, in European Portuguese and several northern and southern Italian dialects, the past participle moves to a position at the higher end of the Low Adverb Space, roughly between *already* and *always*. Schifano shows this with examples of Northern Regional Italian like (52), in which the past participle can freely precede or follow the temporal adverb *sempre* 'always', situated on the higher end of the Low Adverb Space, (43). Note that the order Schifano (2018) reports is not universal across speakers. For instance, in my variety of Italian the order *fumato* > *sempre* is not possible, which means that the past participle does move as high in the Low Adverb Space as in the variety discussed by Schifano.

| (52) | Gli | student-i | hanno | (fuma-to) | **sempre** (fumato) |
|---|---|---|---|---|---|
| | DET.DEF.PL | student-PL | have.PRS.3PL | smoke-PST.PTCP | always |

'The students have always smoked.'

(Schifano, 2018, p. 220)

As far as *già* 'already' is concerned, which is situated at the very top of the Low Adverb Space, there is no optionality. In fact, the order *firmato* > *già* is pragmatically marked and only felicitous if the whole verbal complex is given information, as in (54). Schifano (2018) argues this follows

[6] However, it has been suggested that participial movement might also be driven by the necessity to license its aspectual interpretation (Cinque, 1999), as well as -in some cases- by discourse factors (Cinque, 1999; Zanuttini, 1997). Also, see Biberauer and D'Alessandro (2006) and D'Alessandro and Roberts (2010) for a phase-based approach to past participle movement.

from Light Predicate Raising (Cinque, 1999), namely an additional movement step, driven by discourse factors and *già* is in a focalized position.

(53) Gli student-i hanno (??firma-to) **già** (firmato)
DET.DEF.PL student-PL have.PRS.3PL sign-PST.PTCP already
'The students have already signed.'

(Schifano, 2018, p. 218)

(54) A: Hanno firma-to?
have.PRS.3PL sign-PST.PTCP
'Have they signed?'

B: Sì, hanno firma-to **già**.
yes have.PRS.3PL sign-PST.PTCP already
'Yes, they have already signed.'

(Schifano, 2018, p. 219)

ValPa past participles also move out of vP. In (55)-(56), the past participles appear just before *bien* 'well' and *vitto* 'fast', two of the lowest adverb the hierarchy (Cinque, 1999; Ledgeway and Lombardi, 2005; Schifano, 2018), situated just above vP. Nevertheless, they do not raise past the adverb *todzor* 'always', located just below T, as can be seen in the representation in (62) for (55).

(55) a. L' à **todzor** tsant-ò **bien**.
CL.NOM.3SG have.PRS.3SG always sing-PST.PTCP well
'(S)he always sang well.'

b. *L'à tsantò **todzor bien**.

(56) a. L' à **todzor** aprist-ò **vitto** la polenta.
CL.NOM.3SG have.PRS.3SG always prepare-PST.PTCP fast DET.F.SG cornmeal

'(S)he always prepared cornmeal fast.'

b. *L'à apristò **todzor vitto** la polenta.

In some cases, the past participle can either precede or follow the low adverbs, as in (57). However, similarly to what Schifano (2018) argues for *già*, the adverb *bien* in is pragmatically and intonationally marked and often accompanied by *fran* 'really', which suggested that it might be focalized. Therefore, it is more likely that what we are seeing in (57) is not optionality in the height of movement of the past participle (which would be hard to motivate syntactically), but rather two separate instances of movement: the canonical movement out of vP and then another movement for discourse reasons (Cinque, 1999; Schifano, 2018). I am not going to delve deeper into the possible focaliztion of *bien* in cases like (57-b) and refer the reader to Schifano (2018) for the analysis and further details.

(57) a. Me trov-o que n' en (fran) medg-à (fran) **bien**.
NOM.1SG find-PRS.1SG COMP CL.NOM.1PL have.PRS.1PL really eat-PST-PTCP well
'I feel that we really ate well.'

b. Me trovo que n'en (fran) **bien** medgà.

The final verb movement pattern I shall discuss is that of infinitival verbs. Italian infinitival verbs in subject clauses move higher than finite lexical verbs, as they target the highest head in the high adverbial space in (43) (Cinque, 1999; Schifano, 2018). This is shown by the fact that they must precede the very high adverb *francamente* 'frankly', (58). In complement clauses, (61), the verb also moves high, as shown by the fact that it must precede the high adverb *spesso* 'often'.

(58) Mi mett-e in imbarazzo, dispo-rre **francamente** **Italian**
CL.DAT.1SG put-PRS.3SG in embarassment have-INF frankly
(*disporre) di mezzi così limita-ti
of mean-PL so limited-PL.M
'It embarrasses me frankly to have such limited means.'

(Cinque, 1999, p. 144)

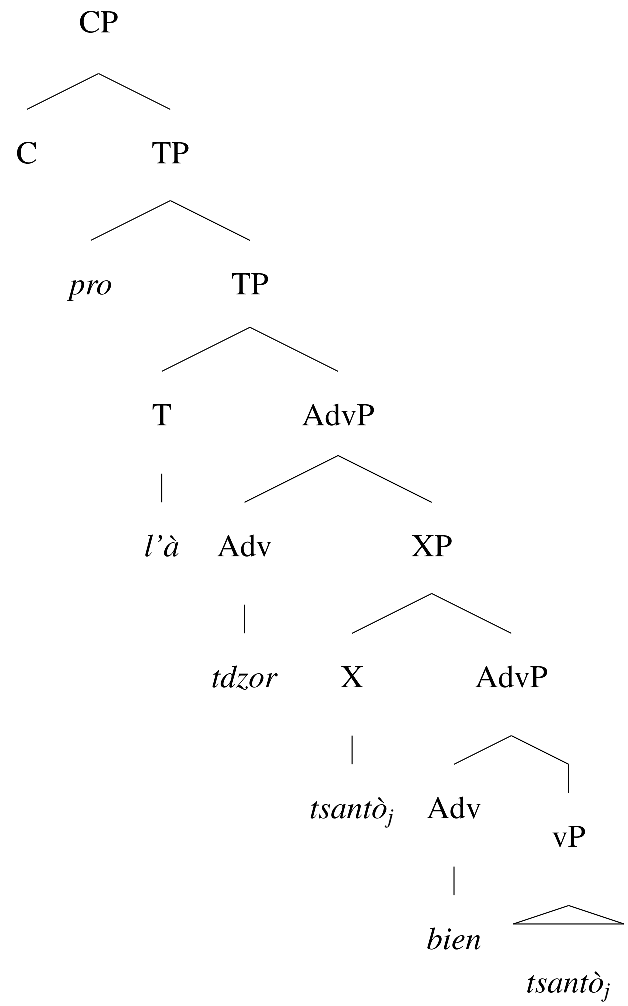
(59) Cred-o di vede-r-lo **spesso** (*vederlo) in giro.
believe-PRS.1SG COMP see-INF-CL.ACC.M.SG often around
'I think I see him a lot around. '

In ValPa we see the same pattern of infinitival placement. Speaker-oriented adverbs are not that common in ValPa, where periphrases are rather used, for this reason in (60) I use the high adverb *de couteumma* 'usually' as in (48). In (29), we see that the infinitive cannot follow the inifinitival form *ai*. Similarly, in complement clauses the infinitival verb must precede the high adverb *soen* 'often'.

(60) Me deplé (*de couteumma) d' ai **de couteumma** tan
CL.DAT.1SG displease-PRS.3SG usually COMP have-INF that
pocca de soou.
little PART money
'I regret that I often have so little money.'

(61) Pens-o de lo ve-re **soen** (*ve-re) eun Veulla.
believe-PRS.1SG COMP CL.ACC.M.SG see-INF often in.DET.DEF.F.SG city
'I think I often see him in Aosta.'

(62)




This section has presented evidence that in ValPa, similarly to other Romance languages, both finite verbs and past participles move out of the vP. The finite verb moves to the TENSE field (T for ease of exposition in (62)). ValPa thus patterns like Sardinian, northerh regional Italian, central regional Italian, and northern Italian dialects in Schifano's classification (46). Past participles also move, but to a lower position, just above vP (XP in (62)). This means that ValPa patterns, in this respect, with Valencian Catalan and Spanish. This brief discussion about verb movement is reported here for completeness and in order to anticipate readers' questions on the position of the verb with regard to clause internal wh-phrases. The topic of verb -more specifically past participle- movement in ValPa is not totally orthogonal to the main argumentation in the thesis and I shall return to it in Chapters 4 and 8.

## 3.3 Chapter summary

This chapter presents the basics of ValPa structure, highlighting the key aspects that will be most relevant for this dissertation. ValPa is an SVO language, whose default argument order is S > Aux > V > DO > IO > ADV/PPloc > ADV/PPtime. However, Topicalization and Focalization are very frequent. Topics and Foci can occur sentence-initially or in sentence-internally (that is post-verbally). Furthermore, in ValPa all verbal elements move out of the vP/VP, similarly to other Romance languages (Ledgeway and Lombardi, 2005; Schifano, 2018). The finite verb (inflected lexical verbs and auxiliaries) moves to the Tense domain, like in Sardinian, northern regional Italian, central regional Italian, and several northern Italian dialects. Past participles, on the other hand, move to a lower position, just above vP, like in Valencian Catalan and Spanish.

## Chapter 4: Clause-internal wh-phrases are *ex-situ*

In ValPa, there are two question formation strategies. Even though the default strategy is to front wh-phrases, (1-a), the latter can also surface clause-internally, as in (1-b). (1-b) could at first sight appear to be an echo question, but in fact it differs in both word-order and intonation from the echo question shown in (1-c), where the speaker has not heard part of the preceding utterance and thus repeats the content of the question with an accented wh-phrase. Questions with CIwh-phrases differ from echo questions, as in (1-c). Unlike echo questions (Biezma et al., 2021), questions with CIwh-phrases are information seeking, display a different word order, cf. (1-b) and (1-c), and differ intonationally.

(1) a.

| | | | | | |
|---|---|---|---|---|---|
| **À qui** | te | baill-e | le | gneu? | **Fronted** |
| to who | CL.NOM.2SG | give.PRS-2SG | DET.DEF.PL | walnut.PL | |

‘To whom will you give the walnuts?’

b. Te baille **à qui** le gneu? **clause-internal**

c. Te baille le gneu À QUI?? **echo**

Nevertheless, ValPa does not display true optionality. The default question formation strategy is to front the wh-phrase, as in (1-a), whereas the structure in (1-b) is pragmatically restricted. I shall come back to this in detail in Chapter **??**, but for the time being I will simply describe the restriction as to highly presuppositional contexts (Chang, 1997; Boucher, 2010; a.o.). With respect to (1-b), that means contexts in which the speaker strongly presupposes that the interlocutor will give the walnuts to someone.

All wh-phrases can appear clause-internally, be they arguments (2) or adjuncts (3). D(iscourse)-linked wh-phrases can also appear clause-internally, (5)-(6). Furthermore, CIwh-phrases are possible in embedded contexts, both finite (7-a) and non-finite (8-a). In both cases, wh-phrases have matrix scope, just like their fronted counterparts (7-b)-(8-b).

(2) T' atsit-e **dequé** ì martsà?
CL.NOM.2SG buy-PRS.2SG what at.DET.DEF.M.SG market
'What will you buy at the market?'

(3) Te par **quan** en vacanse?
CL.NOM.2SG leave.PRS.2SG when on holiday
'When will you leave for holidays?'

(4) Te le bett-e **yeui** le bott-e?
CL.NOM.2.SG CL.ACC.PL put-PRS.2SG where DET.DEF.PL shoe-PL
'The shoes, where are you putting them?'

(5) Te port-e **quin** **livro** en vacanse?
CL.NOM.2SG bring-PRS.2SG which.M.SG book in holiday
'Which book will you bring on holidays?'

(6) Ier t' à predg-à **avouë quint-e** **fenn-e**?
yesterday CL.NOM.2SG have.PRS.2SG speak-PST.PTCP with which-F.PL woman-PL
'With which women did you speak yesterday?'

(7) a. L' on pens-ò [ que n'
CL.NOM.3PL have.PRS-3PL think-PST.PTCP COMP CL.NOM.1PL
ari-en atsit-ò **dequé** pe Tsalende]?
have.COND.PRS-3PL buy-PST.PTCP what for Christmas
'What did they think we would buy for Christmas?'

b. **Dequé** l'on pensò que n'arien atsitò pe Tsalende?

(8) a. Te pensa-v-e [d' all-éi **yeui** en vacanse cit an]?
CL.NOM.2SG think-PST-2SG COMP go-INF where on holiday DEM.M.SG year
'Where were you thinking of going on holiday this year?'

b. **Yeui** te pensave d'alléi en vacanse cit an?

*Qui* 'who' wh-phrases behave slightly differently. Similarly to Italian *chi* 'who', *qui* wh-phrases are often clefted, especially when it's an object wh-phrase: cf. (9) and (10). Nevertheless, there are some circumstances in which the relevant wh-phrase can occur either clause-internally or fronted, as in the case of subject *qui* (11), albeit the word order in (11-b) with the wh-phrase clause-internal is still slightly degraded.

(9) **Qui l' è que** l' à quieri-à?
who CL.NOM.3SG be.PRS.3SG COMP CL.NOM.3SG have.PRS.3SG call-PST.PTCP
'Whom did he call?'

(10) a. ?L' à quieri-à **qui**?
CL.NOM.3SG have.PRS.3SG call-PST.PTCP who
'Whom did he call?'

b. ?**Qui** l'à querià?

(11) a. L' à quieri-à-lo **qui**?
CL.NOM.3SG have.PRS.3SG call-PST.PTCP-CL.ACC.M.SG who
'Who called him?'

b. ?**Qui** l'à querìàlo?

In embedded contexts, we see some other restrictions for non-clefted *qui* wh-phrases. For instance, in (12-a), *qui* is extracted from the matrix clause and fronting is allowed. Having *qui* clause-internally is only allowed in the presence of a resumptive pronoun for the embedded clause, cf. (12-b)-(12-c). On the other hand, if *qui* is extracted from the embedded clause it can be fronted or occur clause-internally, (13). Clefting is always possible, (12-d)-(13-c).

(12) a. **Qui** t' à deut que l' à
who CL.DAT.2SG have.PRS.3SG say.PST.PTCP COMP CL.NOM.3SG have.PRS.3SG
queri-à?
call-PST.PTCP
'Who told you that he called?'

b. *T'à deut **qui** que l'à querià?

c. T' à deut-lo **qui** que
CL.DAT.2SG have.PRS.3SG say.PST.PTCP-CL.ACC.M.SG who COMP
l'à queri-à?
CL.NOM.3SG have.PRS.3SG call-PST.PTCP
'Who told it to you that he called ?'

d. **Qui l'** **è** **que** t' à deut
who CL.NOM.3SG be.PRS.3SG COMP CL.DAT.2SG have.PRS.3SG say.PST.PTCP
que l' à queri-à?
COMP CL.NOM.3SG have.PRS.3SG call-PST.PTCP
'Who is it that told you that he called?'

(13) a. **Qui** te pens-e que l' à
who CL.NOM.2SG think-PRS.2SG COMP CL.NOM.3SG have.PRS.3SG
queri-à pe la machina?
call-PST.PTCP for DET.DEF.F.SG car
'Who do you think he called for the car?'

b. Te pense que l'à querià **qui** pe la machina?

c. **Qui l'** **è** **que** te pens-e que
who CL.NOM.3SG be.PRS.3SG COMP CL.NOM.2SG think-PRS.2SG COMP
l' à queri-à pe la machina?
CL.NOM.3SG have.PRS.3SG call-PST.PTCP for DET.DEF.F.SG car
'Who is it that you think he called for the car?'

These partial restrictions might be a consequence of the weak phonological nature of *qui*, which in some cases prevents it from surfacing in certain positions. This suspicion is further confirmed by the fact that there are no placement restrictions for D-linked wh-phrases like *quin rago*, as exemplified by examples (14) through (17). I shall come back to the phonological properties of wh-phrases in Chapter 8.

(14) a. L' à quieri-à **quin rago**?
CL.NOM.3SG have.PRS.3SG call-PST.PTCP which boy
'Which boy did he call?'

b. **Quin rago** l'à querià?

(15) a. L' à quieri-à-lo **quin rago**?
CL.NOM.3SG have.PRS.3SG call-PST.PTCP-CL.ACC.M.SG which boy
'Which boy called him?'

b. **Quin rago** l'à querilo?

(16) a. **Quin rago** t' à deut que l'
which boy CL.DAT.2SG have.PRS.3SG say.PST.PTCP COMP CL.NOM.3SG
à queri-à?
have.PRS.3SG call-PST.PTCP
'Which boy told you that he called?'

b. *T'à deut **quin rago** que l'à querià?

c. T' à deut-lo **quin rago** que
CL.DAT.2SG have.PRS.3SG say.PST.PTCP-CL.ACC.M.SG which boy COMP
l' à queri-à?
CL.NOM.3SG have.PRS.3SG call-PST.PTCP
'Which boy told it to you that he called ?'

(17) a. **Quin rago** te pens-e que l' à
which boy CL.NOM.2SG think-PRS.2SG COMP CL.NOM.3SG have.PRS.3SG
queri-à pe la machina?
call-PST.PTCP for DET.DEF.F.SG car

‘Which boy do you think he called for the car?’

b. Te pense que l’à querià **quin rago** pe la machina?

Finally, we see that CIwh-phrases can be exhaustive, but don’t need to. ‘Mention-some’ questions, which are not exhaustive, in ValPa are felicitous with wh-phrases both in the HLP and the LLP. In (53), the wh-phrase is not exhaustive, which is shown by the fact that (53) can be answered with (54), even though -of course- Aosta counts many restaurants.

(18) a. **Yeui** no pou-ri-en all-é medj-éi en Veulla?
where CL.NOM.1PL can-COND-1PL go-INF eat-INF in city
‘Where could we go eat in Aosta?’

b. No pourien allè medjéi **yeui** en Veulla?

(19) Ì Vecchio Ristoro! Se medj-e fran bien lè.
to.DET.DEF.M.SG Vecchio Ristoro IMPERS eat-PRS.3SG really well there
‘At the Vecchio Ristoro. You eat really well there.’

The only interrogative element banned from occurring in clause-internal position is *perqué* ‘why’, (20), which is expected if why-like interrogative phrases are externally merged directly in the HLP (Rizzi, 2001; Rizzi and Bocci, 2017).

(20) a. **Perqué** te va ì martsà?
why CL.NOM.2SG go.PRS.2SG to.DET market
‘Why do you go to the market?’

b. Te va ***perqué** ì martsà?

In the present section, I have shown that there are no restrictions on the types of wh-phrases

Table 4.1: Fronted vs clause-internal wh-phrases in ValPa

| Type | **fronted** | **clause-internal** |
|---|---|---|
| Subject *qui* | ? | ? |
| Subject D-linked | √ | √ |
| Object *dequé* | √ | √ |
| Object *qui* | ? | √ |
| Object D-linked | √ | √ |
| Adjunct bare | √ | √ |
| Adjunct D-linked | √ | √ |

that can occur clause-internally, except for *qui*. The pattern is summarized in Table 4.1. Recall that the latter differ from echo questions, as in (21-c), in that they are information seeking, as well as display a different word order, (21-b). The consensus is that wh-phrases in echo questions are in situ, that is, they do not undergo any kind of movement and surface in their base position (Sobin, 1990, 2010). Likewise, the consensus on the French non-fronted wh-phrases discussed in the previous chapter is that they are in-situ (Lasnik and Saito (1992); Chang (1997); Larrivée (2019); a.o.). Therefore, the question I will address in this chapter is whether ValPa CIwh-phrases, like *à qui* in (21-b), are in-situ or have rather moved from their base position and hence are ex-situ. In order to do so, I will look at word order patterns with respect to arguments and adjuncts, weak crossover effects, parasitic gaps licensing, and placement with respect to adverbs.

(21) a. **À qui** te baill-e le gneu? **Fronted**
to who CL.NOM.2SG give-PRS.2SG DET.DEF.PL walnut.PL
'To whom will you give the walnuts?'

b. Te baille **à qui** le gneu? **clause-internal**

c. Te baille le gneu À QUI?? **Echo**

## 4.1 Word order patterns

As mentioned in Chapter 3, the unmarked order of arguments in ValPa is DO>IO (22). In the interrogative counterpart, (23), we see that the word order is whIO>DO, which is initial evidence that the wh-phrase *à qui* is not in base position.

(22) Marco baill-e lo livro à Ivana. **DO>IO**
Marco give-PRS.3SG DET.DEF.M.SG book to Ivana
'Marco will give the book to Ivana.'

(23) Marco baill-e **à qui** lo livro? **whIO>DO**
Marco give-PRS.3SG to who DET.DEF.M.SG book
'To whom will Marco give the book?'

The same is witnessed with locative PPs. In (24), the default words order is DO>$\text{PP}_{\text{loc}}$. Yet, in the interrogative counterpart (25), the CIwh-phrase *yeui* 'where' surfaces to the left of the DO. The reverse order, DO>wh$\text{PP}_{\text{loc}}$, is degraded unless it's an echo question.

(24) L' à bett-ò lo pan en borsa. **DO>$\text{PP}_{\text{loc}}$**
CL.NOM.3.SG have.PRS.3SG put-PST.PTCP DET.DEF.M.SG bread in bag
'He put the bread in the bag.'

(25) a. L' à bett-ò **yeui** lo pan? **wh$\text{PP}_{\text{loc}}$>DO**
CL.NOM.3.SG have.PRS.3SG put-PST.PTCP where DET.M.SG bread
'Where did he put the bread?'

b. L'à bettò lo pan YEUI??

Similarly, if the wh-phrase is an adjunct, the word order differs from the unmarked one, as shown by the following example pairs:

(26) Bianca te port-e lo bouque deman. **DO>ADV$_{time}$**
Bianca CL.DAT.2SG bring-PRS.3SG DET.DEF.M.SG wood tomorrow
'Bianca will bring you the wood tomorrow.'

(27) Bianca te port-e **quan** lo pan? **whADV$_{time}$>DO**
Bianca CL.DAT.2SG bring-PRS.3SG when DET.DEF.M.SG bread
'When will Bianca bring you the bread?'

(28) L' à predg-à avouë Ivi en quemena. **PP$_{with}$>PP$_{loc}$**
CL.NOM.3SG have.PRS.3SG speak-PST.PTCP with Ivi in city.hall
'(S)he spoke with Ivi at city hall. '

(29) L' à predg-à **yeui** avouë Ivana? **whPP$_{loc}$>PP$_{with}$**
CL.NOM.3SG have.PRS.3SG speak-PST.PTCP where with Ivana
'Where did (s)he speak with Ivana?'

With indefinite IOs the pattern is the same, as shown by (30)-(31). Nevertheless, the pattern is slightly different in clauses with an indefinite DO. In the unmarked declarative baseline (32), the word order is DO$_{indef}$>PP. The word order in the interrogative counterpart (33) is, however, the same: DO$_{indef}$>whPP. While this looks prima facie surprising, the reason behind the unexpected word order pattern in (33) is most likely due to independent factors about the positioning of indefinite DO, to which I will come back at the end of this chapter, once I have located the landing position of wh-phrases.

(30) L' à baill-à lo livro à **DO>IO**
CL.NOM.3SG have.PRS.3SG give-PST.PTCP DET.DEF.M.SG book to
eun ami.
DET.INDEF.M.SG friend
'He gave the book to a friend.'

(31) L' à baill-à **à qui** lo livro? **whIO>DO**
CL.NOM.3SG have.PRS.3SG give-PST.PTCP to who DET.DEF.M.SG book

‘He gave the book to a friend.’

(32) L’ à bett-ò eun livro su la tabla. **$DO_{indef}$>PP**
CL.NOM.3SG have.PRS.3SG put-PST.PTCP DET.INDEF.M.SG book on DET.DEF.F.SG table
‘He put a book on the table.’

(33) L’ à bett-ò eun livro **yeui**? **$DO_{indef}$>whPP**
CL.NOM.3SG have.PRS.3SG put-PST.PTCP DET.INDEF.M.SG book where
‘Where did he put a book?’

The evidence from word order patterns show that CIwh-phrases are not surfacing in situ, but have been displaced.

## 4.2 Weak crossover effects

Crossover effects arise when a quantifier variable, e.g. a wh-phrase, originates structurally lower than a co-referenced pronoun that it ‘crosses over’ as a result of movement (Postal (1971); Wasow (1972); Koopman and Sportiche (1982); Cinque (1990); Lasnik and Stowell (1991); Safir (1996); Büring (2004); Safir (2017); Georgi and Amaechi (2023) among many others).[1] There are primarily two kinds of crossover: strong and weak. Strong crossover effects arise in cases like (34), where the pronoun c-commands the gap left by the co-referenced dislocated element, in this case the wh-phrase *who*. Weak crossover (WCO), on the other hand, arises when the pronoun does *not* c-command the gap. We can see cases of WCO effect for instance with wh-movement, (35)

[1]The literature on crossover effects is vast and the arising of these effects has been ascribed to different factors, among which binding, pragmatics (Wasow, 1979; a.o.), and processing (Culicover, 2013). See Safir (2017) for an overview.

and focus fronting, (36). Note that co-reference of a possessive pronoun with a non-displaced c-commanding DP is not an issue, (37).

(34) $[\text{Who}_j]_k$ does $\text{he}_{i/*j}$ like $t_k$?

(35) $[\text{Who}_j]_k$ does $\text{his}_{i/*j}$ mother like $t_k$?

(36) $[\text{John}_j]_k$ $\text{his}_{i/*j}$ mother likes $t_k$, not Luke.

(37) I introduced $\text{Raj}_k$ to $\text{his}_{k/j}$ future wife.

In the literature, there is some degree of disagreement on the existence of WCO effects in some constructions. This is the case for English restricted relative clauses. For some speakers, (38) is perfectly acceptable with co-reference between *the dog* and the possessive pronoun (Chomsky, 1982; Reinhart, 1997), while many others have deemed examples like (38) degraded (Postal, 1993; Lasnik and Stowell, 1991; Safir, 1996, 2017).

(38) $^{\%}$The $\text{dog}_i$ $\text{who}_i$ $\text{his}_i$ owner loves $t_i$ is happy.

Moreover, Hewett (2023b,a) shows that in Iraqi, Tunisian, and Syrian Arabic WCO effects arise even in the absence of movement. I refer the reader to Hewett (2023a) for a full analysis of what drives WCO effects in these languages. The important thing to notice here is that crossover effects do not *necessarily* arise in movement configurations.

Looking at ValPa, we see that CIwh-phrases trigger WCO effects (39-a), like their fronted counterpart, (39-b). The only way to avoid WCO effects is to use a wh-cleft (40). Just like in the English case, co-reference in the declarative counterpart does not cause any issue.

(39) a. L' à baill-à [**à qui$_i$**]$_k$ s-on$_{j/*i}$ livro t$_k$?
CL.NOM.3SG have.PRS.3SG give-PST.PTCP to who POSS.3SG-M.SG book
'To whom$_i$ did he give her$_i$ book?'

b. [**À qui$_i$**]$_k$ l'à baillà son$_{j/*i}$ livro t$_k$ ?

(40) **A qui$_i$ l' è que** l' à baillà
to who CL.NOM.3SG be.PRS.3SG COMP CL.NOM.3SG have.PRS.3SG give-PST.PTCP
s-on$_{j/i}$ livro?
POSS.3SG-M.SG book
'To whom$_i$ did he give her$_i$ book?'

(41) L' à baill-à à Ivana$_i$ s-on$_{i/j}$ livro.
CL.NOM.3SG have.PRS.3SG give-PST.PTCP to Ivana POSS.3SG-M.SG book
'He has given Ivana$_i$ her$_{i/j}$ book.'

Furthermore, we see that CIwh-phrases also trigger secondary crossover, like their fronted counterpart (42). Just like above, in case of co-reference in the declarative counterpart no issues arise.

(42) a. L' à baill-à [**ì frée de qui$_i$**]$_k$
CL.NOM.3SG have.PRS.3SG give-PST.PTCP to.DET.DEF.M.SG brother of who
s-on$_{j/*i}$ livro t$_k$?
POSS.3SG-M.SG book
'To whose$_i$ brother did he give her$_i$ book?'

b. [**Ì frée de qui$_i$**]$_k$ l'à baillà son$_{j/*i}$ livro t$_k$?

(43) L' à baill-à ì frée de Ivana$_i$
CL.NOM.3SG have.PRS.3SG give-PST.PTCP to.DET.DEF.M.SG brother of Ivana
s-on$_{j/i}$ livro.
POSS.3SG-M.SG book
'He gave Ivana$_i$ her$_i$ book.'

To conclude, I will maintain WCO as a valid diagnostic in addition to the other diagnostics discussed in this chapter.

## 4.3 Parasitic-gap licensing

Now let's move on to another test to diagnose whether ValPa CIwh-phrases are in-situ or ex-situ: Parasitic Gaps. A Parasitic Gap (PG) is "a gap that is dependent on the existence of another gap" (Engdahl, 1983, p. 5). In (44-a), the PG in the adjunct clause is licensed by the A'-chain in the main clause. It is well known that *only* overt A'-movement, that is only chains that have been formed in narrow syntax, can license PGs (Engdahl, 1983; Cinque, 1990; Culicover, 2001; Nunes, 2004; a.o.).[2] This is shown by examples (44-b), (44-c), and (44-d). In (44-b), we have an in-situ-wh, which undergoes LF movement to the HLP of the clause. Yet, LF is too late to license PGs, which must be licensed by an A'-chain formed before Spell-Out. The same happens with Quantifier Raising (QR) in (44-c). Finally, in (44-d) there movement, as *this book* does not undergo movement, either in narrow syntax or at LF, and the PG in the adjunct clause is not licensed.

(44) a. Which book$_i$ did you review t$_i$ [ without reading *pg*]?

b. *Who reviewed which book [ without reading *pg*]?

c. *She reviewed every book [ without reading *pg*].

d. *She reviewed this book [ without reading *pg*].

The ValPa verbs used in the PG examples are the ditransitive *baillé* 'to give' (45) and *deuscueté* 'to discuss' (46), whose PPs cannot be dropped.

(45) L' à baill-à lo livro *(à Tcheunne ).
CL.NOM.3SG have.PRS.3SG give-PST.PTCP DET.DEF.M.SG book to Tcheunne

[2] See Nissenbaum (2000) for an analysis of covert movement licensing PGs.

'(S)he gave the book to Tcheunne.'

(46) L' à pò deuscuet-ò *(avouë Tcheunne ).
CL.NOM.3SG have.PRS.3SG NEG argue-PST.PTCP with Tcheunne
'(S)he didn't argue with Tcheunne.'

In the example (47-a), the CIwh-phrases *à qui* licenses the parasitic gap in the adjunct clause *apré ai baillá de soou*, precisely as its fronted counterpart (47-b). The same pattern is witnessed in (48). The baselines, with quantifier phrases, are reported in (49) and (50).

(47) a. T' à port-ò **à qui** la spèiza
CL.NOM.2SG have.PRS.2SG bring-PST.PTCP to whom DET.DEF.F.SG grocery
[apré ai baill-à *pg* de soou]?
after have.INF give-PST.PTCP PART money
'To whom did you bring groceries after having given money?'

b. **À qui**$_i$ t'à portò la spèiza t$_i$ [apré ai baillà *pg* de soou]?

(48) a. T' à mand-ò à catqu-éi **qui** ier [enco
CL.NOM.2SG have.PRS.2SG send-PST.PTCP to shit-INF who yesterday even
doanque deuscuet-éi *pg*] ?
before argue-INF
'Who did you tell to fuck off before even arguing?'

b. **Qui**$_i$ t'à mandò à catqué t$_i$ [enco doanque discut-é *pg*] ?

(49) T' à port-ò la spèiza à tsaque gosse
CL.NOM.2SG have.PRS.2SG bring-PST.PTCP DET.DEF.F.SG grocery to every kid
[apré ai baill-à-*(lei) de soou].
after have.INF give-PST.PTCP PART money
'You brought groceries to every kid after having given them money.'

(50) a. T' à mand-ò à catqu-éi tsaque gosse [enco
CL.NOM.2SG have.PRS.2SG send-PST.PTCP to shit-INF every kid even
doanque deuscuet-éi *(avoë lleur)] ?
before argue-INF with them

'You told every kid to fuck off before even arguing with them.'

The fact that the CIwh-phrase *à qui* 'to who' in (47)-(48) licenses the PG in the adjunct clause provides good evidence that *à qui* 'to who' is not in-situ, but has moved from its base position. The question to be answered now is: where do wh-phrases move to?

## 4.4 CIwh-phrases at the edge of vP

In the previous sections, I have established that CIwh-phrases are ex-situ, namely they are not surfacing in their base position, the question that I will address in this section is the landing position for CIwh-phrases. As I discussed in Chapter 3, main verbs as well as past participles move out the vP. For this reason, we cannot resort to verb placement as a diagnostic for the movement path of CIwh-phrases, as CIwh-phrases always surface to the right of any verbal element:

| (51) | Te | baill-e | **à qui** | le | loufie? |
|---|---|---|---|---|---|
| | CL.NOM.2SG | give-PRS.2SG | to who | DET.DEF.PL | blueberry.PL |

'To whom are you giving the blueberries?'

| (52) | T' | à | baill-à | **à qui** | lo | tseà? |
|---|---|---|---|---|---|---|
| | CL.NOM.2SG | have.PRS.2SG | give-PST.PTCP | to who | DET.DEF.M.SG | horse |

'To whom did you give the horse?'

Therefore, in order to pinpoint where CIwh-phrases surface, I will resort once again to adverb placement, as in the hierarchy proposed by Cinque (1999) and refined by Schifano (2018), discussed in Chapter 3.1 repeated in (53).

(53) a. **High Adverb Space (above TP)**: [ frankly $\text{Mood}_{\text{speech act}}$ [ unfortunately $\text{Mood}_{\text{evaluative}}$

[ apparently $\text{Mood}_{\text{evidential}}$ [ probably $\text{Mod}_{\text{epistemic}}$ [ now $\text{T}_{\text{(past/future)}}$ [ perhaps $\text{Mood}_{\text{irrealis}}$ [ necessarily $\text{Mod}_{\text{necessity}}$ [ usually $\text{Asp}_{\text{habitual}}$ [ again $\text{Asp}_{\text{repetitive(event)}}$ [ often $\text{Asp}_{\text{frequentative(event)}}$ [ intentionally $\text{Mod}_{\text{volitional}}$ [ slowly $\text{Asp}_{\text{celerative(event)}}$

b. **Low Adverb Space (below TP)**: [ not $\text{Neg1}_{\text{presuppositional}}$ [ already $\text{T}_{\text{(anterior)}}$ [ anymore $\text{Asp}_{\text{terminative}}$ [ still $\text{Asp}_{\text{continuative}}$ [ always $\text{Asp}_{\text{perfect}}$ [ hardly Neg2 [ just $\text{Asp}_{\text{retrospective}}$ [ soon $\text{Asp}_{\text{proximative}}$ [ briefly $\text{Asp}_{\text{durative}}$ [ typically $\text{Asp}_{\text{generic/progressive}}$ [ almost $\text{Asp}_{\text{prospective}}$ [ completely $\text{Asp}_{\text{SgCompletive(event)}}$ [ everything $\text{Asp}_{\text{PlCompletive}}$ [ well Voice [ fast $\text{Asp}_{\text{celerative(process)}}$ [ again $\text{Asp}_{\text{repetitive(process)}}$ [ often $\text{Asp}_{\text{frequentative(process)}}$ [ completely $\text{Asp}_{\text{SgCompletive(process)}}$ [vP ...]...]

Adapted from (Cinque, 1999, p. 106) and (Schifano, 2018, p. 2)

A note of caution on wh-questions with low manner adverbs is necessary at this point. Constructing examples with certain adverbs, especially low manner ones, is tricky for two reasons. First, low manner adverbs tend to be focalized or inserted in a comparative construction, as in (54) and (55). This is potentially problematic, as one would need to first establish whether *vitto paé* in (54) and *vitto comme eun tsamoù* in (55) are located in the same position as *vitto* in the declarative (56). Work by Schifano (2018) discussed in the previous Chapter suggests that in fact emphatic adverbs are focalized and undergo movement.

(54) a. **Yeui** te va vitto paé?
where CL.NOM.2SG go.PRS.2SG fast like.that
'Where are you going that fast?'

b. Te va **yeui** vitto paè?

(55) a. **Yeui** te va vitto comme eun tsamoù?
where CL.NOM.2SG go.PRS.2SG fast like DET.DEF.M.SG mountain.goat
'Where are you going fast like mountain goat?'

b. Te va **yeui** vitto comme eun tsamoù?

(56) L' à medj-à vitto e l' è
CL.NOM.3SG have.PRS.3SG eat-PST.PTCP fast and CL.NOM.3SG be.PRS.3SG
part-ì.
leave-PST.PTCP
'He ate fast and he left.'

The second thing to keep in mind is that the use of manner and temporal adverbs like *often* and *always* makes the question highly presuppositional. For this reason, in various languages, there is a preference to resort to clefting constructions, albeit fronting is not ruled out. The following examples show this in Italian (the English translations convey the same idea). Note that in both cases the non-clefted structure is not ruled out,

(57) a. **Dov' è che** dev-e puli-re bene?
where BE.PRS.3SG COMP must-PRS.3SG clean-INF well
'Where is it that he should clean well?'

b. **Dove** dev-e puli-re bene?
where must-PRS.3SG clean-INF well
'Where should he clean well?'

(58) a. **Dov' è che** anda-te sovente in vacanza?
where BE.PRS.3SG COMP go-PRS.2PL often on holiday
'Where is it that you often go on holiday?'

b. **Dove** anda-te sovente in vacanza?
where go-PRS.2PL often on holiday
'Where do you often go on holiday?'

Yet, there are contexts in which it wh-fronting is perfectly acceptable, as in the following Italian example, where the speaker is asking the interlocutor to give them a list of the dishes that they are able to prepare well.

(59) **Context**: You colleague is telling you how they are pretty good at cooking. There is a pretty long list of dishes that you'd like to learn, such as lasagna, ravioli, pizza dough, tiramisù, souflé, custard cream, bœuf bourguignon. So you'll start asking if they can teach you how to make some of these, but they keep replying they are not good at that specific dish. Puzzled, you ask them:

a. Ok, quindi **qual-i** **piatt-i** sai cucina-re bene?
ok so which-PL.M plate-PL know.PRS.2SG cook-INF well
'So which dishes can you prepare well?'

Similarly, in ValPa clefting is preferred to wh-fronting (60)-(61) in some contexts. Therefore, it is important to be cautious in the use of adverb placement to diagnose the landing position of wh-phrases. For this reason, the following examples will include a context, similar to that in the Italian example, as to assure that there is no focalization on the adverb, nor a strong preference for clefting.

(60) a. E me **yeui** **l'** **è** **que** de-yo pulit-éi bien?
and me where CL.NOM.3SG be.PRS.3SG COMP must-PRS.3SG clean-INF well
'Where is it that he should clean well?'

b. E me **yeui** de-yo pulit-éi bien?
and me where must-PRS.3SG clean-INF well
'Where should he clean well?'

(61) a. **Yeui l'** **è** **que** allode soen en vacanse vo?
where CL.NOM.3SG be.PRS.3SG COMP go.PRS.2PL often on holiday NOM.2PL
'Where is it that you often go on holiday?'

b. **Yeui** allode soen en vacanse vo?
where go.PRS.2PL often on holiday NOM.2PL
'Where do you often go on holiday?'

As the reader can gather from the following examples, it is perfectly acceptable to have a wh-phrase and a low manner adverb, like *vitto* 'fast' and with *bien* 'well', coexisting in the clause. Yet, the only possible order is $\text{ADV}_{\text{manner}}>$wh-phrase.

(62) **Context**: You brought to school "Harry Potter and the Half-blood Prince", because Michael really wants to read it. However, the religion teacher highly disapproves of fantasy novels, so the exchange must happen in secret. As he is busy talking to a colleague by the classroom door, you ask your neighbor Bianca to pass on the book quickly so the teacher does not see it. Bianca is a bit confused and asks:

a. De-yo pass-éi vitto **à qui** lo livro?
must-PRS.1SG pass-INF fast to who DET.DEF.M.SG book
'To whom should I quickly pass the book?'

b. *Deyo passéi **à qui** vitto lo livro?

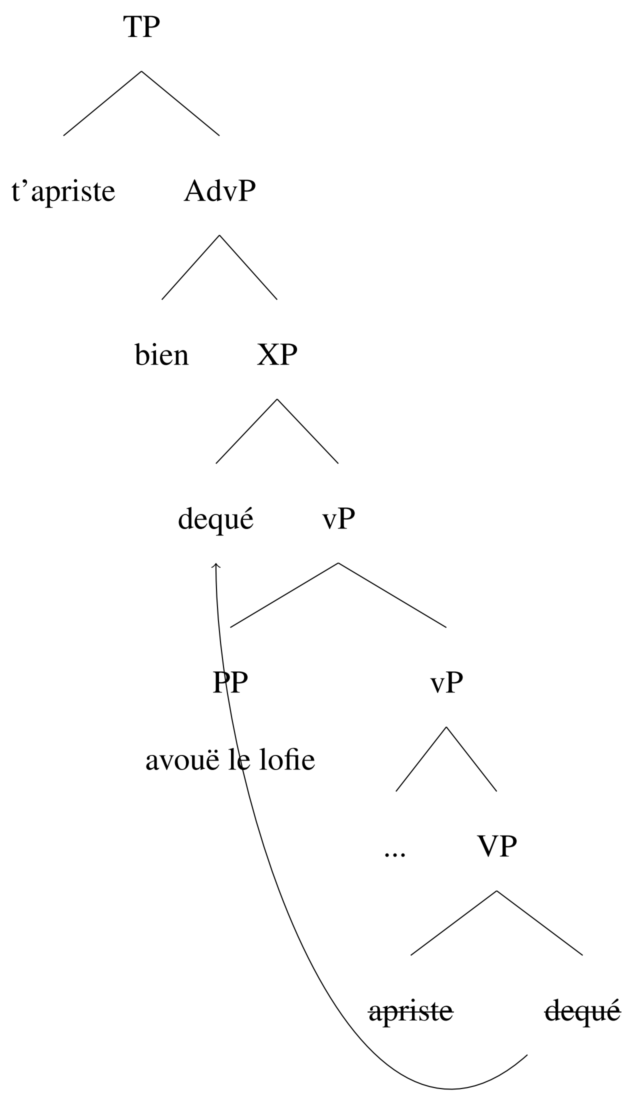
(63) **Context**: You are discussing with friends recipes you have perfected with blueberries, which are so abundant in your region. As Micaela joins the group, you ask her:

a. E te t' aprist-e bien **dequé** avouë le loufie?
and NOM.2SG CL.NOM.2SG prepare-PRS.2SG well what with DET.DEF.PL blueberrie.PL
'And you, what do you prepare well with the blueberries?'

b. *E te t'apriste **dequé** bien avouë le loufie?

CIwh-phrases must follow low manner adverbs like *vitto* 'fast' and *bien* 'well', which are situated very low in the adverb hierarchy in (53). The word orders in (62) and (63) are, thus, evidence that CIwh-phrases move to a position just above vP, as shown in the simplified (64).

(64)




For the time being, the landing position just above vP is labeled XP in (64). Chapter 5 will contextualize the ValPa findings by discussing other analyses of CIwh-phrases in languages of different families and provide a theoretical frame for the movement path of CIwh-phrases.

## 4.5 Object shift

Before moving to previous theories of CIwh-phrases in Chapter 5, there is another point I would like to discuss, namely the position of wh-phrases with respect to indefinite DOs.

As discussed in Chapter 3, in declarative clauses, the word order with indefinite DOs is the same as with definite DOs: DO>IO>ADV/PP$_{loc}$>ADV/PP$_{time}$, (65). Yet, we have seen earlier in this chapter that, unlike with definite DOs, in the presence of a wh-phrase and an indefinite IOs, the order is the same as the unmarked one in declaratives: DO>whIO, (66).

(65) L' à baill-à eun livro à la métra. **DO$_{\mathbf{indef}}$>IO**
CL.NOM.3SG have.PRS.3SG give-PST.PTCP DET.INDEF.M.SG book to DET.DEF.F.SG teacher
'He gave a book to the teacher.'

(66) L' à baill-à eun cadò **à qui**? **DO$_{\mathbf{indef}}$>whIO**
CL.NOM.3SG have.PRS.3SG give-PST.PTCP DET.INDEF.M.SG gift to who
'To who did he give a gift?'

The fact that CIwh-phrases appear to the right of indefinite DOs appears slightly problematic for an ex-situ analysis. However, there is a plausible explanation, namely that indefinite DOs in ValPa undergo object shift, as it is the case with VOS order in several languages, including some Romance languages. There are two strategies to obtain VOS orders in Romance (Gallego, 2013), both of which follow from verb movement: object shift (Ordóñez, 1997, 1998, 2000) and VP shift[3] (Zubizarreta, 1998; Belletti, 2004). In this section, I will bring forth evidence that in ValPa VPs containing an indefinite DP undergo movement to a clause-internal position, thus in an instance of VP shift and not object shift.

The analysis proposed by (Ordóñez, 1997, 1998, 2000) for VOS patterns in Galician, European Portuguese, and Spanish, as in (68), rests on the analysis put forth for Scandinavian languages. In Icelandic, for instance, both definite and plural indefinite DOs move out of VP, but only if the verb has also moved out of VP. This is often referred to as the Holmberg Generalization (Holmberg, 1986). The landing position for shifted DOs is assumed to be just above VP. Thráinsson (2001) reports a certain optionality in object shift of indefinite DOs, albeit there is a difference in interpretation. Plural DOs that remain in situ inside VP, (67-a), receive an existential interpretation, e.g. there are books I don't read, whereas when the DO undergoes object shift (67-b), it receives a generic interpretation. The same pattern of object shift is reported for Spanish, (68). According to López (2012) and (Ordóñez, 1998), there is also some degree of optionality in object shift, (69), with annexed interpretative effects, albeit they are different from those reported by Thráinsson (2001) for Icelandic. In Spanish, Ordóñez argues that shifted objects, as in (69-a), are interpreted as specific.[4] The DOs are underlined in the following examples to make the contrasts more easily visible.

(67) a. Ég les ekki bækur.
I read NEG books

[3]The original term in the literature is VP fronting, however the use of fronting is confusing, especially as throughout this thesis I use the word fronting to refer to movement to the HLP of the clause. Therefore, I will be using the term VP shift.

[4]Note that the interpretive effects are not consistent across various idiolects of Spanish, as Gallego (2013) points out.

‘I don’t read books.’

b. Ég les bækuri ekki.
I read books NEG
‘I don’t read books (I only buy them).’

(Thráinsson, 2001, p. 90)

(68) Ley-ò la carta María.
read-PST.3SG the letter Maria
‘Maria read the letter.’

(Gallego, 2013, p. 413)

(69) a. Compra-r-on un libro todos los estudiantes
buy-PST-3PL a book all the student
‘All the students bought a book.’

b. Compra-r-on todos los estudiantes un libro.

(Gallego, 2013, p. 418)

Ordóñez (1997, 1998, 2000) proposes that in (68) the DO *la carta* in (68) adjoins to vP, above the position of the subject, and therefore c-commanding it, as in (70). This analysis predicts that in these languages the object should be able to bind into the object, which is precisely what happens, as exemplified in (71).

(70) $[_{TP}$ verb $[_{vP}$ DO $[_{vP}$ subject $[_{VP}$ ~~verb~~ ~~DO~~ ]]]]

(71) Recogi-ó cada $\text{coche}_j$ $\text{su}_j$ proprietario.
pick.up-PST.3SG each car its owner
Intended: ‘For each car up, its owner picked it up.’

(Gallego, 2013, p. 416)

The second strategy found among languages of the Romance family that display VOS order is VP shift, which is witnessed in certain Central-Eastern Romance languages (i.e., Catalan and Italian) and was proposed by Zubizarreta (1998) and later by Belletti (2004). In Italian, the word order VOS is not particularly widespread. Belletti reports it as limited to contexts where the whole VP is given information, as in (72).

(72)

| | | | |
|---|---|---|---|
| Capir-à | il | motivo | Déborah. |
| understand-FUT.3SG | DET.DEF.M.SG | reason | Déborah |

‘Déborah will understand the reason.’

Belletti argues that in cases like (72), the whole VP undergoes topicalization and moves to a TopicP in the LLP. Since in (73) the DO does not c-command the subject in SpecvP, Italian should disallow objects from binding into subjects. This is exactly what we find, (74).

(73) [$_{TP}$ ... [$_{TopicP}$ [$_{VP}$ verb DO] [$_{vP}$ subject ~~[$_{VP}$ verb DO~~ ]]]]

(74)

| | | | | | |
|---|---|---|---|---|---|
| *Hanno | saluta-to | Gianni$_j$ | i | propr-i$_j$ | genitori. |
| have.PRS.3PL | greet-PST.PTCP | Gianni | DET.DEF.M.PL | own-PL | parent-PL |

Intended: ‘His parents have greeted Gianni.’

(Belletti, 2004, p. 36)

Unfortunately, Belletti (2004) does not discuss indefinite DOs. With indirect DOs, the VOS order is more widespread and the VP does not need to be given information, as in (75). This undermines the claim that VP shifts involves topicalization of the whole VP. Furthermore, in sentences with a low manner adverb, like *veloce* ‘quickly’, the DO appears to the left of the adverb. These two facts suggest that most likely in cases like (75) and (76), the VP is not topicalized to the LLP, which is situated below manner adverbs, as discussed in Chapter 2.

(75) Port-a una torta Maria.
bring-PRS.3SG DET.INDEF.M.SG cake Maria
'Maria will bring a cake.'

(76) Faccio un caffé veloce e poi andiamo.
do.PRS.1SG DET.DEF.M.SG coffee quickly and then go.PRS.1PL
'I prepare a coffee quickly and then we go.'

Nonetheless, the goal of this section is not to rework the derivation of the VOS order in Italian, but merely to set the ground for a short discussion of what might be happening in the ValPa example repeated below in (78), where the word order is the same as that in the declarative (77).

(77) L' à baill-à eun livro à la métra. **$\mathbf{DO_{indef}}$>IO**
CL.NOM.3SG have.PRS.3SG give-PST.PTCP DET.INDEF.M.SG book to DET.DEF.F.SG teacher
'He gave a book to the teacher.'

(78) L' à baill-à eun livro **à qui**? **$\mathbf{DO_{indef}}$>whIO**
CL.NOM.3SG have.PRS.3SG give-PST.PTCP DET.INDEF.M.SG book to who
'To who did he give a book?'

ValPa behaves like Italian when it comes to VOS order. When the DO is definite, they are limited to certain contexts where the content of the VP is given information, (79). On the other hand, indefinite DOs can occur more freely between the verb and the subject, as in (80). Similarly to what we witness in Italian, the shifted object cannot bind into the subject, (81). This suggests that ValPa, like Italian and Catalan, does not display object shift, but VP shift. Unfortunately, we stumble upon the same issue witnessed in Italian, namely in clauses with $\mathrm{VO_{indef}S}$ order the content of the VP as a whole need not be given information. Moreover, in case of VP shift, the $\mathrm{DO_{indef}}$ surfaces to the left of low manner adverbs, as in (82-a). Therefore, it is unlikely that the VP has moved to a Topic position in the LLP.

(79) Compren tot Lise.
understand.PRS.3SG all Lise
'Lise understands everything.'

(80) Port-e eun livro Irma.
bring-PRS.3SG DET.DEF.M.SG book Irma
'Irma will bring a book.'

(81) *Salu-e tsaque gosse$_j$ s-on$_j$ papa.
greet-PRS.3SG each buy POSS.3SG-M.SG dad
Intended: 'Each dad greets his son.'

(82) a. Fe-yo eun cafè vitto e part-en.
make-PRS.1SG DET.INDEF.M.SG coffee quickly and leave-PRS.1PL
'I will make a coffee quickly and then we'll leave.'

b. Feyo vitto eun cafè e part-en.

Moreover, in (82) we see that there is some degree of optionality in the word order of the indefinite DO and the low manner adverb *vitto* 'quickly', just like it was reported for Icelandic: in (82-a) *eun cafè* is interpreted as existential, whereas in (82-b) it receives a generic reading, as in "I will make some coffee". Note that this optionality is, however, limited to indefinite DOs that can be interpreted either specifically or generically, while wiht DOs like *an doccia* 'a shower' there is no optionality and only the order *vitto*>$\mathrm{DO_{indef}}$ is possible. Furthermore, it is not possible to have optionality in examples like (80) with an overt post-verbal subject, repeated below as (84).

(83) Fe-yo (vitto) an doccia (*vitto) e part-en.
make-PRS.1SG quickly DET.INDEF.F.SG shower and leave-PRS.1PL
'I will take a shower quickly and then we'll leave.'

(84) a. Port-e eun livro Irma.
bring-PRS.3SG DET.DEF.M.SG book Irma
'Irma will bring a book.'

b. ??Porte Irma eun livro.

This evidence suggests that, in general, VPs containing an indefinite DO in VaPa shift to a position above low manner adverbs, even though this movement seems to be optional in some -very limited- cases, as seen in (82).[5] Now, going back to the position of CIwh-phrases with respect to indefinite DOs, if VPs containing indefinite DOs shift to a clause-internal position that is higher tha the LLP, then the order $\mathrm{DO}_{\mathrm{indef}}$>CIwh-phrase is indeed expected.

(85) L' à baill-à eun cadò **$\mathbf{DO}_{\mathbf{indef}}$>whIO**
CL.NOM.3SG have.PRS.3SG give-PST.PTCP DET.INDEF.M.SG gift
**à qui**?
to who
'To whom did he give a gift?'

(86) [$_{TP}$ ... [$_{XP}$ [$_{VP}$ verb DO] [$_{LLP}$ wh-phrase [$_{vP}$ ~~[$_{VP}$ verb DO~~ ~~wh-phrase~~ ]]]]

The question of VP shift in ValPa, and in Italian and other Romance languages, is by itself a very interesting puzzle that deserves attention and I leave it open for further investigations.

[5] One possibility is that the optionality only surfaces in cases where there is a possible scope ambiguity, namely in (82) between the adverb and the indefinite: *vitto>eun* and *eun>vitto*. This would explain why there is no ambiguity in (83) and (84). But as for the other details of this puzzle, more research is needed.

## 4.6 Chapter summary

In this chapter, I have discussed at length the word order patterns witnessed in ValPa wh-questions. I have shown that, except *perqué* 'why', all wh-phrases in ValPa can occur either fronted or clause-internally. Resorting to word order patterns, weak crossover effects (with some caution), parasitic-gap licensing, and adverb placement, I show that CIwh-phrases do not surface in-situ. Questions with a CIwh-phrase do not follow the unmarked word order. For instance, in an IO wh-question, the word order would be S > V > whIO > DO, as opposed to the unmarked S > V > DO > IO word order. This pattern is observed in several different questions and is very robust. Thus, the conclusion is that the surface position of CIwh-phrases is just above the vP.

The only surprising facts come from questions with an indefinite object, where the word order in the question is exactly the same as the default word order (S > V > DOindef > whIO vs S > V > DOindef > IO). However, as I argue in Section 4.5, this is expected if ValPa displays Object Shift (or VP shift), as it was proposed for several Romance languages, including Italian, Spanish, Catalan, and Romanian (Zubizarreta, 1998; Ordóñez, 1998; Belletti, 2004). Object Shift and VP shift are both analytically compatible with the ValPa data, but the actual issue of whether ValPa has Object Shift or VP shift is an open question, to be addressed in future work.

# Chapter 5: Previous theories of ‘non fronted’ wh-phrases

In the previous chapter, I have argued that ValPa CIwh-phrases are not in situ but have been displaced to a position just above vP. ValPa is not unique in this sense: CIwh-phrases are found in several languages. This chapter will discuss relevant analyses of CIwh-phrases across several languages, starting with Romance (Section 5.1), and then moving to Slavic (Section 5.2) languages and finally to SOV languages (Section 5.3).

## 5.1 CIwh-phrases in Romance languages

Clause-internal wh-phrases are relatively common in Romance languages. The most debated language in this respect is surely French, which permits optionality in wh-fronting, see (1). The last few decades have seen different analyses on the location of non-fronted wh-phrases in French. Although Belletti (2006) argues that wh-phrases target a Focus position at the edge of vP, the standard assumption is that in French non-fronted wh-phrases, like *où* ‘where’ in (1-b), are in situ, (Chang, 1997; Boucher, 2010). As can be seen in (1), only wh-fronting triggers subject auxiliary inversion, (1-a). The latter is not obligatory in modern-day colloquial French, at least for some speakers. Low wh-phrases are very productive (see discussion in Chapter 9.1.1), but there are two structural restrictions: they are not licensed in embedded contexts, (2), and cannot surface in the scope of the negation, (4). The most common explanation in the literature is that French wh-in-situ do not undergo movement, not even at LF, and hence must have their wh-features checked by the matrix CP, which is blocked by a scopal element, like a negation, or an embedded C intervening (Bošković, 1998; Cheng and Rooryck, 2000).[1] Bošković (1997); Bošković and Takahashi (1998) and Mathieu (1999) argue that in examples like (3), the wh-phrases is licensed as the embedded clause is a nonfinite TP.

(1) a. **Où** va-s-tu? **French**
where go-PRS.2SG-2NOM.SG
'Where are you going?'

b. Tu vas **où**?

(2) *Marie pense que Sami a achet-é **quoi**? **French**
Mary think.PRS.3SG COMP Sami have.PRS.3SG buy-PST.PTCP what
'What does Marie think that Sami bought?'

(3) Jean a pens-é [$_{TP}$ de faire **quoi**]?
Jean have.PRS.3SG think-PST.PTCP COMP do.INF what
'What did Jean think about doing?'

(4) *Jean ne mange pas **quoi**? **French**
Jean NEG eat what?
'What doesn't Jean eat?'

Brazilian Portuguese also displays CIwh-phrases and (some degree) of optionality in wh-fronting (Kato, 2003, 2013), as can be seen in (5). Unlike French, CIwh-phrases in Brazilian Portuguese are not limited to matrix contexts, (6), and are felicitous in the scope of the negation, (7).

[1]Recent experimental work–still in progress–by Baunaz, Bocci, and Shlonsky (pers. comm.), however, seems to suggest that in modern-day French the wh-phrase is insensitive to negation and 'embedded C' as interveners.

(5) a. **Quem** (que) você viu? **Brazilian Portuguese**
who that you saw
'Who did you see?

b. Você viu **quem**?
you saw who
'Who did you see?'

(Kato, 2013, p. 178)

(6) a. Maria pensa que Jõao comprou **o quê**? **Brazilian Portuguese**
Mary thinks that John bought what
'What does Mary think that John bought?'

b. Maria não sabe se o João encontrou **quem** ?
Mary not knows if the John found who
'Who does Mary not know if John found?'

(Kato, 2013, p. 180)

(7) O João não come **o que**? **Brazilian Portuguese**
Joan not eat what
'What doesn't Joan eat?'

(Kato, 2013, p. 181)

Given these differences with French, Kato (2003) argues that wh-phrases in Brazilian Portuguese are not in situ, but rather target a Focus position at the edge of vP. This position is situated in an area rich in A'-elements, known as the Low Left Periphery (Belletti, 2004), in (8). This is further supported by the fact that wh-phrases can co-occur with Topics, which can precede or follow the wh-phrase, as in (9).

(8) [$_{TP}$ [$_{TopP}$ [$_{FocP}$ wh-phrase [$_{TopP}$ [$_{vP}$ [$_{VP}$ ~~wh-phrase~~ ]]]]]]

(9) a. João tinha restituído **que livro** *para a Maria*? **Brazilian Portuguese**
Joao had returned which book to Maria
'Which book had John returned to Maria?'

b. João tinha restituído *para a Maria* **que livro**?

(Kato, 2013, p. 198)

Kato (2013) then argues that Brazilian Portuguese does not display long wh-movement anymore. All movement is short movement to FocP in the LLP. Moreover, inspired by Miyagawa's (2001) analysis of Japanese wh-in-situ, Kato argues that the interrogative Q-operator in CP, which is silent in BP, does not check wh-features. The features of the wh-phrase are checked in FocP in the LLP. Consequently, there is no further movement of the wh-phrase, nor any Agree relation between the interrogative head in the CP domain, or High Left Periphery (HLP) and the clasue internal wh-phrase. Kato (2013) does not discuss how the scope of the wh-phrase is calculated. On the other hand, the seemingly wh-fronting cases, like (10), are actually the result of inverse cleft constructions, where the copula and the complementizer have been deleted. The derivation for (10) would thus be the one sketched in (11-b), whereby the wh-phrase *o que* undergoes movement to FocP in the LLP. Then, the copula and the complementizer get deleted, (11-b).

(10) **O que** Maria a comprou? **Brazilian Portuguese**
what Maria has bought
'What has Maria bought?'

(11) a. $[_{ForceP}$ $[_{TP}$ é $[_{FocP}$ $[_{vP}$ $[_{VP}$ $[_{ForceP}$ que $[_{vP}$ a Maria $[_{VP}$ comprou o que ]]]]]]]]

b. $[_{ForceP}$ $[_{TP}$ é $[_{FocP}$ o que $[_{vP}$ $[_{VP}$ ~~que~~ $[_{TP}$ a Maria comprou ~~o que~~ ]]]]]]

Kato (2013, 2020) argues that this is the result of a diachronic change, which is also witnessed in Québec French: the ”fronted” wh-phrase has been grammaticalized to an inverted cleft construction and is now a mere stylistic variant.

### 5.1.1 CIwh-phrases in northern Italian languages

Non-fronted wh-phrases are very common in northern Italian languages. Bellunese (a Venetan language), for example, disallows fronting of bare wh-phrases (Munaro, 1999), (12), whereas D-linked wh-phrases cannot surface clause-internally (13). The Lombard variety spoken in La Strozza Valle Imagna (Lombardy), on the other hand, displays optionality (Manzini and Savoia, 2007): the wh-phrase can surface clause-internally or fronted (14-a)-(14-b). Moreover, it is possible to spell out both copies (14-c). No differences in interpretation are reported.

(12) a. A-tu parecià **che**? **Bellunese**
have-you2PS prepared what
'What did you prepare?'

b. ***Che** à-tu parecià? (Adapted from (Munaro, 1999, p. 50))

(13) a. *A-tu sièlt **che vestito**? **Bellunese**
have-you2PS chosen what dress
'What did you prepare?'

b. **Che vestito** à-tu sièlt?

(Munaro, 1999, p. 14))

(14) a. **ki** tʃamet? **La Strozza Valle Imagna**
who you.call
'Who are you calling?'

b. tʃamet **ki**?

c. **ki** tʃamet **ki**?

(Manzini and Savoia, 2007, p. 16))

Unfortunately, Manzini and Savoia (2007) do not discuss the derivation of examples like (14), on which we can only speculate. However, the next section will discuss another northern Italian language that displays optionality in wh-fronting: Trevisan.

#### 5.1.1.1 Optionality in wh-fronting in Trevisan

Tevisan, or Trevigiano, is a Venetan Language, spoken in the Italian town Treviso. Similarly to French and the Lombard variety spoken in La Strozza, Trevisan displays optionality in wh-fronting. In (15), the wh-phrase *chi* 'whom' can either appear fronted (15-a) or clause-internally (15-b). Bonan (2018, 2019) reports that there is no semantic or pragmatic difference between the two word orders.

(15) a. **Chi** ga-tu catà? **Trevisan**
who have-cl2PS met
'Who have you met?'

b. Ga-tu catà **chi**?

(Bonan, 2019, p. 15)

Bonan argues that wh-phrases like *chi* in (15-b) are not in situ, but rather have moved to a clause-internal position in Belletti's LLP, making use of two crucial pieces of evidence: word order and subject clitic inversion. The unmarked word order in Trevisan is DO-IO (16), yet in (17), the IO wh-phrase *a chi* 'to whom' surfaces to the left of the DO *i pomi* 'the apples'.

(16) a. Ghe go dato i pomi$_{DO}$ a Gianni$_{IO}$. **Trevisan, DO>IO**
DAT have$_{1PS}$ given the apples to John
'I gave the apples to John.'

b. *Ghe go dato a Gianni$_{IO}$ i pomi$_{DO}$.

(Bonan, 2019, p. 61-62)

(17) a. Ghe ga-tu dato **a chi**$_{IO}$ i pomi$_{DO}$? **Trevisan, whIO>DO**
DAT have-you given to whom the apples
'I gave the apples to John.'

b. *Ghe ga-tu dato i pomi$_{DO}$ **a chi**$_{IO}$?

(Bonan, 2019, p. 62)

Furthermore, Trevisan questions obligatorily display subject clitic inversion, (18-b), as opposed to the declarative counterpart in (18-a). As it can be seen in (15-a), the question with the wh-phrase surfacing clause-internally triggers subject clitic inversion (15-b), just like wh-fronting (15-a).

(18) a. Ti te ga zà senà. **Trevisan**
you cl2PS have already had.dinner
'You already had dinner.'

b. Ti ga-tu zà senà?
you have-cl2PS have already had.dinner
'Have you had dinner already?'

(Bonan, 2019, p. 14)

To recapitulate, based on this evidence from word order and subject clitic inversion, Bonan (2019) argues that wh-phrases like *chi* in (15-b) are not in situ. Following Belletti (2004, 2006) and Kato (2013), she proposes that Trevisan wh-phrases move from their base position to FocP in LLP, in what she defines *Wh-to-Foc* movement, as outlined in (19). The original LLP proposed by Belletti (2004) is repeated in (20).

(19) $[_{TP}\ [_{TopP}\ [_{FocusP}$ wh-phrase $[_{TopP}\ [_{vP}\ [_{VP}$ ~~wh-phrase~~ ]]]]]]

(20) $[_{TP}\ [_{TopP}$ Topic $[_{FocusP}$ Focus $[_{TopP}$ Topic $[_{vP}\ [_{VP}$ ]]]]]] **Belletti's LLP**

Following Horvath's (1986) claim that if a language possesses a position for Contrastively-Focused constituents, that position must also be available for wh-phrases, Bonan (2018, 2019) argues that FocP is targeted by both wh-phrases and Contrastive Focus. In (21), we see that the Contrastive Focus *a Toni* 'to Toni'[2] can either occur to the left (21-a) or to the right (21-b) of the DP *el to libro* 'your book'. Bonan assumes that in (21-a), *a Toni* has undergone focus-movement to FocP in the LLP. On the other hand, in (21-b) *a Toni* is focalized in situ. An alternative possibility, not discussed by Bonan (2019), is that in both examples *a Toni* is in FocP in the LLP, and the DO *el to libro* 'your book' is a Topic. In Belletti's LLP (20), Topics can occur above or below the unique FocP.

(21) I me gà dito che te ghe gà prestà el to libro a Piero.
they me have told that $cl_{2PS}$ DAT have lent the your book to Piero
'I've been told you lent your book to Piero.'

a. No, ghe gò prestà A TONI el libro, no a Piero.
No, DAT $have_{1PS}$ lent TO TONI the book, not to Piero.
'No, I lent the book TO TONI, not to Piero.'

[2] A note of caution is necessary here. As I have mentioned in Chapter 3, in the literature the term "Contrastive Focus" is often used as an umbrella term, which also includes corrective focus. I believe that *a Toni* 'to Toni' in (21) is, in fact, a corrective focus, not a Contrastive Focus. Corrective Focus expresses a contrast across utterances and the background of the Focus-containing utterance is a repetition of the background of the corrected assertion, which is exactly what happens in (21). See Chapter 3 and Bianchi (2013) and Bianchi et al. (2015) for a discussion of the difference between the two constructions.

b. No, ghe gò prestà el libro A TONI, no a Piero.

(Bonan, 2019, p. 110)

If wh-phrases and Contrastive Focus target the same position, it follows that they must be mutually exclusive. Unfortunately, Bonan does not report examples of the incompatibility of wh-phrases and Contrastive Focus within one periphery. She only reports an unacceptable example with a fronted wh-phrase and a clause-internal Contrastive Focus, (22). We can only assume that the mutual exclusion of these two A'-elements in (22) implies their mutual exclusion within the same periphery as well.

(22) a. ??Cuando ghe ga-tu dato I POMI a Gianni?
when DAT have-cl$_{2PS}$ given THE APPLES a Gianni
'When did you give the apples to Gianni?

b. ??Cuando ghe ga-tu dato I POMI a Gianni?' (Bonan, 2019, p. 178)

Trevisan CIwh-phrases are felicitous inside islands, signalled in red parentheses in (23), while having matrix scope. This led Bonan to conclude that CIwh-phrases are clause-bound and do not move further up than the 'most local' LLP.

(23) **Context**: A friend of yours went to the animal fair last weekend, as he does every year. He's a cattle raiser who attends the fair just to bid and try to buy the heaviest pig and usually succeeds. You meet him at the bar and ask:

a. Eora, te ga comprà [ un porsel che pesa **cuanto** ] ?
so, CL.2SG have bought a pig that weighs how.much
'What is the weight of x, where x is a pig and you bought x?'

(Bonan, 2019, p. 194)

The matrix scope of the wh-phrase, in (23), is obtained by movement of a silent Q particle à la Cable (2010), which Bonan argues is adjoined to all Trevisan wh-phrases. Let's unpack the derivation for (15), repeated below in (24).

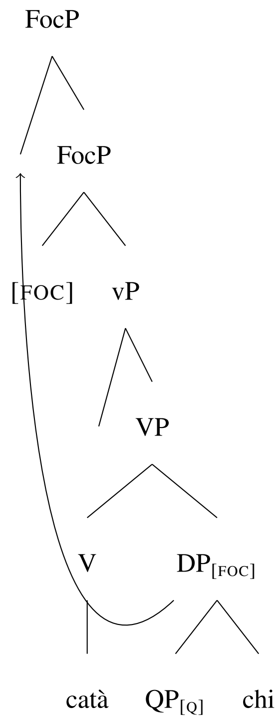
(24) a. **Chi** ga-tu catà?
who have-cl2PS met
'Who have you met?'

b. Ga-tu catà **chi**?

(Bonan, 2019, p. 15)

Every wh-phrase in Trevisan carries a [FOC] feature and has a silent Q particle adjoined to it, as in (25). FocP in the LLP always hosts a [FOC] feature, thus attracting the wh-phrase *chi*, which pied-pipes the adjoined QP (Cable, 2010).

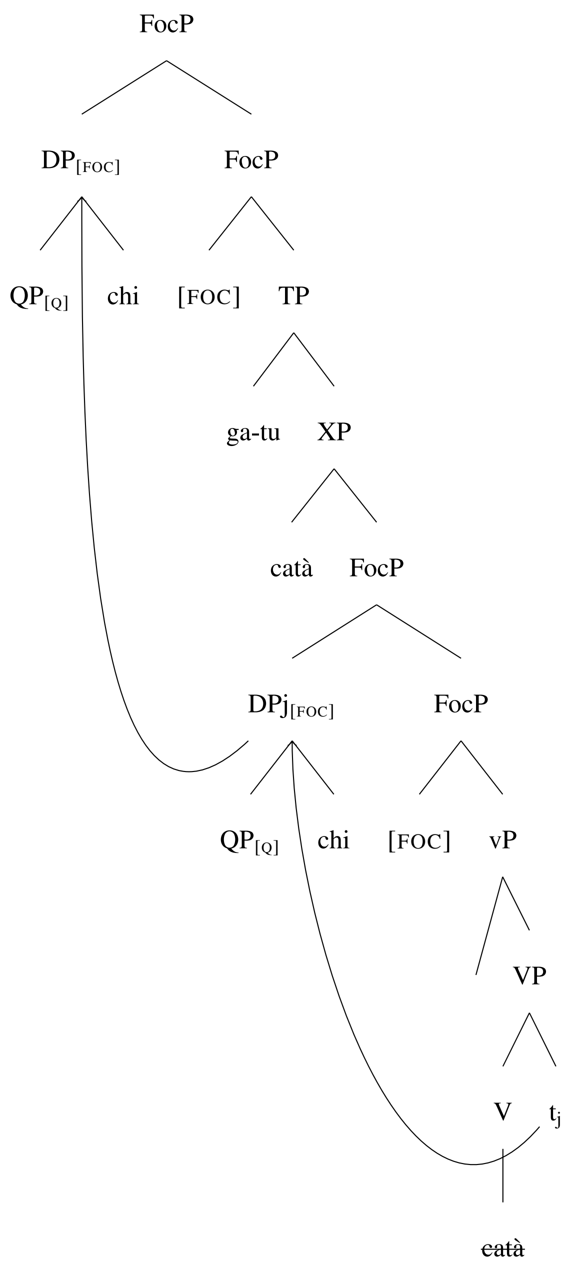
(25)




On the contrary, FocP in the HLP either hosts a [FOC] or a [Q] feature. A [FOC] feature will attract the entire wh-phrase, as in (26),[3] which will result in wh-fronting, as in (24-a).

[3]The past participle *catà* also moves out of vP, pace Schifano (2018) a.o. and the ValPa patterns discussed in Chapter 3.

(26)

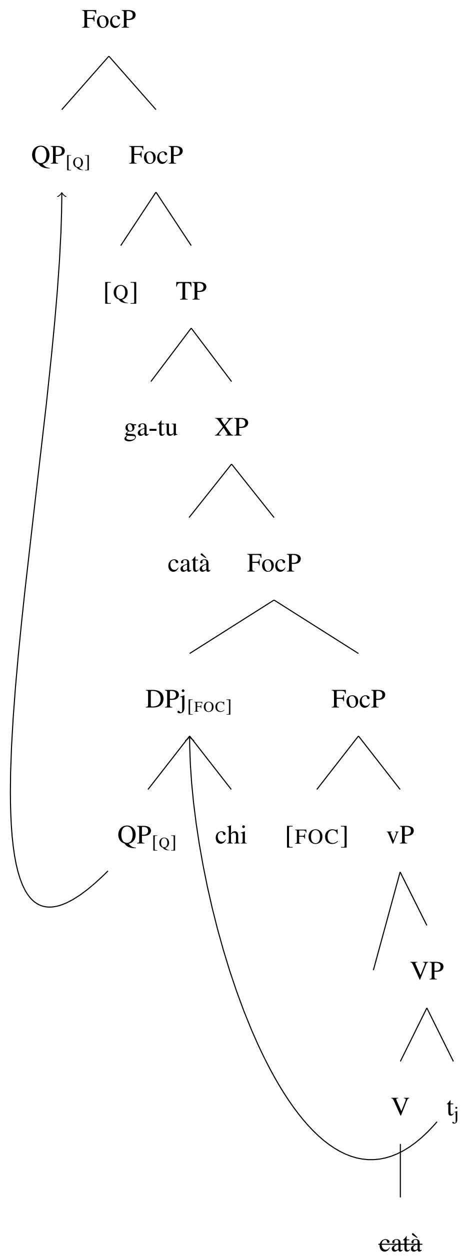



If, on the other hand, FocP in the HLP carries a [Q] feature, only the adjoined silent QP moves to the HLP, leaving the wh-phrase *chi* 'who' frozen in the LLP.[4] This derives the order in (24-b) and is shown in (27).

[4] Bonan (2019) notes that sub-extraction in (27) is not problematic. When wh-phrases move to criterial positions, sub-extraction is felicitous (Rizzi, 1997; Rizzi and Shlonsky, 2007; Bonan, 2019). See also Bošković (2021) on evidence against the freezing ban more in general.

There are two main takeaways from Bonan's (2019) account. First, the lowest leg of movement to the LLP is obligatory: driven by a [FOC] feature in the head of FocP, wh-phrases move to Spec,FocP in the LLP. The different word-orders, fronted vs clause-internal, are established by the feature hosted in FocP in the HLP: the [FOC] feature forces fronting of the whole wh-phrase, which pied-pipes QP, while a [Q] feature only drives movement of QP, leaving the wh-phrase in the LLP. The optionality is thus only apparent and Trevisan in fact displays structural ambiguity, which depends on the feature hosted in FocP in the HLP.

(27)




## 5.2 Low wh-phrases in multiple wh-fronting languages

Serbo-Croatian (SC), Romanian, and Bulgarian, allow multiple wh-phrases (Bošković, 2002; Franks, 2017; Rudin, 1988) and it is obligatory for all of them to move to FocP in the HLP, (28). Bošković (1999, 2002) argues that the head of FocP in the HLP hosts an attract-all-F feature, forcing movement of all elements carrying a Focus feature, like bare wh-phrases (Bošković, 1999, 2002).

(28) a. **Ko šta** kupuje? **Serbo-Croatian**
who what buys
'Who buys what?'

b. ***Ko** kupje **šta**?

(Bošković, 2002, p. 355)

(29) a. ***Koj** e kupil **kakvo**? **Bulgarian**
who is bought what
'Who bought what?'

b. **Koj kakvo** e kupil?

(Bošković, 2002, p. 355)

(30) a. ***Cine ce** a adus **unde**? **Romanian**
who what has bought where
'Who bought what where?'

b. **Cine unde ce** a adus?

(Bošković, 2002, p. 370)

Bošković (2002) argues that the only exception to multiple wh-fronting are cases of homophonous wh-phrases. In such cases, spelling out the second wh-phrase clause in the clause-initial position is impossible (31-a)-(31-b).[5]

[5]Note that such restrictions are not the result of Superiority, as SC only exhibits Superiority effects in certain contexts, such as embedded clauses, long-distance movement, and questions with an overt complementizer, but not in null complementizer matrix question, like the examples reported here. See (Bošković, 2002) for further details.

(31) a. **Šta** oslovjava **šta**? **Serbo-Croatian**
what conditions what
'What conditions what?'

b. ***Šta šta** oslovjava?

(Bošković, 2002, p. 364)

The restriction is a purely phonological one, as inserting an adverb between the two wh-phrases interrupts the sequence of homophonous wh-phrases, hence avoiding the violation (32-a).[6]. In this case, spelling out the lower copy of the chain is impossible (32-b). Similar data is reported for Bulgarian; I refer the reader to Bošković (2002) for the paradigm.[7]

(32) a. **Šta** neprestano **šta** oslovjava? **Serbo-Croatian**
what constantly conditions what
'What constantly conditions what?'

b. ***Šta** neprestano oslovjava **šta**?

(Bošković, 2002, p. 364)

Bošković (2002) claims that at PF, just like at LF, there is a strong preference to pronounce

[6]This statement is, however, an issue for an attract-all-F analysis, where the Foc head attracts all wh-phrases as multiple specifiers. If the two *šta* in (31) are multiple specifiers of a single Foc head in the HLP, then how is it possible that an adverb can occur in between? The only possibility is that that adverb is also focalized and hence itself in one of the several Spec,FocP

[7]Recent work by Roscoe and Thoms (in press) argues that, at least in Bulgarian, the restriction on homophonous wh-phrases is a mere illusion and follows from the distinction between D-linked and non-D-linked wh-phrases. The authors argue that there are multiple positions for D-linked wh-phrases, which allows for multiple wh-fronting of some wh-clusters. This is following Krapova and Cinque (2008), who argue that the Bulgarian CP domain has three separate positions for wh-phrases: an iterable clitic-resumed position for D-linked wh-phrases, an iterable non-clitic-resumed position for D-linked wh-phrases, and a position for bare wh-phrases. Therefore, the reason why it looks like sequences of homophonous wh-phrases are banned is that a subset of wh-phrases target the non-iterable non-D-linked position, which can only enter an Agree relation with one goal, following the Principle of Minimal Compliance (Richards, 1997; van Urk, 2015). This goal will then undergo movement, whereas subsequent goals will be ignored by the probe, and multiple fronting becomes impossible. It is unclear if this analysis can generalize to Romanian and SC entirely, but if it does that it presents a serious challenge to the analysis proposed in Bošković (2002).

the head of the chain, namely the highest copy, in SpecFocP on the HLP. Yet, a lower copy in the given chain can be pronounced instead ”iff pronunciation in the head position would lead to a PF violation, provided that the violation can be avoided by pronouncing the lower member of the chain” (Bošković, 2002, p. 368). The sentence in (31-a) would thus have the derivation in (33). Recall that SC does not display superiority effects in matrix clauses, therefore the crossing paths in (33) are not an issue.

(33) Šta$_i$ ~~šta$_j$~~ oslovjava ~~šta$_i$~~ šta$_j$ ?

Bošković (2002) also discusses Romanian, a language in which fronting is obligatory for all wh-phrases, even in echo questions (34) (Comorovski, 2013). Just like SC and Bulgarian, Romanian disallows sequences of homophonous wh-phrases (35).

(34) a. *Ion a adus CE? **Romanian**
Ion has brought what
'Ion has bought WHAT??'

b. CE Ion a adus?

(Bošković, 2002, p. 370)

(35) a. **Ce** precede **ce**? **Romanian**
what precedes what
'What precedes what?'

b. ***Ce ce** precede?

(Bošković, 2002, p. 365)

Further support against an in-situ analysis comes from the fact that Romanian wh-phrases that surface low can license parasitic gaps. In (36-a), the low *ce* 'what' licenses the parasitic gap in the adjunct clause. As discussed in Chapter 4, parasitic gaps can only be licensed by overt A'-movement (Engdahl, 1983; Postal, 1993; Nunes, 2004). This led Bošković (2002) to argue that the low *ce* 'what' in fact undergoes focus-fronting in narrow syntax, hence licensing the parasitic gap, as in (36-b). However, the ban on sequences of homophonous wh-phrases disallows the pronunciation of the head in the chain, and the lower copy is pronounced instead. This way the derivation does not incur any PF violations.

(36) a. **Ce** precede **ce** [fără să influenţeze *pg*]? **Romanian**
what precedes what without SUBJ.PART influences
'What precedes what without influencing?'

b. Ce ~~ce~~ precede **ce** [fără să influenţeze *pg*]?

(Niinuma, 2010, p. 163)

A ban on sequences of homophonous wh-phrases is not the only constraint that will prompt PF to choose to pronounce a lower copy of the chain in these languages. As (Bošković, 2002; Franks, 2017) and Elena Soare (pers. comm.) argue, in Romanian it is licit to spell out the lower copy of a wh-chain in order to avoid an island violation, as in (123). Note that, Bošković (2002) does not argue that islands are a PF phenomenon, but rather that the violation occurs in narrow syntax, but the construction is saved by phonologically realizing a copy within the island. Bošković briefly states that one way to address this is by assuming that realization of a lower copy of the chain removes the star assigned to higher copies which have violated locality conditions (Chomsky and Lasnik, 1993).

(37) a. Ion a ausit [ zvonul că Petru a cumpărat CE ] ? **Romanian**
Ion has heard the-rumor that Petru has bought what
'Ion has heard the rumor that Petru has bought what?'

b. *CE Ion a ausit [ zvonul că Petru a cumpărat]?

(Bošković, 2002, p. 374)

Unlike the Romance languages discussed earlier in this chapter, SC, Bulgarian, and Romanian do not display optionality in wh-fronting: wh-phrases *must* be fronted. Yet, a lower copy of the wh-chain can be spelled out in order to avoid a PF violation, like the one on sequences of homophonous wh-phrases, or to ameliorate island violations. The key takeaway is that while the preference is to spell out the head of the chain, the grammar does permit–in some circumstances–the pronunciation of a lower copy. This means that post-syntactic constraints 'have a say' in the realization of a wh-chain and can, in fact, force the pronunciation of a lower copy, which on the surface might look like overruling obligatory wh-fronting imposed by the syntax. This narrow syntax-PF interaction will be relevant for the analysis put forth for ValPa CIwh-phrases, especially for the discussion on island amelioration in Chapter 10 and the interaction with prosody in Chapter 8.

## 5.3 Non-fronted wh-phrases in SOV languages

Besides Romance and Slavic, the phenomenon of non-fronted wh-phrases is not uncommon crosslinguistically. In this section, I will present data from several SOV languages: Malayalam, Persian, Basque, and Georgian.

### 5.3.1 Malayalam and Persian

In Malayalam, a Dravidian language, the default question formation strategy is wh-clefting (38). However, non-cleft questions are possible, under one strict condition: the wh-phrase must be left-adjacent to the verb, (39-b). Jayaseelan (2001) argues that the word order in (39-b) is the result of the verb staying inside v/VP, and the wh-phrase *ewiTe* 'where' undergoing Focus movement to a Focus position just above vP, as in (40).

(38) nii **entə** aaNə tinn-atə? **Malayalam**
you what is ate-nominalizer
'What is it that you ate?'

(39) a. awan **ewiTe** pooyi? **Malayalam**
he where went
'Where did he go?'

b. ***ewiTe** awan pooyi?

(Jayaseelan, 2001, p. 40)

(40) [$_{\text{TP}}$ awan [$_{\text{FocP}}$ ewiTe$_{j}$ [$_{\text{vP}}$ [$_{\text{VP}}$ pooyi ~~ewiTe$_{j}$~~ ]]]]

In (41) the DO appears to the left of the IO wh-phrase *aar-kkə* 'who'. Jayaseelan (2001) argues that the wh-phrase moves to a FocusP above vP and the DO scrambles to a position situated below T, which in (42) I labeled ObjP.

(41) a. nii aa pustakam **aar-kkə** koDuttu ? **Malayalam**
you that book who-DAT gave
'To whom did you give that book?'

b. nii **aar-kkə** aa pustakam koDuttu ?

(Jayaseelan, 2001, p. 40)

(42) $[_{TP}$ nii $[_{ObjP}$ aa pustakam$_j$ $[_{FocP}$ aar-kkə$_k$ $[_{vP}$ ~~aar-kkə~~$_k$ $[_{VP}$ koDuttu ~~aa pustakam~~$_j$ ]]]]]

Multiple wh-phrases are possible in this language, (43) and all must surface left-adjacent to the verb, cf. (43-a) and (43-b). However, the wh-phrases cannot be freely ordered, (44). In other words, we see superiority effects. Jayaseelan (2001) does not give an explanation of how exactly the movement happens, although he mentions two possibility: either there are multiple Focus projections above vP or FocusP allows more adjunctions. Given the limited data available in Jayaseelan (2001) and subsequent papers (see e.g. Jayaseelan (2008)), it's hard to speculate more on the phenomenon.

(43) a. [ii kaaryam **aarə aar-ooDə eppooL** paRaññu ennə] eni-k'k'ə aRiy-illa **Malayalam**
this matter who whom-to when said COMP I-DAT know-NEG
'I don't know who told this matter to whom, when.'

b. *[**aarə** ii kaaryam **aar-ooDə eppooL** paRaññu ennə] eni-k'k'əaRiy-illa

(Jayaseelan, 2001, p. 59)

(44) a. ii praśn̲am **aarə engin̲e** parihariccu ? **Malayalam**
this probelem who how solved
'Who solved this problem?'

b. *ii praśn̲am **engin̲e aarə** parihariccu ?

(Jayaseelan, 2001, p. 60)

However, unlike Topics, Focus projections are not known for being iterable (Erteschik-Shir, 1997;

Erteschik-Shir, 2006; Horvath, 1986; Bonan, 2019), therefore it is most likely that in (44-a) the wh-phrases are multiple specifiers of FocP, similarly to what has been argued by Bošković (1999, 2002) for some Slavic languages and Romanian, as I discussed in Section 5.2. This means that there is one single projection, FocP, which is targeted by all wh-phrases.

Persian (Indo-Iranian) is another language, where CIwh-phrases, as in (45-b), target a Focus projection just above vP. The unmarked word-order in the language is DO>V>PP (45-a) and definite DOs scramble to a clause-internal position below T. Wh-phrases, on the other hand, surface in an immediate pre-verbal position (45-b). Kahnemuyipour (2001) investigates the position of the wh-phrase with respect to low manner adverbs, like *arum* 'gently'. The finding is that wh-phrases must follow low manner adverbs (45-b).

(45) a. Æli ketab-o arum gozašt ru miz. **Persian**
Ali book-DO gently put.PST on table
'Ali gently put the book on the table.'

b. Æli ketab-o (arum) **koja** (*arum) gozašt
Ali book-DO gently where put.PST
'Where did Ali gently put the book?' (Kahnemuyipour, 2001, p. 50)

(46) [$_{TP}$ Æli [$_{ObjP}$ ketabo [$_{AdvP}$ arum [$_{FocP}$ **koja**$_j$ [$_{vP}$ [$_{VP}$ gozašt ~~ketabo~~ ~~koja~~$_j$ ]]]]]]

Persian is very flexible when it comes to word order, as scrambling is prolific. Therefore, the fact that the word order wh-phrase>ADV is impossible is strong evidence that the wh-phrase targets a dedicated (very low) position. This led Kahnemuyipour (2001) to argue that wh-phrases in Persian target a FocusP just above vP (46),[8] just like in Malayalam.

[8]Here I am simplifying the derivation; for ease of exposition, I am sketching the locative argument wh-phrase *koja* as originating inside VP, based on the fact that locative PPs in declarative clauses surface to the right of the verb, as in (45-a). However, the external merging position of this element is orthogonal to the point being made here

### 5.3.2 Basque

Basque is another language with seemingly non-fronted wh-phrases, whereby focalized constituents, including wh-phrases, must be left-adjacent to the main verbal complex. In (47-a), this is obtained by leftward movement of the subject, whereas in (47-b) this is obtained by rightward movement of the subject. The same holds if the wh-phrase is a DO, as in (48), and when the wh-phrase is an adjunct, as in (49).

(47) a. Jon$_j$ **señek** $\_{j}$ ikusi rau? **Basque**
Jon.ABS who.ERG see.PRF auxPR
'Who saw Jon?'

b. **Señek** $\_{j}$ ikusi rau Jon$_j$?

c. ***Señek** Jon ikusi rau?

(Arregi, 2002, p. 165)

(48) a. Mirenek **séin** ikusi rau? **Basque**
Mirene.ERG who.ABS see.PRF auxPR
'Who has Miren seen?'

b. **Séin** ikusi rau Mirenek?

c. ***Séin** Mirenek ikusi rau?

(Arregi, 2002, p. 166)

(49) a. Jon **nóis** jun san? **Basque**
Jon.ABS when go.PRF aux.PST
'When did Jon leave?'

b. **Nóis** Jon jun san?

---

and in Kahnemuyipour (2001).

(Arregi, 2002, p. 167)

Other focalized constituents, such as New Information Focus, must also occur in pre-verbal position, as in (50). Arregi (2002) argues that the verb-adjacency of the focalized constituents follows from prosodic constraints. In Basque, the prosodic prominence is assigned to an element contained in the XP immediately preceding the verb (for instance in cases of possessives, like *neure ama* 'my mother', the prosodic prominence can fall on the possessive *neure* only and not on the whole DP). As argued by Jackendoff (1972); Reinhart (1995); **?**); Zubizarreta (1998); a.o., focalized element, including wh-phrases, must bear the prosodic prominence, thereby the left-adjacency requirement on focalized constituents and wh-phrases.

(50) Jon ATZO jun san. **Basque**
Jon.ABS yesterday go.PRF aux.PST
'Jon left YESTERDAY.'

(Arregi, 2002, p. 167)

There have been different approaches to wh-question formation in Basque. For instance, Ortiz de Urbina (1994, 1995) proposes an analysis of Focus in Basque which reminds those for V2 cases in German, whereby the focalized constituent moves to the CP domain and the verbal complex further undergoes movement to the C head. The material precedes the focalized element, e.g. *Jon* in (50), is Topicalized and moves to a structurally higher position (Arregi, 2002). Arregi (2002) adopts a different approach, in which all focalized constituents (and thus also wh-phrases) do not undergo any movement, but remain inside the vP/VP, while the other arguments move out, either via left- or via right-dislocation, as in (47) and (48). Recall that Basque is a head-final language, therefore (48-a) would have the derivation in (51). The subject *Mirenek* moves to SpecTP, whose specifier in of the left (cf. Arregi (2002)), and the main verb undergoes head-movement to Asp. This leaves only the wh-phrase *séin* inside VP.

(51) $[_{TP}$ Mirenek $[_{AspP}$ $[_{vP}$ ~~Mirenek~~ $[_{VP}$ **séin** ~~ikusi~~ ]] ikusi rau ]]

Finally, subsequent work by Arregi (2003), as well as more recent work by Duguine and Irurtzun (2014) and Raynaud (2017) suggests that, in fact, wh-phrases in Basque do not remain in situ inside the VP, but rather undergo movement to the CP domain, pace Ortiz de Urbina (1994, 1995), with movement of the inflected verb (composed of V + v + T)[9] to C. This allows us to neatly explain cases of long-distance wh-movement, as in (52).[10]

(52) Nork esan du Jonek [edan duela ~~nork~~ ura]? **Basque**
who.ERG say AUX Jon.ERG drink AUX.COMP water.ABS
'Who did Jon say drank water?'

(Duguine and Irurtzun, 2014, p. 2)

Therefore, the seemingly CIwh-phrases in Basque are fronted, with subsequent head movement of the verbal complex to a projection in the HLP (formerly C), as in other V2 languages.

[9]Therefore in an instance of head movement: V moves to v, which subsequently moves to T. See Ortiz de Urbina (1994, 1995) and Duguine and Irurtzun (2014) for further details of the analysis.

[10]Arregi (2002) proposes a wh-movement derivation for examples like (52). The wh-phrase undergoes movement from its base position in SpecvP of the embedded clause to the periphery of the matrix vP. That is followed by rightward movement of the embedded clause, which is supported by the preference to place complement clauses to the right of the verb, despite Basque being head-final. I refer the reader to Arregi (2002) for the details of the derivation.

### 5.3.3 Georgian

In Georgian, a Kartvelian language spoken in the Caucasus, wh-phrases must occur left-adjacent to the main verb, as in (53). A similar restriction seems to apply to narrow focus as well, as in (54), which can however also occur post-verbally, as in (54-c), unlike wh-phrases (53-c).

(53) a. Bebia **ra-s** a-lag-eb-d-a? **Georgian**
grandma.NOM what-DAT VER-clean-SF-SM-IPFV.3SG
'What did grandma clean?'

b. ***Ras** bebia alagebda?

c. *Bebia alagebda **ras**? (Borise, 2023, p. 184)

(54) a. Guʃin dila-s bebia SAMZAREULO-S **Georgian**
yesterday morning-DAT grandma.NOM kitchen-DAT
a-lag-eb-d-a.
VER-clean-SF-SM-IPFV.3SG
'Yesterday morning grandma cleaned the kitchen.'

b. *Guʃin dilas SAMZAREULOS bebia alagebda.

c. Guʃin dilas bebia alagebda SAMZAREULOS.

(Borise, 2023, p. 186)

Based on this asymmetry, as well as movement diagnostics including crossover effects and island, Borise (2023) argues that, unlike focus constituents, wh-phrases in Georgian do not remain in situ inside the vP.

Looking at the relative position of wh-phrases and mid-clausal adverbs, such as *iʃviatad* 'seldom', Borise (2023) reports that wh-phrases surface to the left of the adverb and so does the verb, as in (55). On the other hand, narrow focus constituents occur to the right of such habitual adverbs, as in (56). Note that in (56), the verb also occurs to the right of the habitual adverb.

(55) Masc'avlebel-i ra raodenob-is st'udent'-s i-dzax-eb-s iviatad?
teacher-NOM **what number-GEN student-DAT** VER-call-SF-PRS.3SG seldom
'What number of students does the teacher seldom call on?'

(Borise, 2023, p. 199)

(56) Masts'avlebel-i iʃviatad SAM-ZE NAK'LEB ST'UDENT'-S i-dzax-eb-s.
teacher-NOM seldom three-on less student-DAT VER-call-SF-PRS.3SG
'The teacher seldom calls on FFEWER THAN THREE STUDENTS.'

(Borise, 2023, p. 199)

Nevertheless, in embedded clauses the wh-phrase can never occur to the left of the complementizer, as exemplified by (57).

(57) Marik'a-s u-nda i-ts-od-es [tu ra (*tu) tkv-a
Marika-DAT VER-want VER-know-SM-3SG COMP.Q what.NOM say-AOR.3SG
Manana-m].
Manana-ERG
'Marika wants to know what Manana said.'

Following these data, Borise (2023) argues that wh-phrases in Georgian move to a dedicated A'-position situated above vP and below TP. This position is, nonetheless, relatively high in the clausal spine, and above the position of habitual adverbs like *iʃviatad* 'seldom'. These temporal adverbs, as shown by Cinque (1999) a.o., are situated in the high adverbial space, just below T (see Chapter 3.2 for a detailed discussion of the adverbial hierarchy). Note, furthermore, that the verb also moves out of the vP/VP, together with the wh-phrase. In (58), I report the derivation for

(53). Here *Bebia* 'grandma' is topicalized (Borise simply puts it in CP in (58)). The wh-phrase *ras* 'what' moves to the specifier of WP and the main verb undergoes head movement to the head of WP.

(58) [$_{\text{CP}}$ Bebia … [$_{\text{WP}}$ ras alagebda [$_{\text{vP}}$ ~~bebia~~ [$_{\text{VP}}$ ~~ras~~ ~~alagebda~~ ]]]]

Wh-phrases, however, do not move past WP which, as Borise (2023) explains, is most likely the reason why in Georgian long wh-movement is impossible, because the wh-phrase does not move to the edge of the embedded clause and therefore cannot undergo successive-cyclic movement to the matrix clause. In these cases, the scope of the wh-phrase is calculated via scope marking (Dayal, 1993; Fanselow, 2006).

## 5.4 Chapter summary

In this chapter, I presented data from several languages that display seemingly non-fronted wh-phrases (some of which also allow some degree of optionality in wh-fronting) and discussed several analyses. There are substantial differences in the analyses put forth for many of the languages presented here. In languages like French, non-fronted wh-phrases remain in situ throughout the entire derivation, which means that they do not even move at LF. Recall that this analysis is motivated by the infelicity of in situ wh-phrases in embedded contexts and in the scope of other scopal elements, such as negation. The scope of the wh-phrase is then calculated via an Agree relation with the interrogative head in the HLP. In this type of language, there is optionality in wh-fronting, strictly speaking: either the wh-phrase is moved to the HLP (in narrow syntax) or it remains in situ all the way through. In Brazilian Portuguese, Québec French, Persian, Malayalam, and Trevisan, the wh-phrase undergoes short focus-movement to FocP in the LLP (Kato, 2013, 2020; Jayaseelan, 1996; Kahnemuyipour, 2001; Bonan, 2018, 2019). Not all authors specify how the scope of the wh-phrase is calculated. For BP, for instance, Kato (2003, 2013) states that the interrogative head in the HLP does not agree with the wh-phrase in the LLP, which furthermore does not undergo any movement at LF. The seemingly fronted counterpart is actually an inverse cleft which has been grammaticalized. In Trevisan, Bonan (2018, 2019) argues that CIwh-phrases undergo focus-movement to FocP in the LLP. The different word orders (fronted VS clause-internal) are established by the feature hosted in FocP in the HLP, which can either be a [FOC] feature, hence driving movement of the wh-phrase, or a [Q] feature, only driving movement of the adjoined QP (QP fronting also establishes the scope). Georgian displays a similar pattern: the wh-phrase targets a dedicated wh-position, whP, which is situated below T (Borise, 2023). The scope of the wh-phrase is calculated via scope-marking (Dayal, 1993; Fanselow, 2006) and there is no optionality. On the other hand, languages like Basque do not have CIwh-phrases 'strictly speaking', but rather fronted wh-phrases with remnant movement of the whole clause to a higher position. Finally, in languages such as Serbo-Croatian, Bulgarian, and Romanian, *all* wh-phrases must undergo focus-movement to the HLP in narrow syntax. There is no optionality in wh-fronting, but pronouncing a lower copy in the chain is possible to avoid PF violations, more specifically, sequences of homophonous wh-phrases, as well as ameliorate island violations. Therefore, the different word orders are accounted for post-syntactically by pronouncing different copies in the chain.

Now that I have discussed previous analyses of clause-internal wh-phrases and optionality in wh-fronting, I have set the foundation for the analysis of wh-movement in ValPa, which will be outlined in the following two chapters. In Chapter 6, I will show that ValPa clause-internal wh-phrases move to the LLP, albeit not to FocP, a finding which will require us to rethink the structure of both peripheries. Chapter 7 will then analyze in detail the movement path of ValPa wh-phrases.

# Chapter 6: Refining the structure of peripheries

At the end of Chapter 4, I demonstrated that CIwh-phrases in ValPa are not in situ, but have moved to a clause-internal position. This position is nonetheless low, as CIwh-phrases surface after low manner adverbs. I therefore concluded that this position must be just above vP. In the previous chapter, I discussed various analyses of clause-internal wh-phrases (Jayaseelan, 1996; Kahnemuyipour, 2001; Belletti, 2006; Kato, 2013; Bonan, 2019). ValPa, therefore, is not unique, and I can now state that ValPa CIwh-phrases target a position in the LLP, similarly to Brazilian Portuguese, Trevisan, Malayalam, Persian, or Georgian. Despite differing in the features responsible for movement and details of the overall derivation, the theories on CIwh-phrases discussed in Chapter 5 all agree on one point: CIwh-phrases undergo focus-movement and target a Focus position just above vP, namely FocP in Belletti's LLP, repeated in (1). This chapter will explore the position targeted by ValPa CIwh-phrases.

(1) $[_{TP}$ $[_{TopP}$ Topic $[_{FocusP}$ Focus/wh-phrase $[_{TopP}$ Topic $[_{vP}$ $[_{VP}$ ]]]]]] **Belletti's LLP**

As discussed in Chapter 5, FocP in the LLP is also targeted by New Information and Contrastive Foci (Belletti, 2004; Kato, 2013; Bonan, 2019). Here, I focus on Contrastive Focus because the other types of Focus discussed in Chapter 3 (Corrective, New Information, and Mirative), are incompatible with questions. Therefore, following Kahnemuyipour (2001); Kato

(2013); Bonan (2019) a.o., makes two precise predictions for ValPa, the first prediction we can formulate is that wh-phrases and Contrastive Focus should be mutually exclusive, because both target the unique Focus projection in the LLP. The second prediction is that Topic should be able to both precede and follow wh-phrases in the LLP. This is precisely what we find in Brazilian Portuguese (Kato, 2013) (see Chapter 5.1).

In this chapter, I will discuss ValPa data showing that these predictions are not borne out (Section 6.1) and that wh-phrases target a dedicated A'-position at the upper end of the LLP. Then, I will discuss the felicitous co-occurrence of wh-phrases and Focus in the CP domain of ValPa (also in Section 6.1), arguing against a wh-as-focus movement analysis. In Section 6.3, I will discuss other issues that arise with wh-as-focus movement analysis in Italian and beyond. Finally, Section 6.4 will present data on D-linked wh-phrases and propose a different analysis for D-linked wh-phrases.

## 6.1 Focus and wh-phrases in the Low Left Periphery

Given the previous theories placing CIwh-phrases in FocP in the LLP. Therefore, the prediction is that ValPa wh-phrases and Contrastive Focus should be mutually exclusive, but that wh-phrases can freely co-occur with Topics in the LLP, which should be able to both precede and follow wh-phrases, as in (1) above.

As discussed in Chapter 3, in ValPa, both Topics and Contrastive Focus can occur in the CP domain and the LLP, as can be seen in (2) and (3) respectively. In these and subsequent examples, Topics are shown in italics and Foci in small caps.

(2) a. *Lo* *pan* l' atsit-o deman.
DET.DEF.M.SG bread CL.ACCM.SG buy-PRS.1SG tomorrow
'The bread, I will buy it tomorrow.'

b. L'atsito deman *lo pan*.

(3) a. À TCHEUNNE dz' ì baill-à lo livro, pò à
TO TCHEUNNE CL.NOM.1SG have.PRS.1SG give-PST.PTCP the book NEG to
Ivana.
Ivana
'TO TCHEUNNE I gave the book, not to Ivana.'

b. Dz'ì baillà TO TCHEUNNE lo livro, pò à Ivana.

CIwh-phrase and Topics freely co-occur in the ValPa LLP, yet the order is not free: the CIwh-phrase must precede the topicalized constituents, regardless of their category (4), (5), and (6). The coexistence with Topics was expected, as the latter target different projections.

(4) a. Te 'llei 'll-i **dequé** *ì* **wh>Top**
CL.NOM.2SG CL.DAT.3SG read-PRS.2SG what to.DET.DEF.M.SG
*gosse*?
child
'What will you read to the child?'

b. *Te 'llei 'lli ì gosse **dequé**? ***Top>wh**

(5) a. Adon, te lo baill-e **à qui** **wh>Top**
so CL.NOM.2SG CL.ACC.M.SG give-PRS.3SG to whom
*lo* *pan*?
DET.DEF.M.SG bread
'To whom will you give the bread?'

b. *Adon, te lo baille *lo pan* **à qui**? ***Top>wh**

(6) a. Te lei va **quan** *ì* *martsà*? **wh>Top**
CL.NOM.2SG CL.LOC go.PRS.2SG when at.DET.DEF.M.SG market

'When are you going to the market?'

b. *Te lei va *ì martsà* **quan**? ***wh>Top**

Provided the right context, CIwh-phrases and Contrastive Focus can co-occur in the LLP (7). When they co-occur, their order is fixed: the wh-phrase must precede the Contrastive Focus (7-a), henceforth abbreviated as CF in the examples. The co-occurrence of wh-phrases with both Topics and Contrastive Focus within the same clause is allowed, and the order is once again fixed: the wh-phrase must precede all A'-elements in the LLP, (7).

(7) **Context**: You have two cousins, Sara and Maria. While you are very fond of Sara, your parents strongly prefer Maria. During a dinner, they keep talking about how they want to gift Maria a flaming red mountain bike for Christmas. You know that they will still buy Sara a gift, even though it will not be as magnificent, so a little annoyed, you utter:

a. | E | no | regal-en | **dequé** | À | SARA? | **wh>CF** |
|---|---|---|---|---|---|---|
| and | CL.NOM.1PL | gift-PRS.3PL | what | TO | SARA | |

'And to Sara what do we get as gift?'

b. *E no regalen À SARA dequé? ***CF>wh**

(8) **Context**: Your friend Nicole is telling you that she keeps reading to her kid two books that Nicole's sister got her for Christmas. One book is about a unicorn and the other about a bear that goes to the sea. The books do look like they have been read a lot. Next to them, you see the book that you gifted her: it looks as good as new, so you take it and ask her:

a. E te ‘llei ‘ll-i **quan** CI LIVRO *ì gosse*? **wh>CF>Top**
and CL.NOM.2SG CL.DAT.3.M.SG read-PRS.3SG when DEM.M.SG book to.DET.DEF.M.SG child
‘And when do you read THIS BOOK to the child?’

b. E te ‘llei ‘lli **quan** *ì gosse* CI LIVRO ? **wh>Top>CF**

c. *E te ‘llei ‘lli CI LIVRO **quan** *ì gosse*? ***CF>wh>Top**

d. *E te ‘llei ‘lli *ì gosse* **quan** CI LIVRO ? ***Top>wh>CF**

e. *E te ‘llei ‘lli CI LIVRO *ì gosse* **quan**? ***CF>Top>wh**

The evidence presented thus on the co-occurrence of CIwh-phrases and Contrastive Focus in ValPa is surprising given previous claims in the literature (Rizzi, 1997; Rizzi and Bocci, 2017). However, it is necessary to prove that the Topic and Focus in the previous examples are indeed displaced to the LLP and not surfacing in-situ. To test this, I will resort to two diagnostics: word order and weak crossover effects. Recall that the unmarked word order in ValPa is the one reported in (9).

(9) S > Aux > V > DO > IO > $\text{ADV/PP}_{\text{loc}}$ > $\text{ADV/PP}_{\text{time}}$

Looking at (8), we see that the word order in the first example (8-a) is the same as the unmarked one, $\text{DO}_{\text{Topic}}>\text{IO}_{\text{CF}}$, and therefore not useful for diagnosing movement. However, in (8-b), the order is the reverse: $\text{IO}_{\text{CF}}>\text{DO}_{\text{Topic}}$. This is evidence that the Topic at least is not in base position. Now consider a parallel example to (8), but in which the IO *ì gosse* ‘to the child’ is the Contrastive Focus and the DO *mon livro* ‘my book’ the topic, namely (10).

(10) **Context**: Your friend Nicole is telling you that she keeps reading to her mom the book

that you gifted them for Christmas *One Thousand and One Nights*. However, you gifted it to them in the hope that they would read it to the kid, not her mom, so you ask:

a. E te lo 'll-i **quan** **wh>Top>CF**
and CL.NOM.2SG CL.ACC.3.M.SG read-PRS.3SG when
*m-on livro* ì GOSSE?
POSS.1SG-M.SG book to.DET.DEF.M.SG child
'And when do you read my book TO THE CHILD?'

b. E te lo 'lli **quan** ì GOSSE *mon livro* ? **wh>CF>Top**

c. *E te lo 'lli *mon livro* **quan** ì GOSSE? ***CF>wh>Top**

d. *E te lo 'lli ì GOSSE **quan** *mon livro* ? ***Top>wh>CF**

e. *E te lo 'lli *mon livro* ì GOSSE **quan**? ***CF>Top>wh**

The fact that in (10-b) we get the $IO_{CF}$>$DO_{Topic}$ word order, which differs from the default word order in (9), suggests that the Focus is not focalized in situ inside the VP. In Belletti's LLP, there are Topic positions on either side of the unique Focus position, and therefore both orders Top>CF in (10-a) and CF>Top in (10-b) are expected.

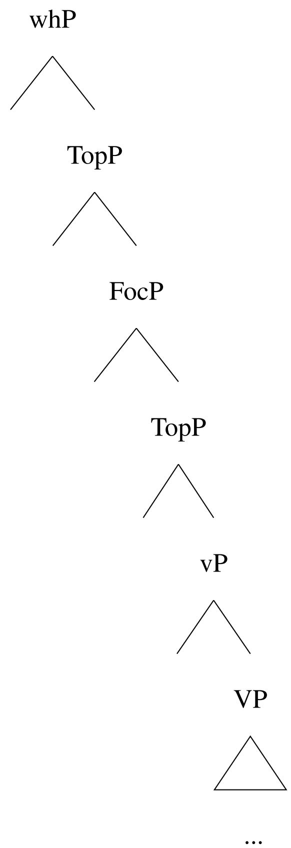
Next, clause-internal focalized constituents trigger weak crossover effects. In (11), it is not possible to have co-reference between *Beppe* and the possessive. The arising of weak crossover effects and the word order being different from the default word order in unmarked contexts is proof that À BEPPE in (11) is not in situ. Topicalized elements are known for not triggering weak crossover effects (Lasnik and Stowell, 1991; Bruening, 2022), which is exactly what we find in ValPa, (12). This might be because Topic-movement is not sensitive to crossover effects or because Topics are base generated in the LLP in ValPa, but I leave this open for future research. Yet, if contrastively-focalized elements are displaced to the LLP, then in any situations where a topicalized constituent surfaces to the left of the Contrastive Focus, as in (10-b), is to be assumed that the Topic is not inside VP, but has been displaced to the LLP.

(11) No baill-en À BEPPE$_j$ s-on$_{k/*j}$ livro (pò à Tcheunne).
NOM.1PL give-PRS.1PL to Beppe POSS.3SG-M.SG book NEG to Tcheunne
'We will give his book to Beppe (not to Tcheunne).'

(12) No 'lli baill-en *à Beppe*$_j$ s-on$_{k/j}$ livro .
NOM.1PL CL.DAT.3SG give-PRS.1PL to Beppe POSS.3SG-M.SG book
'We will give his book to Beppe.'

Back to our discussion on the position of Topics and Contrastive Focus in the language, the evidence from word order and weak crossover effects points to the direction of Topics and Contrastive Focus surfacing in the LLP and not within VP. Therefore, the predictions outlined at the beginning of the chapter are not borne out, and the structure of the LLP proposed by Belletti (2004) and Bonan (2019) is untenable for ValPa. CIwh-phrases and Contrastive Focus can co-occur in the ValPa LLP. However, CIwh-phrases must precede all other A'-elements in the LLP, which suggest that they target a dedicated position, in the upper end of the periphery, as in (13). The structurally lower FocP is, on the other hand, targeted by contrastively-focalized elements. See Section 6.5 for a discussion of the position of different types of Foci.

(13) **The revised structure of the LLP**

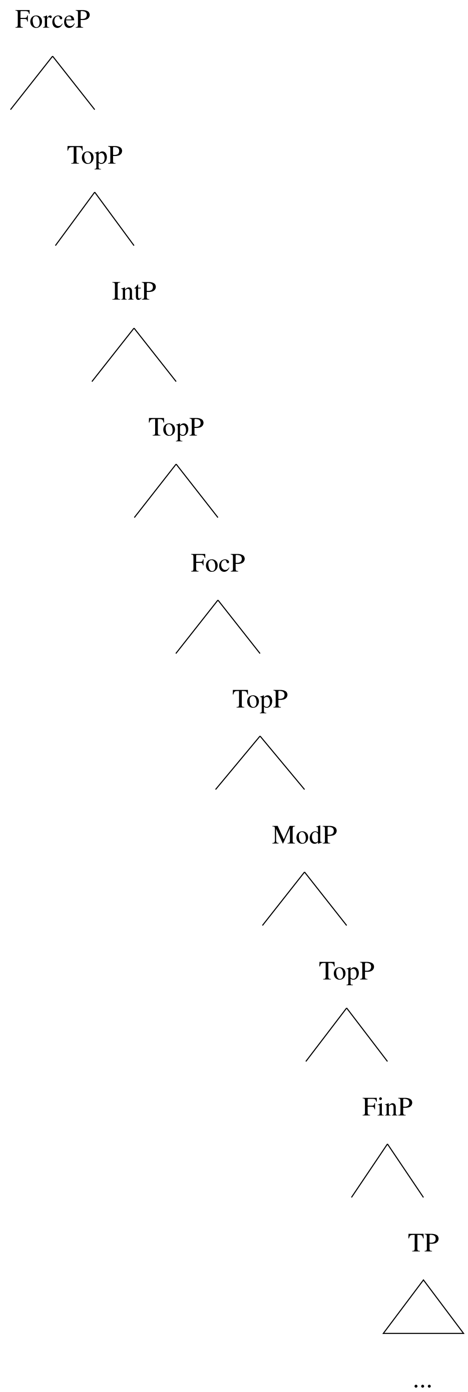



Therefore, the data discussed so far shows previous theories on CIwh-phrases (Jayaseelan, 1996; Kahnemuyipour, 2001; Belletti, 2006; Bošković, 1999; Kato, 2013; Bonan, 2019) to be untenable for ValPa. ValPa CIwh-phrases do not target a Focus projection, but rather a dedicated A'-position at the higher end of the periphery, here labeled whP. Two questions arise at this point: is the existence of a dedicated whP limited to the ValPa LLP or does it extend to the high left periphery (the CP domain)? Is this a peculiarity of ValPa or does it extend to other languages? Sections 6.2 and 6.3.1 will address these questions.

## 6.2 Wh-phrases and Focus in the high left periphery

Following Bresnan's (1970) claim that every clause comprises a CP, cartographers have argued that every clause contains a CP projection. This contrasts with researchers who claim that clause sizes vary (see Lohninger and Wurmbrand (2020) and Doherty (1996) a.o.). CP is responsible for clause typing (Cheng, 1997) and hosting complementizers, like English *that*. Rizzi (1997) expanded on this proposal, arguing that every clause, be it matrix or embedded, presents a detailed periphery, rich in hierarchically ordered functional projections, which came to be known as the high left periphery (henceforth HLP), in (14).

(14) **The HLP per Rizzi (1997)**




The upper boundary of the HLP is ForceP, which encodes the illocutionary force of the clause, e.g. declarative or imperative, and whose head hosts finite complementizers, like Italian *che* and English *that*. The lower boundary is FinP, which encodes the finiteness of the clause and hosts non-finite complementizers, like Italian *di*. Several A'-projections are located between ForceP and FinP. Topics, for instance, occur between the two boundaries (14). IntP hosts interrogative complementizers like *se* 'if', as well as interrogative wh-phrases like *perché* 'why' (Rizzi, 2001). Finally, ModP can be targeted by certain fronted adverbs, like *rapidamente* 'quickly'. While originally proposed and illustrated for Italian, subsequent work contributed cross-linguistic evidence for the hierarchy (see Rizzi and Bocci 2017 for references to cartographic work on a variety of languages).

(15) a. Pens-o [ che *il* *formaggio* lo mange-r-ò domani].
think-PRS.1SG COMP DET.DEF.M.SG cheese CL.ACC.M.SG eat-FUT-1SG tomorrow
'The cheese, I think I will eat it tomorrow.'

b. Pensa-v-o [ *il* *formaggio* di mangia-r-lo domani].
think-PRS.1SG DET.DEF.M.SG cheese COMP eat-INF-CL.ACC.M.SG tomorrow
'The cheese, I was thinking of eating it tomorrow.'

Among the several functional projections present in the HLP, one has drawn particular attention in the literature: FocusP. Starting with Rizzi (1997), FocusP, or FocP, has been claimed to host both wh-phrases and Contrastive Focus. This statement is motivated by Rizzi's (1997) and Rizzi and Bocci's (2017) observation that wh-phrases and Contrastive Focus cannot co-occur in the matrix HLP, regardless of their linear order. Focus-movement and wh-movement have thus been unified and reanalyzed as movement to FocP, as in (17) and (18).

(16) a. *A GIANNI che cosa hai de-tto, non a Piero?
to Gianni what have.PRS.2SG say-PST.PTCP NEG to Piero

'What did you say to Gianni, not to Piero?'

b. *Che cosa A GIANNI hai detto, non a Piero?

(Rizzi and Bocci, 2017, p. 8)

(17) a. Cosa ha mangia-to?
what have.PRS.3SG eat-PST.PTCP
'What did he eat?'

b. [$_{\text{FocP}}$ cosa [$_{\text{TP}}$ ha mangiato [$_{\text{vP}}$ [$_{\text{VP}}$ ~~cosa~~ ]]]

(18) a. LA PIZZA ha mangia-to, (non la pasta).
DET.DEF.F.SG pizza have.PRS.2SG eat-PST.PTCP NEG DET.DEF.F.SG pasta
'He ate THE PIZZA, (not the pasta)."

b. [$_{\text{FocP}}$ la pizza [$_{\text{TP}}$ ha mangiato [$_{\text{vP}}$ [$_{\text{VP}}$ ~~la pizza~~ ]]]

However, two decades later, Rizzi and Bocci (2017) pointed out that the mutual exclusion of wh-phrases and Contrastive Focus is limited to matrix contexts, as in embedded clauses these two A'-elements can co-occur, albeit in a fixed order: the Contrastive Focus must precede the wh-phrase, (19).

(19) a. ?Mi domand-o [ A GIANNI (ieri) che cosa
CL.DAT.1SG wonder-PRS.1SG to Gianni yesterday what
abbia-no de-tto non a Piero].
have.SUBJ-PRS.3PL say-PST.PTCP NEG to Piero
'I wonder to Gianni yesterday what they have said, not to Piero.'

b. *Mi domando [ che cosa (ieri) A GIANNI abbiano detto, non a Piero.]

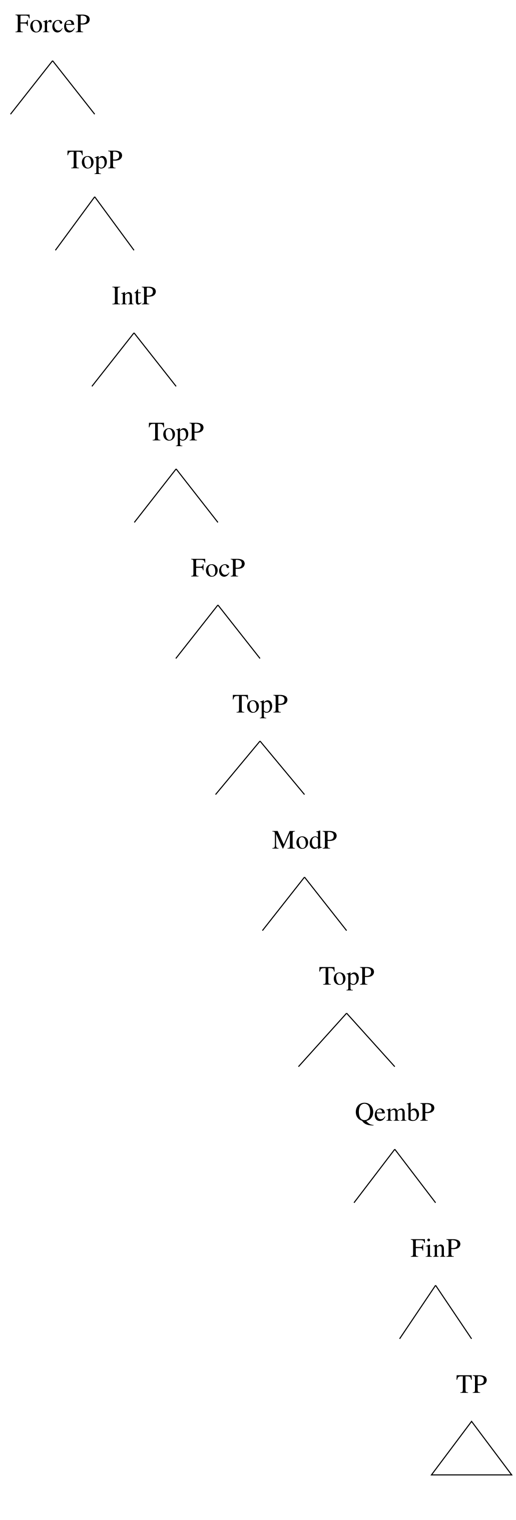
(Rizzi and Bocci, 2017, p. 8-9)

Examples like (19) led to the postulation of a dedicated wh-position in the HLP of embedded clauses. Rizzi and Bocci (2017) argue that this position is licensed by the selecting verb, hence its absence in matrix contexts. This position is quite low in the HLP, as some adverbials like *ieri* 'yesterday', (19), and Topics, (20), can be interpolated between the Contrastive Focus and the wh-phrase. Note that Topics cannot appear to the right of the wh-phrase in (20), which led Rizzi and Bocci to argue that the wh-phrase *che cosa* targets a dedicated position very low in the HLP, just above FinP: QembP, (21).

(20) a. ?Mi domand-o [ A GIANNI (per Natale) che cosa
CL.DAT.1SG wonder-PRS.1SG to Gianni for Christmas what
(per Natale) regali-amo non a Piero].
gift-PRS.1PL NEG to Piero
'I wonder to Gianni for Christmas what we will gift, not to Piero.'

b. *Mi domando [ che cosa (per Natale) A GIANNI regaliamo, non a Piero.]

(21) **The structure of the HLP per Rizzi and Bocci (2017)**




The claim that the embedded HLP contains a dedicated wh-position, which is not present in the matrix HLP, is theoretically undesirable and contrasts with empirical work by Lohninger and Wurmbrand (2020) on clause typing and by Caplan and Djärv (2019) a.o. on V2 in Germanic, who show that the HLP of embedded clauses is, if anything, smaller than the matrix HLP. Furthermore, the claim on mutual exclusion of Focus and wh-phrases in the HLP is not universal. For instance, in my variety of Italian, Focus and wh-phrases can felicitously co-occur within the matrix HLP, but only the order CF>wh is allowed, (22), precisely as Rizzi and Bocci (2017) report for the HLP of embedded clauses.

(22) **Context**: You are having a drink with your friends and discussing the gift you should buy for your friend Nelly, whose 50th birthday is coming up in a month. You just realized that your friend Ivana has a birthday just before Nelly's, so you ask:

a. E A IVANA (per il complenno) cosa (*per il complenno)
and to Ivana for DET.DEF.M.SG birthday what
regalia-mo?
gift-PRS.1PL
'And to Ivana what are we gifting?'

b. *E cosa (per il complenno) A IVANA regalia-mo ?

Note that Topics can occur between the Contrastive Focus and the wh-phrase, but cannot follow the wh-phrase. This is evidence that the position targeted by *cosa* in (22-a) must be very low in the HLP, probably just above FinP. This is exactly where Rizzi and Bocci (2017) situated QembP, therefore, it is safe to assume that in my variety of Italian both matrix and embedded clauses have a dedicated whP at the bottom end of the HLP.

So far, I have suggested, based on several Italian data points, that the mutual exclusion of wh-phrases and Contrastive Focus in the HLP is undesirable both on theoretical and empirical grounds. Now, I will move on to ValPa data and bring forth further empirical evidence against this claim.

In the HLP of ValPa matrix clauses, Contrastive Focus and wh-phrases are not mutually exclusive, (23), nd again one order is highly preferred: the Contrastive Focus must precede the wh-phrase. On the one hand, it is important that the relative order of wh-phrases and Contrastive Focus in the ValPa HLP is the same as that reported by Rizzi and Bocci (2017) and myself (see example (16)) for Italian matrix clauses. On the other hand, the order in (23) is the mirror image of that found in the ValPa LLP, in which wh-phrases target the highest A' projection of the periphery.

(23) **Context**: You have two cousins, Sara and Maria. While you are very fond of Sara, your parents strongly prefer Maria. During a dinner, they keep talking about how they want to gift Maria a flaming red mountain bike for Christmas. You know that they will still buy Sara a gift, even though it will not be as magnificent, so a little annoyed, you utter:

a. E À SARA **dequé** no regal-en? **CF>wh**
and to Sara what CL.NOM.1PL gifl-PRS.1PL
'And TO SARA what do we gift?'

b. *E dequé À SARA no regalen? ***wh>CF**

Above, I suggested that in my variety of Italian wh-phrases target a very low position in the HLP, which was confirmed by the impossibility of Topics to follow wh-phrases. The same is witnessed in ValPa. In matrix contexts, the Topic phrase *pe Tsalende* 'for Christmas' can either precede, (24-a), or follow, (24-b), the Contrastive Focus *à Sara*, but it can never follow the wh-phrase, (24-c).

(24) **Context**: You have two cousins, Sara and Maria. While you are very fond of Sara, your parents strongly prefer Maria. During a dinner, they keep talking about how they want to gift Maria a flaming red mountain bike for Christmas. You know that they will still buy Sara a gift, even though it will not be as magnificent, so a little annoyed, you utter:

a. E *pe Tsalende* À SARA **dequé** no regal-en? **Top>CF>wh**
and for Christmas to Sara what CL.NOM.1PL gifl-PRS.1PL
'And for Christmas TO SARA what do we get as gift?'

b. E À SARA *pe Tsalende* **dequé** no regalen? **CF>Top>wh**

c. *E À SARA **dequé** *pe Tsalende* no regalen? ***CF>wh>Top**

If we embed example (24) under an interrogative verb, like *se demandé* 'wonder', we see that the pattern in embedded clauses is the same as in matrix ones: Topics can occur before (25-a) and after (25-b) the Contrastive Focus and cannot follow the wh-phrase (25-c).

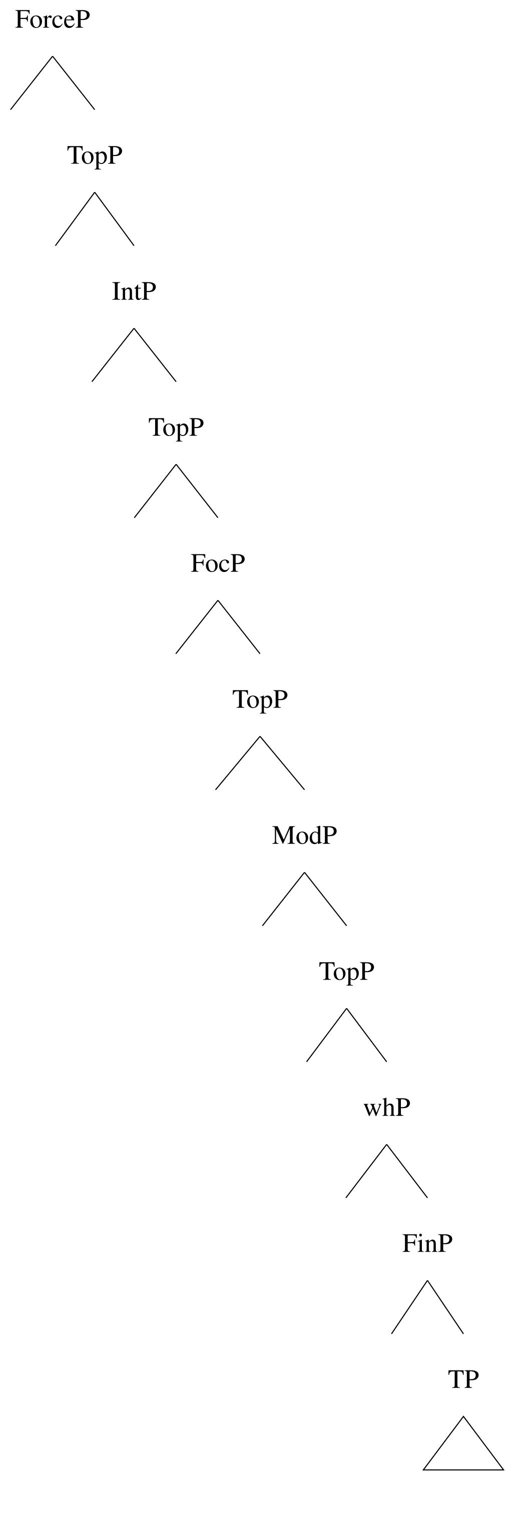
(25) a. Me demanda-v-o *pe Tsalende* À SARA **dequé** no regalen. **Top>CF>wh**
CL.REFL.1 ask-PST-1SG
'I wondered TO SARA for Christmas what we will gift.'

b. Me demandao À SARA *pe Tsalende* **dequé** no regalen. **CF>Top>wh**

c. *Me demandao À SARA **dequé** *pe Tsalende* no regalen. ***CF>wh>Top**

The parallels in the structure of the matrix and embedded HLP provide further evidence, on top of the Italian data briefly discussed earlier in this section, that the presence of a dedicated wh-position is not restricted to embedded contexts. Their order is fixed: the wh-phrase must follow the Contrastive Focus. Using Topic placement, I have shown that wh-phrases target a position very low in the HLP, most likely just above FinP, as no other A'-element can appear to their right. This evidence is important for several reasons. First, it shows that the co-occurrence of Contrastive Focus and wh-phrases is not a peculiarity of the LLP of ValPa, but it extends to its HLP. In the HLP, wh-phrases target a position at the lower end of the periphery, whereas in the LLP they target the topmost projection. Thus, there is no distinction in the presence of these A'-elements in matrix and embedded HLPs, contra what was previously argued in the literature (Rizzi and Bocci, 2017; Bonan, 2019). This is crucial as it allows us to unify the structures of the peripheries and argue against the undesired claim that the embedded HLP is larger and more elaborate than the matrix one. This means that we can update the structure of the HLP as in (26).

(26) **The revised structure of the HLP**




As discussed in Chapter 2, I am assuming that movement to an operator position (wh or

Focus) is feature-driven (see also Chapter 5). Yet, so far I have not addressed the topic of features that drive movement of wh-phrases and Focus in ValPa, which is the central theme of the next section.

## 6.3 Rethinking the features of wh-movement

In the previous section, I have presented data from ValPa and in a limited manner from Italian challenging the claim that wh-phrases and (Contrastive ) Focus target the same position, finally arguing that they target distinct separate positions. However, I have merely argued this from a structural standpoint, leaving aside the features that drive movement.

In the literature, it is very often claimed (Rizzi, 1997; Bošković, 2002; Bonan, 2019) that, since wh-phrases and Focus target the same position, they carry the same feature: [FOC]. This is exemplified in examples (27) and (28).

(27) a. Cosa ha mangia-to?
what have.PRS.3SG eat-PST.PTCP
'What did he eat?'

b. [$_{\text{FocP}}$ cosa$_{\text{[FOC]}}$ [FOC] [$_{\text{ha}}$ ha mangiato [$_{\text{vp}}$ [$_{\text{VP}}$ ~~cosa~~$_{\text{[FOC]}}$ ]]]]]

(28) a. LA PIZZA ha mangia-to, (non la pasta).
DET.DEF.F.SG pizza have.PRS.2SG eat-PST.PTCP
'He ate THE PIZZA, (not the pasta)."

b. [$_{\text{FocP}}$ la pizza$_{\text{[FOC]}}$ [FOC] [$_{\text{ha}}$ ha mangiato [$_{\text{vp}}$ [$_{\text{VP}}$ ~~la pizza~~$_{\text{[FOC]}}$ ]]]]]

The cartographic approach is very explicit about the fact that each functional projection within the HLP (and LLP) hosts a specific feature. For instance, TopicP hosts a [TOP] feature and FocP a [FOC] feature. The evidence from ValPa presented throughout this chapter that wh-phrases and Contrastive Focus target separate positions suggests that they carry different features: a [WH] feature and a [Foc] feature. This is sketched in (29) and (30).

(29) a. Cosa ha mangia-to?
what have.PRS.3SG eat-PST.PTCP
'What did he eat?'

b. [$_{\text{FocP}}$ [$_{\text{whP}}$ cosa$_{\text{[WH]}}$ [WH] [$_{\text{TP}}$ ha mangiato [$_{\text{vP}}$ [$_{\text{VP}}$ ~~cosa$_{\text{[WH]}}$~~ ]]]]]

(30) a. LA PIZZA ha mangia-to, (non la pasta).
DET.DEF.F.SG pizza have.PRS.2SG eat-PST.PTCP NEG DET.DEF.F.SG pasta
'He ate THE PIZZA, (not the pasta).'

b. [$_{\text{FocP}}$ la pizza$_{\text{[FOC]}}$ [FOC] [$_{\text{whP}}$ [$_{\text{TP}}$ ha mangiato [$_{\text{vP}}$ [$_{\text{VP}}$ ~~la pizza$_{\text{[FOC]}}$~~ ]]]]]

### 6.3.1 Relativized minimality violations

In this section I will present data from ValPa and Italian showing that, contrary to claims (Jayaseelan, 1996; Kahnemuyipour, 2001; Belletti, 2006; Bošković, 1999; Kato, 2013; Bonan, 2019), an analysis for wh-phrases is untenable feature-wise. If both Contrastive Focus and wh-phrases underwent focus-movement, we would expect to incur featural Relativized Minimality violations, contrary to facts.

Featural Relativized Minimality, (32), is a type of locality effect that, in simple terms, tells you to perform a given operation (e.g. Agree or move) to the closest suitable element (Rizzi (1990, 2004); a.o.), where closest is calculated in structural, i.e. c-commanding, terms. In a configuration like (31), for instance, Z intervenes between X and Y because it carries the same feature as X. Intervention is defined in terms of c-command: Z structurally intervenes between X and Y when Z c-commands Y and Z does not c-command X. Therefore, X cannot Agree with Y, nor force Y to move to its specifier, because Z is in the way. This constitutes a Relativized Minimality violation.

(31) . . . X[F]. . . Z[F]. . . Y[F]

(32) Featural relativized minimality (adapted from Rizzi (1990, 2004))

Y is in a minimal configuration with X iff there is no Z such that:

(i) Z carries the same feature as X, and

(ii) Z structurally intervenes between X and Y

If both wh-phrases and Contrastive Focus carry the same [FOC] feature, we are bound to incur some relativized minimality violations. Let's walk through the derivation of (7) above, repeated without context in (33). Note that here I am assuming that the direct object is generated as the complement of V, whereas the indirect object is generated in a structurally higher position, which in (34-a) is SpecVP (Marantz, 1993; Bruening, 2010). Later, I will discuss alternative structures of ditransitive verbs and show that the problem arises regardless of the adopted structure. In the simplified (34-a), once vP merges with the head of FocP, the [FOC] feature will attract the closest goal, namely the IO *à Sara* 'to Sara'.

(33) a. E no regal-en **dequé** À SARA? **wh>CF**
and CL.NOM.1PL gift-PRS.3PL what TO SARA
'And to Sara what do we give as gift?'

b. *E no regalen À SARA dequé? ***CF>wh**

(34) a. [$_{\text{FocP}}$ à Sara$_{\text{[Foc]}}$ [Foc] [$_{\text{vP}}$ [$_{\text{VP}}$ ~~à Sara~~$_{\text{[Foc]}}$ regalen dequé ]]]

b. [$_{\text{whP}}$ dequé$_{\text{[Foc]}}$ [Foc] [$_{\text{FocP}}$ à Sara$_{\cancel{\text{[Foc]}}}$ [Foc] [$_{\text{vP}}$ [$_{\text{VP}}$ ~~à Sara~~$_{\cancel{\text{[Foc]}}}$ regalen ~~dequé~~$_{\cancel{\text{[Foc]}}}$ ]]]]

As the derivation proceeds, in (34-b), FocP merges with the head of whP. If the latter were to host a [Foc] feature, it would try to attract the closest goal with a [Foc] feature. Here, I am going to follow Rizzi (2006, 2010) and assume that a phrase which has moved to a criterial position in the (high or low) left periphery, namely an operator (wh- or focus-) position, gets frozen and is thus not accessible to further movement.[1] In this case, *à Sara* in (34-b) is invisible to further probes and the head of whP can probe further and correctly attract *dequé*. Note that Rizzi's (2006; 2010) criterial freezing is essential for this derivation to proceed correctly: as can be seen in (35), if *à Sara* were not 'frozen', the head of whP would attract the closest goal: *à Sara*. This would lead to the wrong word order, as outlined in (35). However, as we will see below, criterial freezing is not the solution, as we run into problems regardless of whether we assume criterial freezing or not.

(35) a. [$_{\text{FocP}}$ à Sara$_{\text{[Foc]}}$ [Foc] [$_{\text{vP}}$ [$_{\text{VP}}$ ~~à Sara~~$_{\text{[Foc]}}$ regalen dequé ]]]

b. *[$_{\text{whP}}$ à Sara$_{\text{[Foc]}}$ [Foc] [$_{\text{FocP}}$ ~~à Sara~~$_{\cancel{\text{[Foc]}}}$ [Foc] [$_{\text{vP}}$ [$_{\text{VP}}$ ~~à Sara~~$_{\cancel{\text{[Foc]}}}$ regalen dequé ]]]]

However, if we have a sentence where the wh-phrase is the IO, while the Contrastive Focus is the DO, as in (36), the derivation becomes problematic. In the simplified (37-a), once vP

[1] See the discussion in Chapter 5.1.1.1 and Rizzi (2006, 2010) for cases where criterial freezing does not apply, e.g. sub-extraction, and Bošković (2021) for a discussion against criterial freezing and smuggling.

merges with the head of FocP, the [FOC] feature will attract the closest goal, namely the IO *à qui* 'to whom'. So far, we don't run into major issues. As the derivation proceeds, in (37-b), FocP merges with the head of whP, which will attract the closest goal with a [FOC] feature. Once again, if we follow Rizzi (2006, 2010) and assume *à qui* is frozen and is thus not accessible to further movement, then the head of whP can probe further and attract *la fonténa*. This will lead to the wrong word order CF>wh-phrase.

(36) a. E no regal-en **à qui** LA FONTÉNA? **wh>CF**
and CL.NOM.1PL gift-PRS.3PL to who DET.DEF.F.SG fontina
'And to whom we will gift THE FONTINA?'

b. *E no regalen LA FONTÉNA **à qui** ***CF>wh**

(37) a. [$_{\text{FocP}}$ à qui~~[Foc]~~ [FOC] [$_{\text{vP}}$ [$_{\text{VP}}$ ~~à qui~~[FOC] regalen la fonténa[FOC] ]]]

b. *[$_{\text{whP}}$ la fonténa~~[Foc]~~ [FOC] [$_{\text{FocP}}$ à qui~~[Foc]~~ [FOC] [$_{\text{vP}}$ [$_{\text{VP}}$ ~~à qui~~[FOC] regalen ~~la fonténa[FOC]~~ ]]]]

Note that, if there were not criterial freezing, then the word order would be seemingly correct, as in (38).

(38) a. [$_{\text{FocP}}$ à qui~~[Foc]~~ [FOC] [$_{\text{vP}}$ [$_{\text{VP}}$ ~~à qui~~[FOC] regalen la fonténa[FOC] ]]]

b. *[$_{\text{whP}}$ à qui~~[Foc]~~ [FOC] [$_{\text{FocP}}$ ~~à qui[FOC]~~ [FOC] [$_{\text{vP}}$ [$_{\text{VP}}$ ~~à qui~~[FOC] regalen la fonténa [FOC] ]]]]

Even if the DO were generated in a structurally higher position than the IO (Larson, 1998), we would still incur a violation, but the situation would be reversed: we would be able to derive (36-a), but it would not be possible to correctly derive (33-a). Let us walk through the derivations for both examples. (36-a) would have the derivation in (39). As soon as vP merges with FocP, the feature in its head will attract the closest goal: *la fonténa*, (39-a). The latter is now frozen in SpecFocP, therefore the head of whP can correctly attract *à qui*, (39-b). Note that if we were not to assume Criterial Freezing, after moving to SpecFocP, *la fonténa* would still be available for further computations, be attracted by the [FOC] feature in the head of whP and move to its specifier, as in (40). In this case, *à qui* would remain in situ and we would end up with the wrong word order.

(39) a. [$_{\text{FocP}}$ la fonténa$_{\cancel{\text{[Foc]}}}$ [FOC] [$_{\text{vP}}$ [$_{\text{VP}}$ la fonténa$_{\text{[Foc]}}$ regalen ~~à qui~~$_{\text{[Foc]}}$ ]]]

b. [$_{\text{whP}}$ à qui$_{\text{[Foc]}}$ [FOC] [$_{\text{FocP}}$ la fonténa$_{\cancel{\text{[Foc]}}}$ [FOC] [$_{\text{vP}}$ [$_{\text{VP}}$ ~~la fonténa~~$_{\cancel{\text{[Foc]}}}$ regalen ~~à qui~~$_{\cancel{\text{[Foc]}}}$ ]]]]

(40) a. [$_{\text{FocP}}$ la fonténa$_{\cancel{\text{[Foc]}}}$ [FOC] [$_{\text{vP}}$ [$_{\text{VP}}$ la fonténa$_{\text{[Foc]}}$ regalen ~~à qui~~$_{\text{[Foc]}}$ ]]]

b. *[$_{\text{whP}}$ la fonténa$_{\cancel{\text{[Foc]}}}$ [FOC] [$_{\text{FocP}}$ la fonténa$_{\cancel{\text{[Foc]}}}$ [FOC] [$_{\text{vP}}$ [$_{\text{VP}}$ ~~la fonténa~~$_{\cancel{\text{[Foc]}}}$ regalen à qui$_{\text{[Foc]}}$ ]]]]

The derivation for (33-a) is shown in (41). As soon as vP merges with FocP, the feature in its head is going to attract the closest goal: *dequé*, (41-a). Now, assuming Criterial Freezing, *dequé* is not unavailable for further computations, therefore the head of whP will attract the closest available goal, namely *à Sara* and we end up with the wrong word order, (41-b).

(41) a. [$_{\text{FocP}}$ dequé$_{\text{[Foc]}}$ [FOC] [$_{\text{vP}}$ [$_{\text{VP}}$ ~~dequé~~$_{\text{[Foc]}}$ regalen À SARA$_{\text{[Foc]}}$ ]]]

b. *[$_{\text{whP}}$ À SARA$_{\text{[Foc]}}$ [FOC] [$_{\text{FocP}}$ dequé$_{\cancel{\text{[Foc]}}}$ [FOC] [$_{\text{vP}}$ [$_{\text{VP}}$ ~~dequé~~$_{\cancel{\text{[Foc]}}}$ regalen ~~À SARA~~$_{\cancel{\text{[Foc]}}}$ ]]]]

As opposed to (40), here not assuming Categorial Freezing would derive the correct word order, in

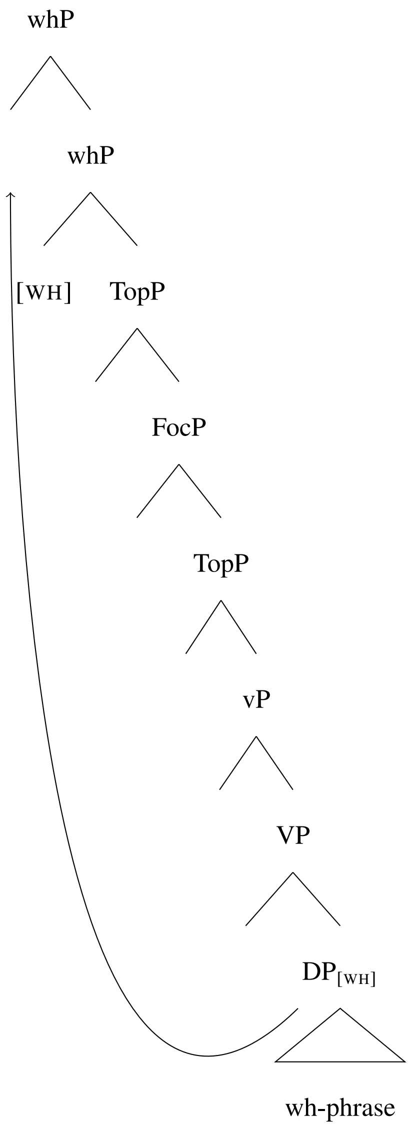
(42). However, the focalized constituent *à Sara* would remain in situ. However, as we have seen earlier in this chapter, this is evidence that (non-fronted) Contrastive Focus moves to SpecFocP in the LLP.

(42) a. [$_{\text{FocP}}$ dequé$_{\text{[Foc]}}$ [FOC] [$_{\text{vP}}$ [$_{\text{VP}}$ ~~dequé~~$_{\text{[Foc]}}$ regalen À SARA$_{\text{[Foc]}}$ ]]]

b. [$_{\text{whP}}$ dequé ~~$_{\text{[Foc]}}$~~ [FOC] [$_{\text{FocP}}$ ~~dequé$_{\text{[Foc]}}$~~ [FOC] [$_{\text{vP}}$ [$_{\text{VP}}$ ~~dequé$_{\text{[Foc]}}$~~ regalen À SARA$_{\text{[Foc]}}$ ]]]]

The present data shows that wh-movement cannot be driven by a [FOC] feature, otherwise we risk incurring (Featural) Relativized Minimality violations. On the contrary, wh-movement must be driven by a dedicated feature: [WH] (Seguin 2023, in press). This is outlined in (43) for the ValPa LLP.

(43) **The revised structure of the LLP**




The same relativized minimality violations arise if we analyze wh-movement to the HLP. Since ValPa and Italian embedded clauses (and matrix in my variety of Italian) display the same word order patterns of wh-phrases and Contrastive Focus in the HLP (CF>wh), I will build this discussion on Italian, more specifically on the data reported in Rizzi and Bocci (2017). When they proposed the existence of a dedicated wh-position in embedded clauses like (44), Rizzi and

Bocci did not specify in the analysis what feature drives movement of the wh-phrase.

(44) a. $^{?}$Mi domand-o [ A GIANNI (ieri) che cosa
CL.DAT.1SG wonder-PRS.1SG to Gianni yesterday what
abbia-no de-tto non a Piero].
have.SUBJ-PRS.3PL say-PST.PTCP NEG to Piero
'I wonder to Gianni yesterday what they have said, not to Piero.'

b. *Mi domando [ che cosa (ieri) A GIANNI abbiano detto, non a Piero.]

(Rizzi and Bocci, 2017, p. 8-9)

Building the structure of (44) bottom-up, as soon as TP merges with Qemb, the [FOC] feature in Qemb is going to probe for a goal, (45-a). The closest XP carrying a [FOC] feature is the indirect object *a Gianni*, which will act as an intervener. Qemb will be unable to probe for *che cosa* and will attract *a Gianni*, which moves to SpecQembP. Assuming that, at this point, *a Gianni* is frozen and thus unavailable for further movement, the head of FocP can then attract the closest goal with a [FOC] feature, namely *che cosa*, as in (45-b).[2]

(45) a. [$_{\text{Qemb}}$ a Gianni$_{\text{[Foc]}}$ [FOC] [$_{\text{TP}}$ abbiano[$_{\text{VP}}$ ~~a Gianni~~$_{\text{[Foc]}}$ regalato che cosa$_{\text{[Foc]}}$ ]]]

b. *[$_{\text{FocP}}$ che cosa$_{\text{[Foc]}}$ [FOC] [$_{\text{Qemb}}$ a Gianni$_{\text{[Foc]}}$ [FOC] [$_{\text{TP}}$ abbiano [$_{\text{VP}}$ ~~a Gianni~~$_{\text{[Foc]}}$ regalato ~~che cosa~~$_{\text{[Foc]}}$ ]]]]

Just like we have seen above with the ValPa LLP, if we assume that DOs are externally merged in a structurally higher position than IO (Larson, 1998), we don't run into a relativized minimality violation for cases like (44), but we do in examples like (46).

[2] In (45-a) and (45-b), the past participle moves out of the VP (see Chapter 3), but I have decided not to show this here to not overcomplicate the derivation. Here I am displaying movement in one fell swoop rather than successive-cyclically through the vP edge to simplify the derivation visually. Nonetheless, even if movement happened successive cyclically through the edge of vP, the relativized minimality violation would still occur.

(46) a. Mi domand-o [ LA BICI **a chi** abbia-no
CL.DAT.1SG wonder-PRS.1SG DET.DEF.F.SG bike to who have.SUBJ-PRS.3PL
regala-to (non il monopattino)].
say-PST.PTCP NEG DET.DEF.M.SG scooter
'I wonder the bike to whom they gave, not the scooter.'

b. *Mi domando [a chi LA BICI abbiano regalato, (non il monopattino).]

As soon as TP merges with Qemb, the [FOC] feature in Qemb will attract the closest goal carrying a [FOC] feature, *la bici*, which will move to SpecQemb. When QembP merges with Foc, the [FOC] in its head will attract the closes XP carrying a [FOC] feature, *a chi* (assuming as always that *la bici* is frozen in SpecQembP).

(47) a. [$_{\text{Qemb}}$ la bici$_{\text{[Foc]}}$ [FOC] [$_{\text{TP}}$ abbiano[$_{\text{VP}}$ ~~la bici~~$_{\text{[Foc]}}$ regalato a chi$_{\text{[Foc]}}$ ]]]

b. *[$_{\text{FocP}}$ a chi $_{\text{[Foc]}}$ [FOC] [$_{\text{Qemb}}$ la bici$_{\text{[Foc]}}$ [FOC] [$_{\text{TP}}$ abbiano [$_{\text{VP}}$ ~~la bici~~$_{\text{[Foc]}}$ regalato ~~a chi~~$_{\text{[Foc]}}$ ]]]]

In conclusion, if both wh-phrases and Contrastive Focus carry a [FOC] feature, there will always be some configurations in which we incur a relativized minimality violation. Thus, the evidence presented in this section shows that wh-phrases and Contrastive Focus do not carry the same feature and do not target the same position, either in the LLP or the HLP. In the next section, I will discuss other issues that arises with a wh-as-focus movement analysis of wh-phrases.

### 6.3.2 Beyond Romance: wh, Focus, and exhaustivity

In the present section, I shall briefly discuss two relevant contributions against a wh-as-focus movement: Cable's (2008) on Hungarian and Lee's (1999; 2001; 2005) on San Lucas Quiaviní

Zapotec.

In Hungarian, wh-phrases (48) and certain focalized constituents (49) must appear in immediate pre-verbal position and must bear the main pitch accent, (Cable, 2008). This suggests that both wh-fronting and Focus-fronting is driven by the same feature, originally labeled as discourse newness (Horvath, 1986), then reanalyzed as an exhaustivity feature (Kiss, 1998; Horvath, 2000, 2005).

(48) János kit mutatott be Marinak? **Hungarian wh-fronting**
Janos who.ACC introduced PRT Mary.to
'Who did John introduce to Mary?'

(Cable, 2008, p. 3)

(49) PÉTERT mutatta be Marinak. **Hungarian Focus-fronting**
Peter.ACC introduced PRT Mary.to
'It was PETER that he introduced to Mary'

(Cable, 2008, p. 3)

(50) (Valószínuleg) be-mutatta PÉTERT Marinak. **Hungarian 'low' Focus**
probably PRT-introduced Peter.ACC Mary.to
'Well, probably, he introduced Peter to Mary'

(Cable, 2008, p. 5)

As Cable (2008) argues, the pre-verbal position, occupied by *kit* in (48) and *Pétert* in (49) encodes a kind of exhaustive identification. In answering (49), the speaker conveys that *Pétert* was the only person to have been introduced to Mary. In fact, if the speaker wanted to give a partial answer, that is, that *Pétert* was amongst the people introduced to Mary, then the word order in (50) with the focalized constituent appearing post-verbally would be obligatory. Kiss

(1998) and (Horvath, 2000, 2005) thus argue that Focus fronting, as in (49), is driven by an exhaustivity feature, [EX-FOC]. In an attempt to unify wh- and focus-movement, the question that naturally arose at this point was whether wh-fronting in Hungarian (48) is also driven by the same feature. As Cable (2008) shows, if the wh-phrase occupies a position receiving 'exhaustive Focus', where it has moved by virtue of bearing an [EX-FOC] feature, then the wh-phrase itself should be exhaustive. This means that the wh-question containing said wh-phrase should be infelicitous if an exhaustive answer to it were impossible for pragmatic reasons. This is the case in the question-answer pair (48) and (50), because *Pétert* in (50) is not exhaustive. Let's look at specific examples, known as mention-some questions, to which an exhaustive answer is pragmatically impossible, as in (51) and (52). For instance, the speaker cannot be expected to list all the odd numbers, therefore (52) cannot be answered exhaustively.

(51) Hol vehetek újságot itt a környéken? **Hungarian**
where I.can.buy newspaper.ACC here the vicinity.on
'Where can I buy a newspaper around here?'

(Cable, 2008, p. 10)

(52) Melyik számok páratlanok? **Hungarian**
which numbers odd.PL
'Which numbers are odd?'

(Cable, 2008, p. 10)

Hungarian speakers report (51) and (52) to be perfectly natural, which is evidence against a wh-as-focus movement analysis. Cable (2008), thus, concludes that the fact that in Hungarian wh-phrase and focalized constituents allegedly target the same position in the language cannot be due to wh-phrases being focalized, but rather by a property of the wh-phrase itself, without however elaborating on what these properties are.

In ValPa, there is no exhaustivity requirement on wh-phrases in either periphery. Mention-some questions, which are not exhaustive, are felicitous with wh-phrases both in the HLP and the LLP. In (53), the wh-phrase is not exhaustive, which is shown by the fact that (53) can be answered with (54), even though of course Aosta counts many restaurants.

(53) a. **Yeui** no pou-ri-en all-éi medj-éi en Veulla?
where CL.NOM.1PL can-COND-1PL go-INF eat-INF in city
'Where could we go eat in Aosta?'

b. No pourien alléi medjéi **yeui** en Veulla?

(54) Ì Vecchio Ristoro! Se medj-e fran amodo lè.
to.DET.DEF.M.SG Vecchio Ristoro IMP eat-PRS.3SG really well there
'At the Vecchio Ristoro. You eat really well there.'

On the other hand, Contrastive Focus is always exhaustive (Bianchi, 2013; Bianchi et al., 2015; Kiss, 1998; Horvath, 1986, 2000). Therefore, once again wh-phrases and Constrastive Focus behave differently, further confirming that a wh-as-focus movement analysis is unsuitable for ValPa, as it is for Hungarian.

Lee (2001) also argues against the unification of a wh- and focus-movement with data from the Otomanguean language San Lucas Quiaviní Zapotec (SLQZ), spoken in Mexico. SLQZ is a VSO language in which both focalized constituents and wh-phrases must appear immediately pre-verbal ly.

(55) Gye'eihlly y-tàa'az Li'eb. **Focus fronting - SLQZ**
Mike IRR-beat Felipe
'MIKE will beat Felipe/Felipe will beat MIKE.'

(Lee, 2001, p. 10)

(56) Tu y-tàa'az Li'eb? **wh fronting - SLQZ**
who IRR-beat Felipe
'Who will Felipe beat/Who will beat Felipe?'

(Lee, 2001, p. 10)

Lee argues that in SLQZ only one constituent can be focalized in a given clause. Yet, wh-phrases can co-occur with focalized constituents. For example, the negative marker *a'ti'* is used to negate non-verbal predicates and must appear in the immediate pre-verbal position, (57), occupied by focalized constituents, FocP. *A'ti'* constructions can co-occur with wh-phrases (58), but not with focalized constituents, (59). The felicitous co-occurrence with wh-phrases suggests that, unlike focalized constituents, wh-phrases do not target FocP, but a dedicated wh-position.

(57) A'ti' studya'aann-dya' n-àa Gye'eihlly. **SLQZ**
NEG student-NEG NEUT-be Mike
'Mike isn't a student.'

(Lee, 2001, p. 10)

(58) Tu a'ti' studya'aann-dya' n-àa? **SLQZ**
who NEG student-NEG NEUT-be
'Who isn't a student?'

(Lee, 2001, p. 10)

(59) *Gye'eihlly a'ti' studya'aann-dya' n-àa. **SLQZ**
Mike NEG student-NEG NEUT-be
'MIKE isn't a student.'

(Lee, 2001, p. 11)

A similar pattern is witnessed with verbs carrying a definite aspect marker, which marks emphatic assertive force on future events, namely the high probability that a given event will indeed happen in the future, as in (60). Wh-phrases can co-occur with definite-marked verbs (61), while focalized constituent cannot, (62). Definite-marked verbal elements in SLQZ force TPs to undergo movement to FocP (Lee, 1999), which motivates their mutual exclusion with focalized constituents.

(60) S-tòo'oh Gye'eihlly ca'rr. **SLQZ**
DEF-sell Mike car
'Mike will definitely sell the car. '

(Lee, 2001, p. 11)

(61) Tu s-tòo'oh ca'rr? **SLQZ**
who DEF-sell car
'Who will definitely sell the car?'

(Lee, 2001, p. 11)

(62) *Gye'eihlly s-tòo'oh ca'rr. **SLQZ**
Mike DEF-sell car
'MIKE will definitely sell the car.'

(Lee, 2001, p. 11)

The fact that definite-marked verbs and wh-phrases can freely co-occur, whereas definite-marked verbs and focalized constituents cannot, constitutes further evidence that in SLQZ wh-phrases do not target FocP, but a dedicated wh-position. This predicts that Focus and wh-phrases should be able to co-occur in SLQZ, contrary to facts (63). Lee (2005) argues that wh-phrases first move to FocP and subsequently to ForceP, but she does not report a context for (63), nor whether the opposite order, Foc>wh, is felicitous in the language or whether other A'-elements such as Topics can precede wh-phrases to show that indeed they move to the highest XP available in the HLP, ForceP. The infelicity of (63) might thus be due to other factors, such as semantic and prosodic constraints.

(63) *Tu Gye'eihlly y-taà'az? **SLQZ**
who Mike IRR-beat
'Who did MIKE beat/Who beat MIKE?'

(Lee, 2001, p. 11)

The evidence presented in this section further supports the claim made for ValPa that the wh-as-focus movement analysis is problematic and that, at least in some languages, wh-movement cannot be analyzed as focus movement.

## 6.4 D-linked wh-phrases

So far in this chapter, I have only discussed the position of different A'-elements with respect to bare wh-phrases. In Chapter 4, I have shown that D-linked wh-phrases, which prompt an answer from a set of referents in discourse, can occur in clause-internal position in ValPa, (64). In (64), it is presupposed that there is a predetermined set of cakes (which could very well include all the possible cakes in the world). This section will investigate the relative position of D-linked wh-phrases in the ValPa LLP and HLP. Just like bare wh-phrases, D-linked CIwh-phrases are not in situ. As can be seen in (65), the D-linked CIwh-phrase *quinta torta* 'which cake' licenses the parasitic gap in the adjunct clause (baseline in (66)).

(64) T' à port-ò **quin-ta torta** à l'
CL.NOM.2SG have.PRS.2SG bring-PST.PTCP which-F.SG cake to DET.DEF.F.SG
écoula?
school
'Which cake did you bring to school?'

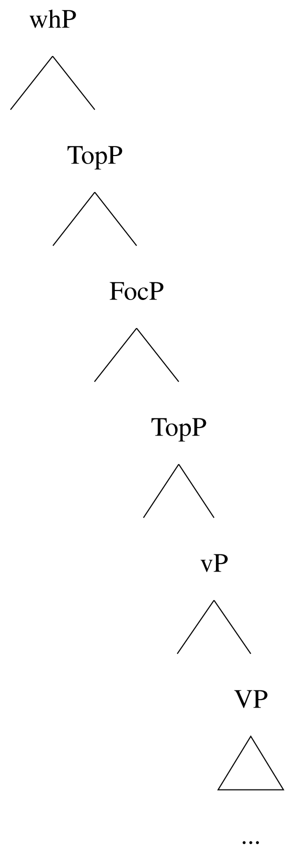
(65) T' à port-ò **quin-ta torta** à l' écoula
CL.NOM.2SG have.PRS.2SG bring-PST.PTCP which-F.SG cake to DET.DEF.F.SG school
[ sensa (l') agout-éi ] ?
without CL.ACC taste-INF
'Which cake did you bring to school without tasting first?'

(66) T' à port-ò la torta à l'
CL.NOM.2SG have.PRS.2SG bring-PST.PTCP DET.DEF.F.SG cake to DET.DEF.F.SG
écoula [ sensa *(l') agout-éi ].
school without CL.ACC taste-INF
'You brought the cake to school without tasting it first.'

Just like bare wh-phrases, CIwh-phrases must follow low manner adverbs, like *bien* 'well'. This evidence suggests that D-linked wh-phrases target the LLP of ValPa, just like bare wh-phrases, (67). The expectation, therefore, is that they target the same position at the higher end of the periphery, namely whP, as outlined in (68).

(67) T' aprist-e (bien) **quin-ta torta** (*bien) ?
CL.NOM.2SG prapre.PRS.2SG well which-F.SG cake
'Which cake do you prepare well?'

(68) **The structure of the ValPa LLP**




Wh-phrases can co-occur with Topics in the LLP, (69) and (70). Yet, unlike with bare wh-phrases, the order isn't fixed and D-linked wh-phrases can either follow or precede the Topic, as in (69-b). The same pattern is witnessed with Focus, (70-b). Co-occurrence with both Topics and Focus is also possible, and once again we witness a free word order of the constituents in the LLP, (71).

(69) a. T' à port-ò-lei **quin livro**
CL.NOM.2SG have.PRS.2SG bring-PST.PTCP-CL.DAT.SG which book
*ì* *gosse*?
to.DET.DEF.M.SG child
'Which book did you bring to the child?'

b. T' à portòlei *ì gosse* **quin livro**?

(70) **Context**: Your friend usually brings books to local schools and she is telling you all

about these books she got for the teachers. You don't care much about those and want to know which ones she brought to the kids, so you ask:

a. T' à port-ò **quin livro** ì GOSSE,
CL.NOM.2SG have.PRS.2SG bring-PST.PTCP which book to.DET.DEF.PL children
(pò ì métr-e)?
NEG to DET.DEF.PL teacher-PL
'Which book did you bring TO THE CHILDREN, (not to the teachers)?'

b. T' à portò ì GOSSE **quin livro**, (pò ì métre)?

(71) **Context**: Your friend is telling you how she reads books to her kid in funny voices, especially the book that her sister got her for Christmas. You want to know how she reads the book you got her, so you ask:

a. E te 'llei 'll-i **avouë** **wh>CF>Top**
and CL.NOM.2SG CL.DAT.3.M.SG read-PRS.3SG with
**quin-ta** **vouése** M-ON LIVRO *ì* *gosse*?
which-F.SG voice POSS.1SG-M.SG book to.DET.DEF.M.SG child
'And with which voice do you read MY BOOK to the child?'

b. E te 'llei 'lli **avouë quin-ta vouése** *ì gosse* MON LIVRO ? **wh>Top>CF**

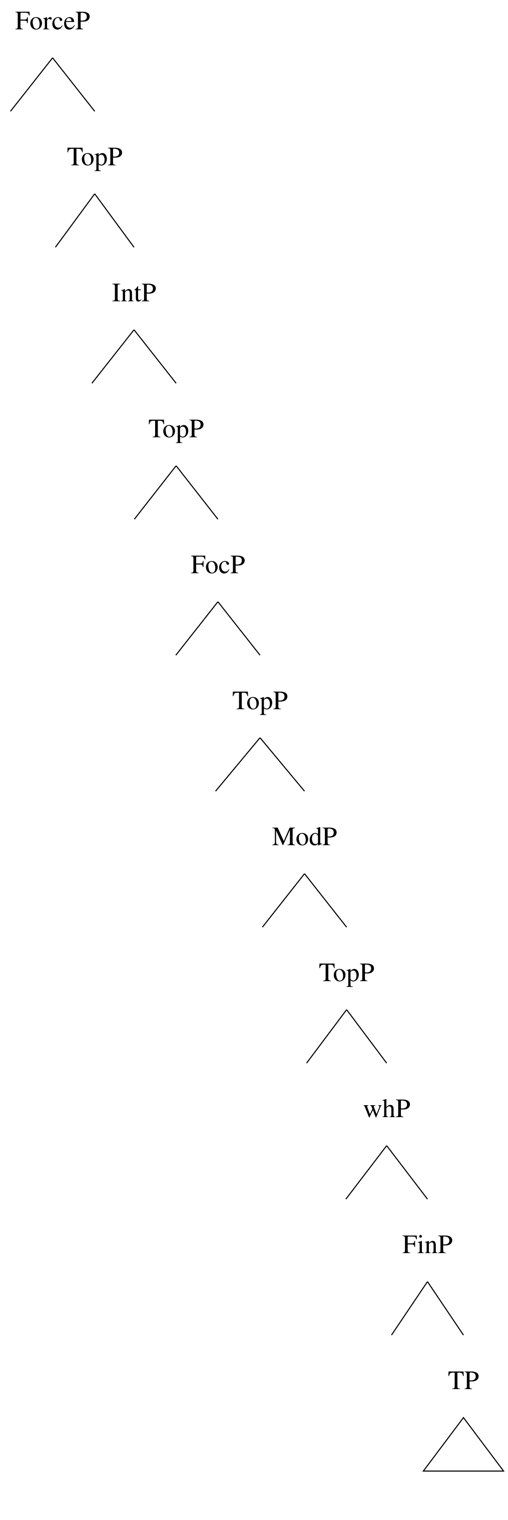
c. E te 'llei 'lli MON LIVRO **avouë quin-ta vouése** *ì gosse*? **CF>wh>Top**

d. E te 'llei 'lli *ì gosse* **avouë quin-ta vouése** MON LIVRO ? **Top>wh>CF**

e. E te 'llei 'lli MON LIVRO *ì gosse* **avouë quin-ta vouése**? **CF>Top>wh**

In Section 6.2, I have shown that, in the mirror image of the LLP, in the HLP wh-phrases follow all other A'-bar elements, as outlined in (72). When we look at D-linked wh-phrases in the HLP, we also notice that the word order is relatively free and D-linked wh-phrases can occur both before and after other A'-elements, (73).

(72) **The revised structure of the HLP**




(73) **Context**: same as (71).

a. E **avouë quin-ta vouése** MON LIVRO **wh>CF>Top**
and with which-F.SG voice POSS.1SG.M.SG book
*ì gosse* te 'llei 'll-i?
to.DET.DEF.M.SG child CL.NOM.2SG CL.DAT.3.M.SG read-PRS.3SG
'And when do you read MY BOOK to the child?'

b. E **avouë quin-ta vouése** *ì gosse* MON LIVRO te 'llei 'lli? **wh>Top>CF**

c. E MON LIVRO **avouë quin-ta vouése** *ì gosse* te 'llei 'lli? **Top>wh>CF**

d. E *ì gosse* **avouë quin-ta vouése** MON LIVRO te 'llei 'lli? **CF>wh>Top**

e. E MON LIVRO *ì gosse* **avouë quin-ta vouése** te 'llei 'lli? **Top>CF>wh**

In the remainder of this section, I will discuss a possible analysis of the freer word order patterns witnessed in (71) and (73).

The most common difference between D-linked and non D-linked wh-phrases reported in the literature has to do with superiority effects. English questions with D-linked wh-phrases can violate Superiority, (75), while questions with bare wh-phrases cannot, (74) (Pesetsky, 1997; Barss, 1990, 2000; Kotek, 2016). Another difference that has been largely discussed in the literature is island effects. D-linked wh-phrases are known to increase the acceptability of sentences with island violations, as can be seen in the English example pair in (76) (Maling and Zaenen (1982); Cinque (1990); Rizzi (1990); Kiss (1993); Goodall (2015); a.o.). [3]

(74) a. Who did you introduce ~~who~~ **to whom**?

b. *To whom did you introduce **who** ~~to whom~~ ?

[3] There are various analyses that try to account for the asymmetry in island violations between bare and D-linked wh-phrases that consider structural and semantics factors, as well as memory. See Goodall (2015) for a brief overview.

(75) a. Which student did you introduce ~~which student~~ to **which professor**?

b. To which professor did you introduce **which student** ~~to which professor~~ ?

(76) a. ?Which problem do you wonder [**how** to solve ~~which problem~~ ]?

b. *What do you wonder [**how** to solve ~~what~~ ]?

Several linguists have argued that these asymmetries stem from the fact that D-linked wh-phrases are in fact syntactically and semantically different from bare wh-phrases (Dayal, 1996; Pesetsky, 1997, 2000; Dayal, 2002; Lipták, 2001; Yoshihisa et al., 2004; Grewendorf, 2012). By virtue of being discourse linked (Pesetsky, 1997), these wh-phrases prompt an answer from a set of referents already existing in the discourse, which is not the case with bare wh-phrases. In this sense, they are more similar to Topics. For instance, Dayal (1996, 2002) and Yoshihisa et al. (2004) argue for a semantics distinction between Topic wh-phrases and non-Topic wh-phrases, in Hindi and Japanese respectively. Claims concerning syntactic differences between D-linked and bare wh-expressions have been put forth for German (Grewendorf, 2012), Hungarian (Lipták, 2001), and Tsez (Polinsky, 2001). There are two possible explanations: that D-linked wh-phrases and non D-linked wh-phrases target the same position, but their movement is driven by different features, or that they target different positions. The second is the most popular claim in the literature: unlike bare ones, D-linked wh-phrases target not wh- (or focus-position) but Topic positions (Lipták, 2001; Polinsky, 2001; Grewendorf, 2012).

As far as Romance languages are concerned, Rizzi (2001, 2004) argued for a distinction between D-linked wh-phrases, which would be Topic-like, and other wh-phrases, which are not Topic-like. His claim is based on asymmetries in island violations in (77) and (78) (the extraction site is marked as _).[4] In the former, the wh-phrase *quanti problemi* 'how many problems' is D-linked, whereas in the latter *quanti soldi* 'how much money' is not. Rizzi briefly states that D-linked wh-phrases like *quanti problemi* do not enter a DP dependency, whereas bare wh-phrases enter a non-DP dependency. "Only D-linked phrases allow DP dependencies at LF [...] and survive across a wh-island" (Rizzi, 2001, p. 99), whereas non D-linked wh-phrases do not allow DP dependencies and therefore do not survive across a wh-island.

(77) ?Quant-i problem-i non sai [come risolve-re _]?
how.many-M.PL problem-PL NEG know.PRS.2SG how solve-INF
Intended: 'For which x such that x is an amount of problems, you don't know how to solve x?'

(Rizzi, 2001, p. 97)

(78) *Quant-i sold-i non sai [come guadagna-re _]?
how.many-M.PL money-PL NEG know.PRS.2SG how earn-INF
Intended: 'For which x such that x is an amount of money, you don't know how to earn x?'

(Rizzi, 2001, p. 97)

Rizzi's analysis is not without problems. First, the claim that the relative acceptability in (77) is due to the Topic-like nature of D-linked wh-phrases (and their DP dependency) is improbable, as Topic-movement in general gives rise to island violations, shown in (79) for adjunct clauses.[5]

[4]The translations of these examples are also bad in English. For this reason, for these and subsequent examples, I report the intended meaning.

[5]See also Sprouse et al. (2016) for experimental evidence that D-linked wh-phrases are not significantly less likely to cause island violations in both English and Italian, although they show a slight amelioration.

(79) *A Gianni, sono arrabbia-ta [perché (gli) parl-i sempre _].
to Gianni be.PRS.1SG mad-F.SG because CL.DAT.M.3SG speak-PRS.2SG always
'I am mad because you always talk to Gianni.'

What causes the moderate island sensitivity in (77) as opposed to (78) is not strictly speaking the dependency between moved element and gap in these two examples, but rather relativized minimality and *come* 'how' acting as an intervener in (78) but not in (77). In fact, as soon as we move away from wh-islands and look at relative clause, complex noun phrase, and adjunct islands (none of which are discussed in Rizzi (2001, 2004)), the asymmetry reported by Rizzi (2001, 2004) vanishes and extracting both D-linked and non D-linked wh-phrases gives rise to equally demonstrable island violations, (80), (81), and (82).

(80) a. *Quant-i problem-i sei arrabbia-ta [con la ragazza
how.many-M.PL problem-PL be.PRS.2SG mad.F.SG with DET.DEF.F.SG girl
che non riesc-e a risolve-re _]?
COMP NEG manage-PRS.3SG to solve-INF
Intended: 'For which x such that x is an amount of problems, you are mad with the girl who cannot solve x?'

b. *Quant-i sold-i sei arrabbia-ta [con la ragazza
how.many-M.PL money be.PRS.2SG mad.F.SG with DET.DEF.F.SG girl
che non riesc-e a trova-re _]?
COMP NEG manage-PRS.3SG to find-INF
Intended: 'For which x such that x is an amount of money, you are mad with the girl who cannot find x?'

(81) a. *Quant-i problem-i hai senti-to [la storia
how.many-M.PL problem-PL have.PRS.2SG hear.PST.PTCP DET.DEF.F.SG story
che Gianni non riesc-e a risolve-re _]?
COMP Gianni NEG manage-PRS.2SG to solve-INF
Intended: 'For which x such that x is an amount of problems, you heard the story

that Gianni cannot solve x?'

b. *Quant-i soldi hai senti-to [la storia che
how.many-M.PL money have.PRS.2SG hear.PST.PTCP DET.DEF.F.SG story COMP
Gianni non riesc-e a trova-re _]?
Gianni NEG managePRS.2SG to find-INF

Intended: 'For which x such that x is an amount of money, you heard the story that Gianni cannot find x?'

(82) a. *Quant-i problem-i sei arrabbia-ta [perché non
how.many-M.PL problem-PL be.PRS.2SG mad.F.SG because NEG
riesc-i a risolve-re _]?
manage-PRS.2SG to solve-INF

Intended: 'For which x such that x is an amount of problems, you are mad because you cannot solve which x?'

b. *Quant-i soldi sei arrabbia-ta [perché non riesc-i
how.many-M.PL money be.PRS.2SG mad.F.SG because NEG manage-PRS.2SG
a trova-re _]?
to find-INF

Intended: 'For which x such that x is an amount of money, you are mad because you cannot find x?'

The evidence in (80), (81), and (82) suggests that D-linked wh-phrases do not display less island sensitivity than non D-linked ones, confirming the findings from Sprouse et al. (2016). As Chapter 10 discusses in details, ValPa behaves like Italian in island constructions and there are no asymmetries in acceptability with extraction of D-linked and non D-linked wh-phrases. Therefore, the asymmetry in (77) and (78) must be due to other reasons. One possibility is that D-linked wh-phrases and non D-linked wh-phrases are inherently different in Italian, pace Pesetsky (1997); Dayal (1996); Polinsky (2001); Lipták (2001); Grewendorf (2012). This argument would actually not part too much from Rizzi's. The update just consists in arguing that D-linked wh-phrases and non D-linked wh-phrases target different position and, crucially, the movement is triggered by different features: [TOPIC] and [WH]. If D-linked wh-phrases carry a [TOPIC] feature and, therefore, undergo Topic-movement to a Topic position in the HLP, then there should not be any relativized minimality issues arising between *quanti problemi*$_{[\text{TOPIC}]}$ and *come*$_{[\text{WH}]}$ in cases like (77). On the other hand, *quanti soldi*$_{[\text{WH}]}$ in (78) is not D-linked and, therefore, carries a regular [WH] feature (and undergoes movement to the dedicated whP). In this case, relativized minimality effects arise, as *come*$_{[\text{WH}]}$ is in the way.

After this digression about Italian, let me circle back to ValPa. Earlier in this section, I have shown that D-linked wh-phrases in ValPa are less constrained when it comes to word order patterns. Bare wh-phrases must occur before all other A'-elements in the LLP, as they target a dedicated wh-position at the higher end of the periphery, whereas in the HLP they occur after all A'-elements, as the wh-position in very low. On the other hand, D-linked wh-phrases can intersperse more freely with Focus and Topics, both in the LLP and the HLP. This difference suggests that bare and D-linked wh-phrases target different positions. Bare wh-phrases target the canonical wh-position in both peripheries, which in the LLP it is situated at the upper end of the periphery (68), while in the HLP it is situated at the lower end of the HLP (72). On the other hand, the freer word order with D-linked wh-phrases is evidence that they do not target the same position as bare wh-phrases. I argue that they target a Topic position and for this reason can occur both before and after topicalized and focalized constituents, in both peripheries, see once again (68) and (72). Furthermore, the targeting of different positions suggests that bare and D-linked wh-phrases carry different features: [TOPIC] and [WH] respectively. This also neatly explains the asymmetry in island violations in Italian discussed above. ValPa patterns exactly like Italian: the only type of islands where extraction of a D-linked wh-phrase is less degraded than extraction of a bare wh-phrase are wh-islands. The examples provided below are the ValPa version of the Italian ones discussed above and in Rizzi (2001). As can be seen in the example pair below, extraction of a D-linked wh-phrase like *veu de dzi* 'how many people' is allowed, (83), whereas extraction of a non D-linked wh-phrase like *veu de soou* 'how much money' is disallowed.

(83) Veu de dzi te so pò [comèn trov-éi _ ]?
how.much PART people CL.NOM.2SG know.PRS.2SG NEG how find-INF
'For which x such that x is an amount of people, you don't know how to find x?'

(84) *Veu de soou te so pò [comèn trov-éi _ ]?
how.much PART money CL.NOM.2SG know.PRS.2SG NEG how find-INF
Intended: 'For which x such that x is an amount of money, you don't know how to find x?'

If we look at extraction out of any other types of island, there is no difference in the acceptability, as exemplified below for *perqué* adjunct islands. The whole array of islands in ValPa will be discussed in Chapter 10.

(85) *Veu de dzi s' è eunmaleuchi-é-e [perqué te trouv-e pò _ ]?
how.much PART people CL.REFL.3 be.PRS.3SG get.mad-PST-PTCP.F-SG because CL.NOM.2SG find-PRS.2SG NEG
Intended: 'For which x such that x is an amount of people, (s)he got mad because you cannot find x?'

(86) *Veu de soou s' è eunmaleuchi-é-e [perqué te trouv-e pò _ ]?
how.much PART people CL.REFL.3 be.PRS.3SG get.mad-PST-PTCP.F-SG because CL.NOM.2SG find-PRS.2SG NEG
Intended: 'For which x such that x is an amount of money, (s)he got mad because you

cannot find x?'

Unfortunately, ValPa does not allow multiple wh-phrases (see Chapter 4), therefore it is not possible to investigate superiority effects. However, if there were a language exactly like ValPa, but that allowed multiple wh-phrases, I would expect that language to never display superiority effects with multiple D-linked wh-phrases, as topicalized constituents are not subject to them, as shown in example (87).

(87) a. *À Gianni lo livro* te 'llie-lo
to Gianni DET.DEF.M.SG book CL.NOM.2SG CL.DAT.3SG-CL.ACC.M.SG
baill-e deman.
give-PRS.3SG tomorrow
'To Gianni you will give the book tomorrow.'

b. *Lo livro à Gianni* te 'llielo baill-e deman.

c. *Lo livro* te 'llielo baille deman *à Gianni*.

d. *À Gianni* te 'llielo baille deman *lo livro*.

This analysis can also explain the difference in superiority effects in English, see (74) and (75), but I leave this open for future research. As far as ValPa is concerned, I believe it is safe to state that D-linked and non D-linked wh-phrases target different position in the LLP and HLP, which accounts for the different word order patterns as well as island violations discussed in this section. The question that arises at this point is whether the movement and nature of D-linked wh-phrases is subject to parametric variation. One can imagine there are three kinds of languages. In languages of the first kind, D-linked and bare wh-phrases target the same position and both movements are driven by the same feature, e.g. [WH]. These languages are predicted to always show superiority effects with multiple wh-questions, (74)-(75), and violations in wh-island constructions, like (76). In languages of the second kind, D-linked and bare wh-phrases target the same position, but their movement is driven by different features, e.g. [WH] and [TOPIC]. In such languages, bare and D-linked wh-phrases display the same word order patterns but there will be no superiority effects with multiple D-linked wh-phrases (as well as with a D-linked and a bare one) or wh-island violations with a D-linked extractee. Finally, in the third group of languages (which includes ValPa), D-linked and bare wh-phrases target different positions and have different features. In these languages, the occurrence of D-linked wh-phrases is freer than that of bare wh-phrases, and there are no superiority effects with multiple D-linked wh-phrases (or a D-linked and a bare one), in languages that allow multiple wh-phrases, nor wh-island violations when extracting a D-linked wh-phrase.

## 6.5 What about other kinds of Foci?

Throughout this chapter, I have discussed the co-occurrence of wh-phrases and Contrastive Focus. The reason behind this choice stems from the fact that many analyses of wh-as-focus movement, especially cartographic ones (see work by Rizzi (1997), Rizzi and Bocci (2017), and Bonan (2018, 2019) among others) as well as some more generic work on Focus in Romance (Samek-Lodovici, 2015), only take into account Contrastive Focus. Yet, as discussed in Chapter 3, there are four types of Foci that are syntactically and semantically different: New Information, Corrective, Contrastive, and Mirative. The question that arises at this point is whether the 'other' Foci not discussed so far target whP, FocP, like Contrastive Focus, or another position. As mentioned earlier, these types of Foci cannot occur in questions (wh- and Y/N) altogether, therefore testing their co-occurrence with wh-phrases is impossible. I have shown in Chapter 3 that in ValPa Corrective and New Information Focus can only be post-verbal in ValPa. The examples are repeated below, in (88) for New Information Focus and in (89) for Corrective Focus.

(88) A: Dequé t' atsit-e?
what CL.NOM.2SG buy-PRS.2SG
'What are you buying?'

B1: Dz' atsit-o lo pan.
CL.NOM.1SG buy-PRS.1SG DET.DEF.M.SG bread
'I am buying bread.'

B2: *Lo pan dz'atsito.

(89) A: N' en invit-ò Nelly.
CL.NOM.1PL have.PRS.1PL invite-PST.PTCP Nelly
'We have invited Nelly.'

B1: Na, n' en invit-ò Clara (, pò Nelly)
no CL.NOM.1PL have.PRS.1PL invite-PST.PTCP Clara NEG Nelly
'No, we have invited Clara (not Nelly).'

B2: ?? Na, Clara n'en invitò (, pò Nelly)

Mirative Focus, (90), can be both pre- and post-verbal, just like Contrastive Focus:

(90) a. Pens-a te! AVOUË LO SEN PÉE
think-PRS.2SG CL.NOM.2SG with-DET.DEF.M.SG DET.DEF.M.SG Pope
vull-i-e predj-éi!
want-PST-3SG speakINF
'Imagine! He wanted to speak with the Pope!'

b. Pensa te! Vullie predjéi AVOUË LO SEN PÉE!

This asymmetry in their surface positions suggests that different types of Foci may not target the same positions. As far as Corrective Focus in Italian is concerned, Bocci (2013) argues that non-fronted Corrective Foci are actually in situ. This also nicely fits with the fact that Corrective Foci require the repetition *verbatim* of the content of the previous utterance, as in echo-questions.[6,7] Therefore, it could be that focalized constituents in Corrective Focus constructions are in fact in situ.

However, if we look at the relative position of Corrective Focus and Topics (Topics are shown in italics in the examples), we see that both orders CorrF>Topic and Topic>CorrF are possible, as exemplified in (91). Recall that the unmarked word order in ValPa is DO>IO. Therefore, if Topics like *lo livro* in (91) are dislocated to the LLP, as I argue in Section 6.1, it follows that the order in (91) CorrF$_{IO}$>Topic$_{DO}$ is evidence that the Corrective Focus *à Clara* is not in its base position. Given its post-verbal position, it can only have been displaced to the LLP, as in simplified (92).[8]

(91) A: N' en baill-à-lo *à Nelly*
CL.NOM.1PL have.PRS.1PL give-PST.PTCP-CL.ACC.M.SG to Nelly
*lo livro*.
DET.DEF.M.SG book
'We have given it to Nelly the book.'

B1: Na, n' en baill-à-lo À CLARA
no CL.NOM.1PL have.PRS.1PL give-PST.PTCP-CL.ACC.M.SG to Clara
*lo livro* (, pò à Nelly)
DET.DEF.M.SG book NEG to Nelly
'No, we have given it to Clara (not to Nelly).'

B2: Na, n' en baillàlo *lo livro* À CLARA (, pò à Nelly).

[6]Badan and Crocco (2019) demonstrate that echo-questions and Corrective Focus constructions have the same prosody. I shall come back to this point when I discuss the prosody of wh-questions in Chapter 8.

[7]However, the repetition *verbatim* can undergo modifications for person and number (e.g. first person *VS* second person), precisely as in echo questions.

[8]Here the past participle is shown in T for reasons of space, but see the discussion in Chapter 3.2 for a discussion on verb movement in ValPa.

(92) [$_{\text{TP}}$ N'en baillàlo [$_{\text{TopP}}$ [$_{\text{FocP}}$ À CLARA [$_{\text{TopP}}$ lo livro [$_{\text{vP}}$ [$_{\text{VP}}$ ~~À CLARA~~ ~~lo livro~~ ]]]]]]

On the other hand, in (91), the word order is Topic>CorrF. There are two possible explanations for this word order: the Corrective Focus *à Clara* is in fact in situ, inside the VP, whereas the Topic has been displaced to the LLP, as in (93-a) or both the Topic and the Corrective Focus have been displaced. Since in the LLP Topics surround the Focus position, both CorrF>Topic and Topic>CorrF orders are possible with displaced constituents.

(93) a. [$_{\text{TP}}$ N'en baillàlo [$_{\text{TopP}}$ [$_{\text{FocP}}$ [$_{\text{TopP}}$ lo livro [$_{\text{vP}}$ [$_{\text{VP}}$ À CLARA ~~lo livro~~ ]]]]]]

b. [$_{\text{TP}}$ N'en baillàlo [$_{\text{TopP}}$ lo livro [$_{\text{FocP}}$ À CLARA [$_{\text{TopP}}$ [$_{\text{vP}}$ [$_{\text{VP}}$ ~~À CLARA~~ ~~lo livro~~ ]]]]]]

If we add another Topic, as in (94), we see that the order can be Topic>CorrF>Topic. Therefore, it seems safe to conclude that both Topics and the Corrective Focus in (94) have been displaced to the LLP. The word order further suggests that the Corrective Focus does not target the highest position in the LLP, namely the one occupied by wh-phrases, but rather FocP in the middle of the periphery. This means that Corrective and Contrastive Focus target the same position in the LLP: FocP. Recall that ValPa does allow pre-verbal Corrective Focus, therefore the same cannot be said about FocP in the HLP (the reason why this is impossible is not clear; I leave the question open for future research).

(94) A: 'Llie-lo port-o *à Nelly* deman *lo* *livro*.
CL.DAT-ACC.M.SG bring-PRS.1SG to Nelly tomorrow DET.DEF.M.SG book
'I will bring it tomorrow the book to Nelly.'

B: Na, te 'llie-lo port-e *à Nelly*
no CL.NOM.2SG CL.DAT-CL.ACC.M.SG bring-PRS.2SG to Nelly
APRIDEMAN *lo* *livro* (, pò deman).
the day after tomorrow DET.DEF.M.SG book NEG tomorrow
'No, you will bring the book to Nelly the day after tomorrow, not tomorrow.'

(95) $[_{\text{TP}}$ ... $[_{\text{TopP}}$ à Nelly $[_{\text{FocP}}$ aprideman $[_{\text{TopP}}$ lo livro $[_{v\text{P}}$ ~~aprideman~~ $[_{\text{VP}}$ ~~à N.~~ ~~lo livro~~ ]]]]]]

Now onto New Information Focus, namely the kind of narrow focus we find in answers to wh-questions, as in (88) above. Just like in the variety of Italian spoken in Aosta Valley, New Information Focus can only be post-verbal. Testing the relative position of New Information Focus and Topics in the LLP is tricky, because in an answer to (96), the most likely response will omit the Topics and only contain the clitics. Nevertheless, in case we were to include the Topics in the answer, we see that the preferred order is NIF>Topics, as in (97).

(96) A: Quan te 'llie-lo baill-e *lo* *livro à* *Nelly*?
when CL.NOM.2SG CL.DAT-CL.ACC.M.SG give-PRS.2SG DET.DEF.M.SG book to Nelly
'When will you give the book to Nelly?'

B: 'Llie-lo baill-o deman.
CL.DAT-CL.ACC.M.SG give-PRS.2SG tomorrow
'I will give it to her tomorrow.'

(97) A: Quan te 'llie-lo baill-e *lo* *livro à* *Nelly*?
when CL.NOM.2SG CL.DAT-CL.ACC.M.SG give-PRS.2SG DET.DEF.M.SG book to Nelly
'When will you give the book to Nelly?'

B1: 'Llie-lo baill-o DEMAN *lo* *livro à Nelly*.
CL.DAT-CL.ACC.M.SG give-PRS.2SG tomorrow DET.DEF.M.SG book to Nelly

'I will give it tomorrow the book to Nelly.'

B2: $^{??}$'Llielo baillo *lo livro* DEMAN *à Nelly*.

B3: $^{??}$'Llielo baillo *lo livro à Nelly* DEMAN .

At this point, it is reasonable to assume that New Information Focus targets a position at the upper end of the LLP. As mentioned above, this type of Focus cannot occur in questions, since it is only viable in an answer to a wh-question. Therefore, it is not possible to test its position relative to that of wh-phrases. It could be that New Information Focus targets the same position as wh-phrases at the higher end of the LLP, or another dedicated $\text{FocP}_{\text{NIF}}$ which is situated above the highest Topic projection, as in (98). The latter solution has been proposed for the Italian HLP by Benincà and Poletto (2004) and–with slight modifications–by Bianchi and Bocci (2012). The core idea is that the Focus field actually has two projections: a Contrastive FocP and an Information Focus (IF) in FocP. According to Benincà and Poletto (2004), the two FocP are adjacent, and no Topic projection can interpolate, as in (99).

(98) $[_{\text{FocPNIF}}$ NIF $[_{\text{TopP}}$ $[_{\text{FocP}}$ CF/CorrF $[_{\text{ToP}}$ $[_{\text{vP}}$ ... ]]]]]

(99) $[_{\text{TopP}}$ Topic $[_{\text{TopP}}$ Topic $[_{\text{FocP}}$ $[_{\text{FocP}}$ CF/CorrF $[_{\text{FocP}}$ IF $[_{\text{TP}}$ ... ]]]]]]

The last type of Focus that I will discuss in this section is Mirative Focus: narrow focus constructions that express the speaker's surprise, unexpectedness, or counter-expectation regarding the information being conveyed (Cruschina, 2021), as in (90) above. The literature on Mirative Focus is scarce, as the notion is relatively recent (the research on this type of Focus started with Cruschina' (2012) work on information structure). The assumption is that Mirative Focus is a subtype of Contrastive Focus (Bianchi and Bocci, 2012) and, therefore, undergoes Focus fronting on a par with Contrastive Focus, targeting FocP in the HLP (Bianchi and Bocci, 2012; Cruschina et al., 2015; Cruschina, 2019b,a). Mirative Focus in ValPa can occur both pre- and post-verbally, which confirms its similarity with Contrastive Focus. It can also precede and follow Topics, both in the HLP (100-a) and the LLP (100-b).

(100) a. *Lo* *pouer* À LA METRA (*lo puoer*) l'
DET.DEF.M.SG pig to DET.DEF.F.SG teacher CL.NOM.3SG
ou lo baill-éi, pens-a te!
want.PRS.3SG CL.ACC.M.SG give-INF think-IMP.2SG CL.NOM.2SG
'To the teacher he wants to give the pig!'

b. L'ou lo bailléi *lo pouer* À LA METRA (*lo puoer*), pensa te!

This evidence suggests that, as claimed by Bianchi and Bocci (2012); Cruschina et al. (2015); Cruschina (2019b,a), Mirative Focus is indeed a subtype of Contrastive Focus and targets the same position in both peripheries: FocP. Furthermore, similarly to Benincà and Poletto's (2004), in Bianchi and Bocci's (2012) also proposes two FocPs in the HLP, (101): a lower one available to all kinds of Foci, and a higher one, only targeted by Corrective and Mirative Focus.

(101) [$_{\text{TopP}}$ Topic [$_{\text{TopP}}$ Topic [$_{\text{FocP}}$ CorrF/Mirative [$_{\text{FocP}}$ Focus [$_{\text{TP}}$ ... ]]]]]

This thesis does not aim to analyze the various Focus constructions in ValPa, but given the argumentation against a wh-as-focus movement analysis in this Chapter, a brief discussion of the positions targeted by different kinds of Foci, summarized in Table 6.1, appears warranted. What I have shown here is that not all Foci target the same position and that New Information Focus appears to target in the LLP either the same position as wh-phrases or a dedicated XP at the

Table 6.1: Position targeted by different kinds of Foci in ValPa

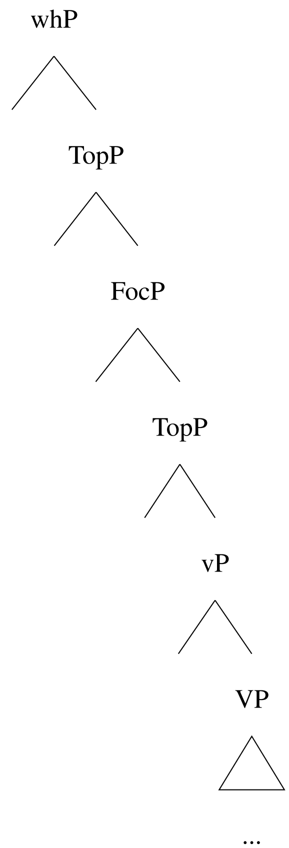
| | **HLP** | **LLP** |
|---|---|---|
| **Contrastive** | FocP | FocP |
| **Corrective** | N/A | in situ/FocP |
| **New Information** | N/A | whP or a dedicated XP above TopP |
| **Mirative** | FocP | FocP |

higher end of the periphery.

## 6.6 Chapter summary

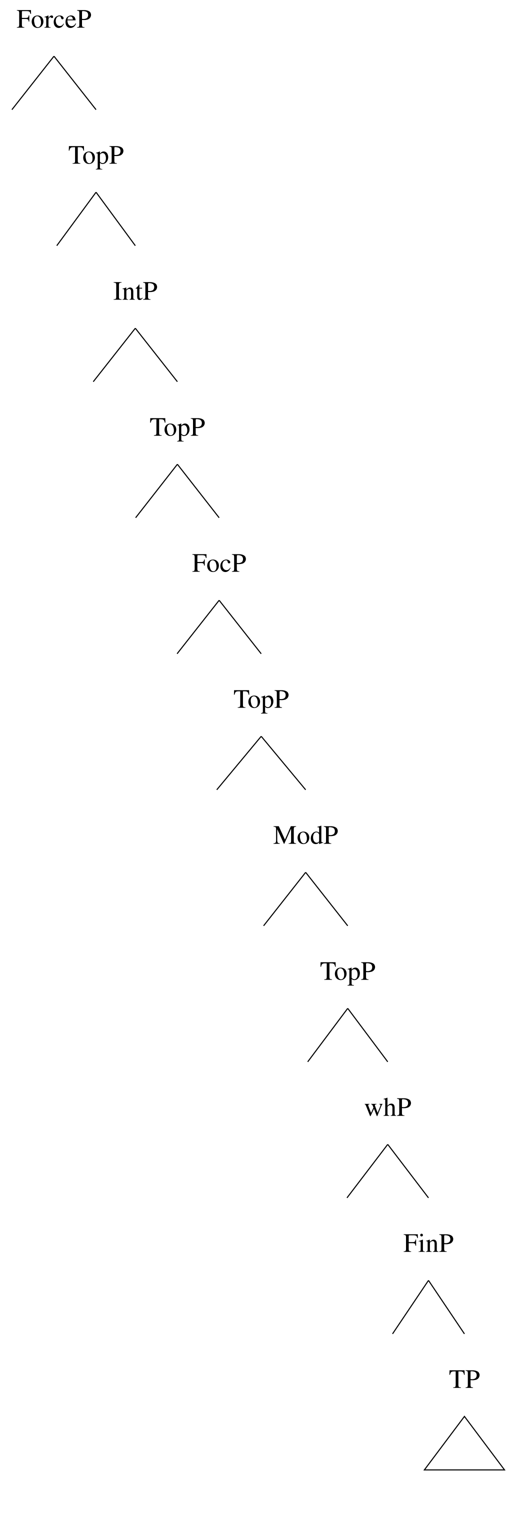
In this chapter, I have argued that previous analyses of CIwh-phrases as targeting a Focus projection in the LLP are untenable for ValPa. I have presented evidence that wh-phrases target a dedicated position at the upper end of the LLP, which I have labeled whP. Constrastively focalized constituents, on the other hand, target a lower position in the LLP: FocP.

(102) **The structure of the ValPa LLP**




In the ValPa HLP, matrix or embedded, wh-phrases can also co-occur with focalized constituents. Such co-occurrence is not unique to ValPa, it also extends to some varieties of Italian. However, the order in the HLP is the mirror image of the one in LLP:

(103) **The revised structure of the HLP**




In Section 6.3, I discussed possible feature combinations and argued that a wh-as-focus movement analysis is not only incorrect (for ValPa and Italian) but also theoretically problematic in general for languages that allow the co-occurrence of wh-phrases and focalized constituents, as it leads to relativized minimality violations in a wide array of derivations. Data from Hungarian and San Lucas Quiaviní Zapotec further question a wh-as-focus movement analysis.

Finally, I have discussed the position of D-linked wh-phrases. The latter do not behave like bare wh-phrases and are freer in their position with respect to other wh-phrases within one periphery. I have argued that D-linked wh-phrases undergo topic-movement to a Topic position, both in the LLP and the HLP. This analysis fits into a broader discussion on the nature of D-linked wh-phrases and provides potential answers for other phenomena witnessed with D-linked wh-phrases, such as superiority effects and lack of wh-islands violations.

# Chapter 7: Further movement up

In Chapter 4, I have presented evidence that ValPa CIwh-phrases are not in situ: they have moved to the LLP. However, it is not yet clear what the derivations are for (1-a) and (1-b).

(1) a. **À qui** t' à baill-à lo livro?
to who CL.NOM.2SG have.PRS.2SG give-PST.PTCP DET.DEF.M.SG book
'To whom did you give the book?'

b. T'à baillà **à qui** lo livro?

In this chapter, I will analyze the structure of the constructions in (1) and consider two hypotheses. The first hypothesis, WYSIWYG, is that ValPa CIwhs remain in the LLP, meaning that optionality is accounted for in the syntax, and (1-a) and (1-b) are derivationally different. The interpretation of the wh-phrase can be achieved either via focus alternatives or via Q-movement, à la Bonan (2018).

**Hypothesis 1**: What You See Is What You get (WYSIWYG)

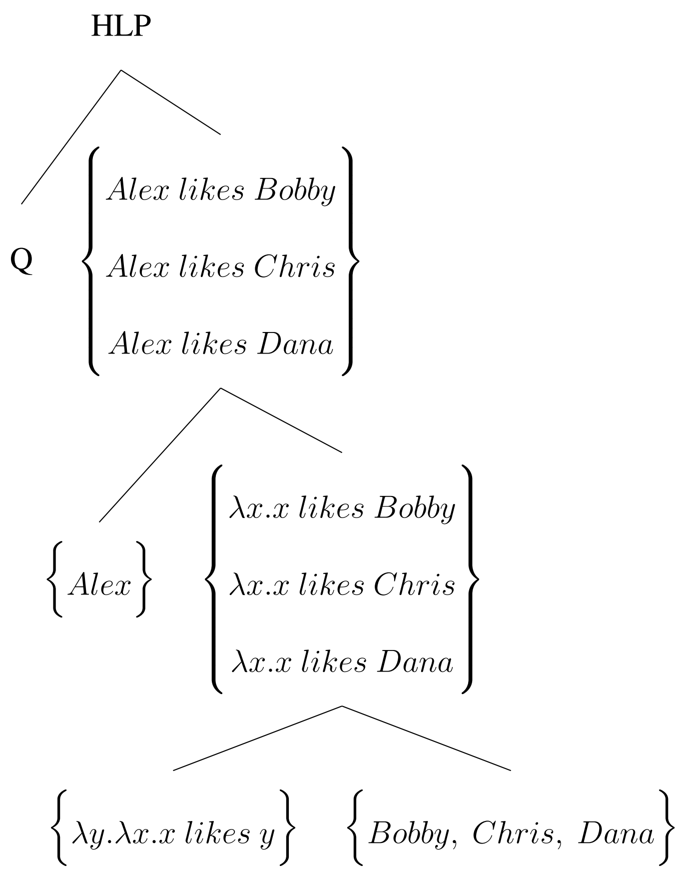
clause-internal wh-phrases in ValPa move to the LLP and remain 'frozen' there

a. The wh-phrase is interpreted via Focus Alternatives

b. The wh-phrase is interpreted via Q-movement

The first possibility, Hypothesis 1a, is that there is an interrogative operator in the HLP, and the wh-phrase is interpreted via Focus Alternatives (or Hamblin semantics), as argued for wh-in-situ by several researchers (Hamblin, 1973; Rooth, 1985, 1992; Beck, 2006; Bruening and Tran, 2006; Kotek, 2016). In this mechanism, the denotation of the wh-phrase is the set of alternatives, as illustrated in the simplified (2)[1] for the toy English example *Alex likes who?* At the TP level, the resulting set of alternative propositions combines with a question operator (Q), which can pick out of the set of alternatives the possible answer(s). The semantics of the questions is, thus, derived without the need for the wh-phrase to move, either in narrow syntax or at LF.[2]

(2)




(Adapted from (Kotek, 2014, p. 23))

[1]I am very grateful to my colleague Utku Turk for helping me craft these examples.

[2]The derivation shown here is simplified to the bone, merely to exemplify the relevant facts. I refer the reader to Hamblin (1973), Rooth (1985, 1992), and Kotek (2014) for more details on the computation.

Going back to the ValPa data and Hypothesis 1a, the derivation for example (1-b) would be as in (3). The wh-phrase moves from the base position to the LLP and from there the scope is calculated via Focus Alternatives.

(3) **Focus Alternatives**: $[_{\text{whP}}$ [Q] $[_{\text{TP}}$ $[_{\text{whP}}$ **à qui** $[_{\text{vP}}$ $[_{\text{VP}}$ ~~à qui~~ ]]]]]

The second possibility, Hypothesis 1b, is to resort to Q-adjuction (Cable, 2010; Bonan, 2019) and argue that in (1-b) the Q-particle gets fronted and the wh-phrase remains in the LLP. The main distinction between Hypotheses 1a and 1b is that the latter still requires movement to the scope position, albeit what is being moved is a silent particle. Hypothesis 1a, on the other hand, does not involve movement of anything interrogative (wh-phrase or QP) past the LLP.

(4) **Q-adjunction**: $[_{\text{whP}}$ $[_{\text{QP}}$ Q] $[_{\text{TP}}$ $[_{\text{whP}}$ $[_{\text{PP}}$ ~~$_{\text{QP}}$ Q]~~ **à qui**] $[_{\text{vP}}$ $[_{\text{VP}}$ ~~$[_{\text{PP}}[_{\text{QP}}$ Q] à qui]~~ ]]]]]

Hypothesis 2, Further movement up, is that wh-phrases do not remain frozen in the LLP (contra Bonan (2019)), but move up to the position where they take scope. This hypothesis in turn contains two sub-hypotheses, as movement could be covert, that is happening at LF, or take place in narrow syntax. In this latter case, (1-a) and (1-b) would be derivationally identical and only differ in which copy of the chain gets pronounced (Bobaljik 1995; Bošković; 2002; Amaechi and Georgi 2020; a.o.)

**Hypothesis 2**: Further movement up

clause-internal wh-phrases in ValPa move to the LLP and then to the position they take scope from

a. The second leg of movement happens covertly: CIwh-phrases move overtly to the LLP and then covertly to the (matrix) HLP

b. The second leg of movement happens overtly: CIwh-phrases move overtly to the LLP and then to the (matrix) HLP. The different word-orders are then accounted for by deletion of different copies

I will resort to four diagnostics, intervention effects, inverse scope (discussed as a subtype of intervention effects, in Section 7.1.3), binding, and parasitic gaps, and argue in favor of Hypothesis 2b (4-b). CIwh-phrases do not remain frozen in the LLP, but move to the position they take scope from *in narrow syntax*. The different word-orders (1) are the result of the deletion of different copies in the chain.

## 7.1 Intervention effects

Intervention effects (IEs) occur when an element X intervenes between two other elements A and B that need to establish a grammatical relationship (such as agreement, binding, or scope), (5). The intervener disrupts this relationship, often resulting in ungrammatical sentences (Beck, 1996; Beck and Kim, 1997; Ouhalla, 1996; Bošković, 1998; Mathieu, 1999; Beck, 2006). For instance, IEs occur when a wh-phrase remains in the scope of a quantificational operator, such as negation. In these cases, fronting of the wh-phrase becomes obligatory to establish the necessary relationship. In (6), I report the list of interveners from Beck (2006); crosslinguistically IEs are most common with focusing particles, like *only*, *even* and *also*.

(5) **Intervention Effects**: a wh-phrase in situ (i.e. a variable) in wh-questions cannot remain in the scope of other scopal elements/operators:

*[Op ... [Op ... [variable]]]

(Adapted from (Mathieu, 1999, p. 445))

(6) **Possible interveners per (Beck, 2006, p. 3)**

a. Negation

b. Quantificational adverbs: *always, often, never*

c. Quantifiers: *every, no, most, few* (and other nominal quantifiers)

d. Focusing particles: *only, even, also*

Fronting, overtly or covertly (Kotek, 2016; Sulemana 2019; a.o.) allows the wh-phrase to move and take wide scope over the intervener. On the other hand, wh-in-situ that do not undergo any movement are subject to IEs: both the Focus Alternatives (Pesetsky, 2000; Kotek, 2014, 2016) and Q-movement (Beck, 2006; Cable, 2010; Sulemana, 2019) are subject to IEs, as sketched in (7) and (8) respectively (interveners shown in red). In French, for instance, it is widely claimed that wh-in-situ cannot remain in the scope of the negation (underlined), as in (9) (Cheng, 1997; Bošković, 1997, 2000; Mathieu, 1999; Boucher, 2010).[3] As discussed in Chapter 5, evidence like (9) led linguists to argue that *à qui* in (9-a) stays in situ throughout the derivation.

(7) Focus Alternatives: $[_{\text{HLP}}$ Q $[_{\text{TP}}$ $[_{\text{NegP}}$ **NEG** $[_{\text{VP}}$ wh-phrase ]]]]

(8) Q-movement: $[_{\text{HLP}}$ $[_{\text{QP}}$ Q] $[_{\text{TP}}$ $[_{\text{NegP}}$ **NEG** $[_{\text{VP}}$ $[_{\text{DP}}$ ~~$[_{\text{QP}}$ Q]~~ [wh-phrase]] ]]]]

[3]Although work in progress by Baunaz, Bocci, and Shlonsky seems to suggest that in modern-day French the wh-phrase is insensitive to IEs in matrix clauses. See also the discussion in Chapter 5.

(9) a. *T' à pas parl-é **à qui**?
CL.NOM.2SG have.PRS.2SG NEG speak-PST.PTCP to who
'To whom didn't you speak?'

b. **À qui** tu as pas parlé?

c. **À qui** est-ce que tu as pas parlé?

German is a more appropriate example for the ValPa puzzle, as it allows partial wh-movement. Wh-phrases that have undergone partial movement are subject to IEs (Beck, 1996). The wh-phrase *wen* 'whom' can be fronted (10-a) or undergo partial movement (10-b) to the HLP of the embedded clause, while the non-contentive wh-phrase *was* 'what', here glossed as WH, occupies the position in the matrix HLP. The presence of the negation blocks the licensing of the wh-phrase *mit wem* 'with whom' via Focus Alternatives (cfr. (11-a) and (11-b)), and fronting of the wh-phrase is necessary (11-c).[4]

(10) a. **Wen** glaubt Uta dass Karl ~~wen~~ gesehen hat?
who.ACC believe.PRS-3SG Uta COMP Karl see.PST.PTCP have.PRA-3SG
'Who does Uta believe that Karl saw?'

b. Was glaub-t Uta **wen** Karl ~~wen~~ gesehen hat?
WH believe.PRS-3SG Uta who.ACC Karl see.PST.PTCP have.PRA-3SG
'Who does Uta believe that Karl saw?'

(Mathieu, 1999, p. 449)

(11) a. *Was glaub-st du nicht **mit wem** Hans ~~mit wem~~
WH believe.PRS-2SG NOM.2SG NEG with who.DAT Hans
gesprochen ha-t?
speak.PST.PTCP have.PRS-3SG
'Who don't you believe that Hans has spoken to?'

[4] Glosses are my own.

b. Was glaubst du **mit wem** Hans ~~mit wem~~ gesprochen hat?

c. **Mit wem** glaubst du nicht dass Hans ~~mit wem~~ gesprochen hat?

(Beck, 1996, p. 3)

Going back to the hypotheses under consideration here, the predictions are as follows. Hypothesis 1 (WYSIWYG) predicts CIwh-phrases in ValPa to be subject to IEs. This is because, despite the partial movement, they would still remain in the scope of the intervener all the way through LF, just like in German. Hypothesis 2 (Further movement up), on the other hand, predicts that ValPa CIwh-phrases are not subject to IEs, as they move over the intervener, either in narrow syntax or at LF. I will present data on the interveners in (6) in separate subsections.

### 7.1.1 Negation

In ValPa, CIwh-phrases can surface in the scope of the negation *pò* (74-b), which is situated just below T (Zanuttini, 1997; Cinque, 1999), as shown in the simplified (13). Thus, despite surfacing clause-internally, at some point in the derivation the CIwh-phrase *dequé* has moved over the negation, and can thus take scope over the entire clause (12-c), like its fronted counterpart (12-a). The derivation is shown in (13), with the second leg of movement here shown as a dashed line to indicate that it is not clear at this point whether the movement happens in narrow syntax or at LF.

(12) a.

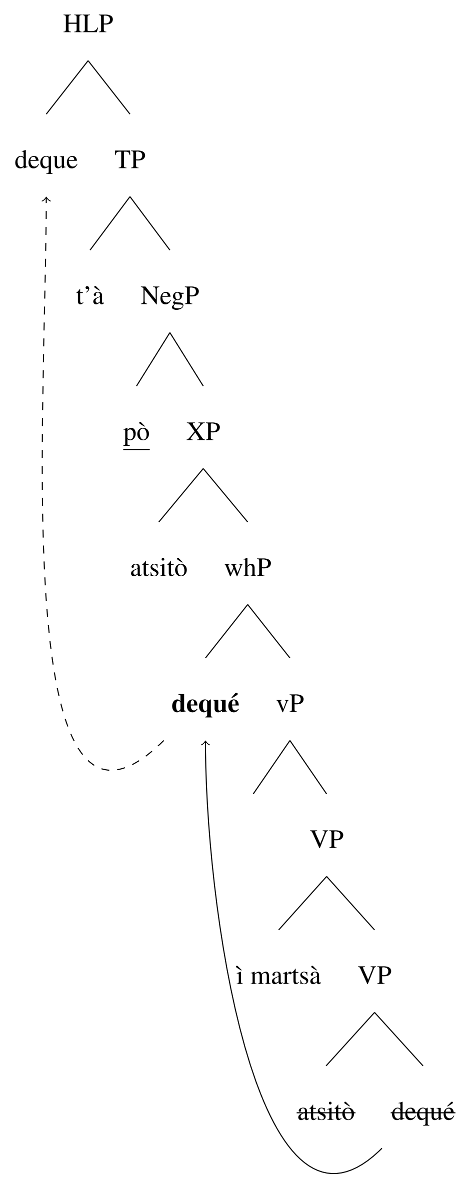
| | | | | | | |
|---|---|---|---|---|---|---|
| **Dequé** | t' | à | pò | atsit-ò | ì | martsà? |
| what | CL.NOM.2SG | have.PRS.2SG | NEG | buy-PST.PTCP | at.the | market |

‘What didn’t you buy at the market?’

b. T’à pò atsitò **dequé** ì martsà?

c. ~~Dequé~~ t’à pò atsitò **dequé** ì martsà?

(13)




ValPa wh-phrases are not subject to IEs from negation even in long-distance movement. In (14), the wh-phrase manages to escape the scope of the negation, like its fronted counterpart, which means that most it must move–at least–to the embedded HLP, as in (14-c). Note that there is also no intervention when the negation is in the matrix clause, as in (15).

(14) a. **Dequé** l' à deut [que l'
what CL.NOM.3SG have.PRS.2SG say-PST.PTCP COMP CL.NOM.3PL
ari-on pò atsit-ò]?
have.COND-3PL NEG buy-PST.PTCP
'What did he tell that they wouldn't buy?'

b. L'à deut [que l'arion pò atsitò **dequé**]?

c. L'à deut [~~dequé~~ que l'arion pò atsitò **dequé** ]?

(15) a. **Dequé** l' à pò deut [que l'
what CL.NOM.3SG have.PRS.2SG NEG say-PST.PTCP COMP CL.NOM.3PL
ari-on atsit-ò]?
have.COND-3PL buy-PST.PTCP
'What didn't he tell that they would buy?'

b. L'à pò deut [que l'arion atsitò **dequé**]?

c. ~~Dequé~~ l'à pò deut [que l'arion atsitò **dequé** ]?

In this respect, ValPa differs from French once again. Earlier in this section, I mentioned an ongoing study by Baunaz, Bocci, and Shlonsky, who argue that in fact French wh-in-situ is immune to IEs from negation in matrix clauses (see fn 3). They also claim that wh-in-situ is not sensitive to IEs from negation when the two elements are clause mates. Therefore, in French the configuration like the one in (14) would is fine, while the one in (15) would not be felicitous.

The evidence presented in this section matches the prediction of Hypothesis 2: CIwh-phrases do not remain put in the LLP. They move to the HLP (most likely the matrix HLP) to escape the scope of the negation.

### 7.1.2 Habitual adverbs

As far as quantificational adverbs *souvent* 'often' and *toujours* 'always', which are situated below T (Cinque, 1999), no IEs are witnessed in ValPa: the CIwh-phrase is licensed in the scope of the adverb (16-b). In fact, for temporal adverbs, the order in (16-b) is preferred to its fronted counterpart (16-a), especially with *soèn* 'often'. This most likely follows from the strong presupposition associated with habitual adverbs. Once again, this is evidence that at some point in the derivation, *dequé* has moved over the adverb to take wide scope over the whole clause (16-c), as in (17).

(16) a.

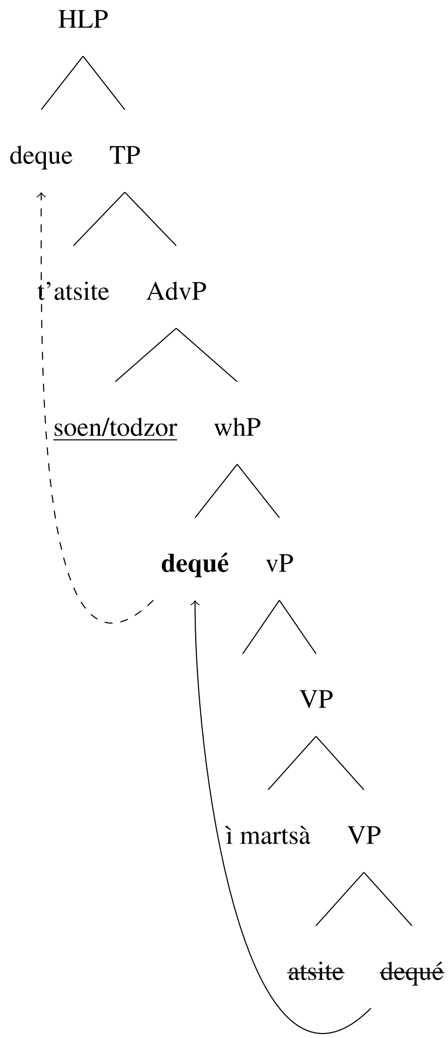
| | | | | | |
|---|---|---|---|---|---|
| **Dequé** | t' | atsit-e | soèn/todzor | ì | martsà? |
| what | CL.NOM.2SG | buy-PRS.2SG | often/always | at.DET.DEF.M.SG | market |

'What do you often/always buy at the market?'

b. T'atsite soèn/todzor **dequé** ì martsà?

c. ~~Dequé~~ t'atsite soèn/todzor **dequé** ì martsà?

(17)




Just like with negation, CIwh-phrases in ValPa are not sensitive to IEs from habitual adverbs in cases of long-distance wh-movement. This means that in (18), the wh-phrase must have moved at least to the edge of the embedded clause to escape the scope of the habitual abverb, as in (18-c). On the other hand, in (19), since the habitual adverb is in the matrix clause, the wh-phrase must have moved to the matrix HLP.

| | | | | | | |
|---|---|---|---|---|---|---|
| (18) | a. | **Dequé** | t' | à | deut | [que | atsit-e |
| | | what | CL.DAT.2SG | have.PRS-3SG | say.PST.PTCP | COMP | buy-PRS.3SG |

soèn/todzor ì martsà]?
often/always at.DET.DEF.M.SG market

'What did she said that she often/always buy at the market?'

b. T'à deut [que atsite soèn/todzor **dequé** ì martsà]?

c. T'à deut [~~dequé~~ que atsite soèn/todzor **dequé** ì martsà]?

(19) a. **Dequé** te di soèn/todzor [que atsit-e
what CL.NOM.2SG say.PRS.3SG often/always COMP buy-PRS.3SG
ì martsà]?
at.DET.DEF.M.SG market

'What does she often/always tell you that she buys at the market?'

b. Te di soèn/todzor [que atsite **dequé** ì martsà]?

c. ~~Dequé~~ te di soèn/todzor [que atsite **dequé** ì martsà]?

Once again, the prediction from Hypothesis 2 is borne out: CIwh-phrases in ValPa are not subject to IEs from temporal adverbs. This means that they move outside the scope of such elements, which are located below T but above vP (cf. (Cinque, 1999)), to a wh-position in the HLP, albeit it is not clear yet if the movement happens in narrow syntax or at LF, hence the dashed line in (17).

### 7.1.3 Quantifiers as interveners *aka* inverse scope

The next category of interveners that Beck (2006) discusses is quantifiers. Before moving to IEs caused by quantifiers in ValPa, it is necessary to first establish the scope relations in ValPa on a general plane. ValPa, like English, has both surface and inverse scope: inverse scope readings are hard to access, yet not ruled out. The main reading of (20) is the one in (20-a). However, if we construct an example where the surface scope reading goes against the speaker's knowledge of the world, then the inverse scope one becomes available. The knowledge of the world suggests that it is unlikely that there exists a kid big enough to be sleeping in front of every house in (21-b). At LF, *tsaque meison* undergoes quantifier raising (QR) to a position where it takes scope over the quantified expression in subject position. Therefore, we can be certain that ValPa allows inverse scope.[5]

(20) Eun garçon l' à medj-à tsaque biscuit.
DET.INDEF.M.SG boy CL.NOM.3SG have.PRS.3SG eat-PST.PTCP every biscuit
'A boy has eaten every biscuit.'

a. There is an x and x is a boy and x ate every $\exists > \forall$

b. For every x and x is a biscuit, a boy ate x $\forall > \exists$

(21) Eun mèinou drumm-e devan tsaque meison.
DET.INDEF.M.SG kid sleep-PRS.3SG in.front.of every house
'A kid sleeps in front of every house.'

a. There is an x and x is a child and x sleeps in front of every house $\exists > \forall$

b. For every x and x is a house, a child sleeps in front of x $\forall > \exists$

Beck (2006) and Mathieu (1999) argue that German partial wh-phrases and French wh-in-situ respectively cannot take wide scope over a quantifier in subject position, as shown in (22) for French.[6] This is because Focus Alternatives and Q-movement do not allow for a wide scope

[5] A note for the reader. When I mentioned the diagnostics at the beginning of the chapter, I listed inverse scope as a separate diagnostic, and I will do so again in the chapter's summary. This decision stems from the fact that inverse scope is an independent property of the language. However, I decided to discuss it as part of IEs, since quantifiers do act as interveners in some languages and Beck (2006) groups them together with the other interveners listed in (6).

[6] Mathieu (1999) reports that the slightly marginal status of (22-a) is due to independent reasons without delving deeper into the topic.

reading of the low wh-phrase. On the contrary, in Bùlì, the *ká* headed wh-phrase undergoes covert movement to the HLP, where it takes scope over the quantifier, hence the felicity of (23) (cf. also Pesetsky (2000)).

(22) Tout le monde aime **quoi**? **French**
all the people likes what?
What does everybody like?'

a. ?'for which pair <x, y>, everybody (x) likes (y)?'

b. *'for which thing (x), everybody likes that thing (x)?' (Mathieu, 1999, p. 447)

(23) Wāi-mē:nā dìg **ká bwā**? **Bùlì**
person-all cook Q what
'What did every one cook?'

(Sulemana, 2019, p. 14)

The prediction for the ValPa data is as follows. Hypothesis 1 (WYSIWYG) predicts that CIwh-phrases in ValPa should be infelicitous in the scope of quantifiers, while Hypothesis 2 (Further movement up) predicts that CIwh-phrases should be able to surface in the scope of a quantifier.

Unlike what is witnessed in French, (22), quantifiers do not cause IEs in ValPa, as can be seen in (24), (25), and (26). Note, moreover, that two readings are available.

(24) L' on tcheutte port-ò **dequé**?
CL.NOM.3PL have.PRS.3PL all bring-PST.PTCP what
'What did everyone bring?'

a. 'for which pair <x, y>, everybody (x) brought y?'

b. 'for which thing (x), everybody brought x?'

(25) Tsaque garçon l' à port-ò **dequé**?
every boy CL.NOM.3SG have.PRS.3SG bring-PST.PTCP what
'What did every boy bring?'

a. 'for which pair <x, y>, every boy (x) brought y?'

b. 'for which thing (x), every boy brought x?'

(26) Eun mèinou drumm-e devan **quint-e** **meison**?
DET.INDEF.M.SG kid sleep-PRS-3SG in.front.of which-F.PL house.PL
'A kid sleeps in front of which houses?'

a. There is an x and x is a child and x sleeps in front of which houses $\exists > wh$

b. For which x and x are houses, a child sleeps in front of x $wh > \exists$

In sum, I have shown that ValPa does allow inverse scope readings with quantifiers and that inverse scope readings are also available in wh-questions. Similarly to negation and habitual adverbs, quantifiers are not interveners in ValPa. Moreover, CIwh-phrases can scope over quantifiers in subject position. This means that (at some point in the derivation) CIwh-phrases move to a position where they can take wide scope over the whole clause, therefore moving higher than the LLP (Hypothesis 2).

### 7.1.4 Focus particles as interveners

According to Beck (2006), focus particles such as *only*, *also*, and *even* are cross-linguistically the most robust triggers of IEs.

(27) *Seulement/même Jean arriv-e à faire **quoi**? **French**
only/also Jean arrive-PRS.3SG to do what
'What does only Jean manage to do?'

(Mathieu, 1999, p. 447-8)

In German, no wh-phrase can remain in the scope of a focus particle like *nur* 'only' (Beck, 2006). In (28), there is only one wh-phrase, which is fronted and therefore out of the scope of *nur*. In (29), on the other hand, there are two wh-phrases and, if *wo* 'where' is in the scope of the focus operator *nur*, as in (29-b), the sentence is degraded or uninterpretable, according to Beck (2006).

(28) **Wen** hat <u>nur</u> der Dirk gesehen? **German**
whom has only the Dirk seen
'Whom did only Dirk see?'

(Beck, 2006, p. 17)

(29) a. ***Wen** hat der Dirk **wo** gesehen? **German**
whom has the Dirk where seen
'Whom did Dirk see where?'

b. **Wen** hat der Dirk **wo** gesehen?

(Beck, 2006, p. 18)

ValPa did not show IEs with any of the possible interveners discussed so far. However, as this section will show, ValPa does display some surprising restrictions for the co-occurrence of wh-phrases and focus particles like *maque* 'only', *euncò* 'also', and *fenque* 'even'. In the following subsection, I will address each focus particle separately.

*Maque* 'only' can focalize a specific XP, as in (30), in which case we get a narrow scope reading. Alternatively, it can focalize the whole VP, as in (31) which results in a wide scope reading, precisely as in English (Rooth, 1985, 1992).

(30) a. L' à predj-à maque [avouë Nelly]$_F$.
CL.NOM.3SG have.PRS.3SG speak-PST.PTCP only with Nelly
'(S)he talked only to Nelly (nobody else).'

b. Maque [avouë Nelly]$_F$ l'à predjà.

(31) L' à maque [predj-à avouë Nelly]$_F$.
CL.NOM.3SG have.PRS.3SG only speak-PST.PTCP with Nelly
'The only thing (s)he did was talk to Nelly.'

In what follows, I will discuss the interaction of wh-movement with both wide and narrow *maque* focus constructions, starting from the latter. As can be seen in (32), not only the CIwh-phrase is felicitous in the scope of the focus particle, it's the only acceptable word order. Wh-fronting is impossible, as is clefting.

(32) a. T' à maque atsit-ò **dequé**?
CL.NOM.2SG have.PRS.3SG only buy-PST.PTCP what
'What is the only thing that you bought?'

b. ***Dequé** t'à maque atsitò?

c. ***Cen que l'è que** t'à maque atsitò?

Now, let's move to narrow *maque* focus constructions. As it can be seen in (33-a), there are no intervention effects when the focalized constituent is the subject and the wh-phrase is clause-internal. Having the wh-phrase fronted is degraded, (33-b), as is the cleft construction in (33-c). Having the subject post-verbally, as in (34), is degraded, regardless of the position of the wh-phrase.

(33) a. Maque Tcheunne l' à port-ò **dequé**?
only Tcheunne CL.NOM.3SG have.PRS.3SG bring-PST.PTCP what

‘What did only Tcheunne bring?’

b. ??**Dequé** maque Tcheunne l’à portò?

c. ?**Cen que l’è que** maque Tcheunne l’à portò?

(34) a. *L’ à port-ò **dequé** maque Tcheunne ?
CL.NOM.3SG have.PRS.3SG bring-PST.PTCP what only Tcheunne
‘What did only Tcheunne bring?’

b. ***Dequé** l’à portò maque Tcheunne?

c. ?**Cen que l’è que** l’à portò maque Tcheunne?

If we focalize a constituent other than the subject, we encounter different results and all word orders are acceptable. For instance, with *maque* ‘only’ as in (35) and (36), having the wh-phrase clause-internally is as acceptable as wh-fronting and clefting.

(35) a. L’ à baill-à **dequé** maque à Tcheunne?
CL.NOM.3SG have.PRS.3SG give-PST.PTCP what only to Tcheunne
‘What did he give only to Tcheunne?’

b. **Dequé** l’à baillà maque à Tcheunne?

c. **Cen que l’è que** l’à baillà maque à Tcheunne?

(36) a. L’ à baill-à **à qui** maque eun livro?
CL.NOM.3SG have.PRS.3SG give-PST.PTCP to who only DET.INDEF.M.SG book
‘To whom did (s)he give only a book?’

b. **À qui** l’à baillà maque eun livro?

c. **À qui l’è que** l’à baillà maque eun livro?

The next focus particle I will discuss is *fenque* 'even'. Like *maque* 'only', *fenque* 'even' can focalize an XP, as in (37) or clause-internally, focalizing the entire VP (38).

(37) a. L' à predj-à fenque [avouë lo Sen Pée]$_F$.
CL.NOM.3SG have.PRS.3SG speak-PST.PTCP even with DET.DEF.M.SG Pope
'(S)he talked even to the Pope (on top of everyone else).'

b. Fenque [avouë lo Sen Pée]$_F$ l'à predjà.

(38) L' à fenque [predj-à avouë lo Sen Pée]$_F$.
CL.NOM.3SG have.PRS.3SG even speak-PST.PTCP with DET.DEF.M.SG Pope
'(S)he even talked to the Pope (wow!).'

(39) a. T' ayé fenque atsit-ò **dequé**?
CL.NOM.2SG have.PST.PTCP even buy-PST.PTCP what
Intended: 'You even bought what?'

b. ??**Dequé** t'ayé fenque atsitò?

c. ??**Cen que l'è que** t'ayé fenque atsitò?

Now, let us look at narrow focus *fenque* constructions. As can be seen in (40-c), having the wh-phrase fronted is also–somewhat–degraded when *fenque* 'even' is focalizing the subject in pre-verbal position, while a CIwh-phrase or clefting is acceptable. On the other hand, having the subject post-verbally, as in (41), is degraded, regardless of the position of the wh-phrase.

(40) a. Fenque Tcheunne l' à port-ò **dequé** ?
even Tcheunne CL.NOM.3SG have.PRS.3SG bring-PST.PTCP what
'What did even Tcheunne bring?'

b. ? **Dequé** fenque Tcheunne l'à portò?

c. **Cen que l'è que** fenque Tcheunne l'à portò?

(41) a. ??L' à port-ò **dequé** fenque Tcheunne ?
CL.NOM.3SG have.PRS.3SG bring-PST.PTCP what even Tcheunne
'What did even Tcheunne bring?'

b. ??**Dequé** l'à portò fenque Tcheunne?

c. ?**Cen que l'è que** l'à portò fenque Tcheunne?

The patterns witnessed with *fenque* 'even' are thus very similar to those witnessed with *maque* 'only'.

Similarly to what happens with *maque* 'only', if we focalize a constituent other than the subject, all word orders are acceptable. For instance, with *fenque* 'even' as in (42) and (43), having the wh-phrase clause-internally is as acceptable as wh-fronting and clefting.

(42) a. L' à baill-à **dequé** fenque à Tcheunne?
CL.NOM.3SG have.PRS.3SG give-PST.PTCP what even to Tcheunne
'What did he give even to Tcheunne?'

b. **Dequé** l'à baillà fenque à Tcheunne?

c. **Cen que l'è que** l'à baillà fenque à Tcheunne?

(43) a. L' à baill-à **à qui** fenque an machina?
CL.NOM.3SG have.PRS.3SG give-PST.PTCP to who even DET.INDEF.M.SG car
'To whom did (s)he give only a book?'

b. **À qui** l'à baillà fenque an machina?

c. **À qui l'è que** l'à baillà fenque an machina?

The last particle I will discuss is *euncò* 'also'. Like *maque* 'only' and *fenque* 'even', *euncò* 'also' can occur with an XP, as in (44) or clause-internally, in which case it receives a wide scope interpretation (45).

(44) a.

| | | | | | |
|---|---|---|---|---|---|
| L' | à | predj-à | euncò | [avouë | Nelly]$_F$. |
| CL.NOM.3SG | have.PRS.3SG | speak-PST.PTCP | also | with | Nelly |

'(S)he talked also to Nelly (nobody else).'

b. Euncò [avouë Nelly]$_F$ l'à predjà.

(45)

| | | | | | |
|---|---|---|---|---|---|
| L' | à | euncò | [predj-à | avouë | Nelly]$_F$. |
| CL.NOM.3SG | also | have.PRS.3SG | speak-PST.PTCP | with | Nelly |

'(S)he also talked to Nelly.'

Interestingly, *euncò* is more allowing than *maque* 'only' and *fenque* 'even' and can felicitously co-occur with wh-phrases, regardless of their position.

(46) a.

| | | | | |
|---|---|---|---|---|
| T' | ayé | euncò | atsit-ò | **dequé**? |
| CL.NOM.2SG | have.PST.PTCP | also | buy-PST.PTCP | what |

Intended: 'You also bought what?'

b. **Dequé** t'ayé euncò atsitò?

c. **Cen que l'è que** t'ayé euncò atsitò?

As far as narrow focus constructions are concerned, the pattern is similar to that witnessed with *fenque*. When the focalized subject is pre-verbal, the only felicitous order is the one with the CIwh-phrase, as in (47-a).

(47) a.

| | | | | | |
|---|---|---|---|---|---|
| Euncò | Tcheunne | l' | à | port-ò | **dequé**? |
| also | Tcheunne | CL.NOM.3SG | have.PRS.3SG | bring-PST.PTCP | what |

'What did also Tcheunne bring?'

b. ??**Dequé** euncò Tcheunne l'à portò?

c. ?**Cen que l'è que** euncò Tcheunne l'à portò?

On the other hand, having the focalized subject post-verbal is compatible with all three word orders:

(48) a. L' à port-ò **dequé** euncò Tcheunne ?
CL.NOM.3SG have.PRS.3SG bring-PST.PTCP what also Tcheunne
'What did also Tcheunne bring?'

b. **Dequé** l'à portò euncò Tcheunne?

c. **Cen que l'è que** l'à portò euncò Tcheunne?

Finally, if the focalized constituent is a DO or an IO, like in (49) and (50), then all three word orders are acceptable.

(49) a. L' à baill-à **dequé** euncò à Tcheunne?
CL.NOM.3SG have.PRS.3SG give-PST.PTCP what alsp to Tcheunne
'What did he give even to Tcheunne?'

b. **Dequé** l'à baillà euncò à Tcheunne?

c. **Cen que l'è que** l'à baillà euncò à Tcheunne?

(50) a. L' à baill-à **à qui** euncò eun vejo?
CL.NOM.3SG have.PRS.3SG give-PST.PTCP to who also DET.INDEF.M.SG glass
'To whom did (s)he give also a glass?'

b. **À qui** l'à baillà euncò eun vejo?

c. **À qui l'è que** l'à baillà euncò eun vejo?

The patterns discussed in this section are summarized in Table 7.1. Let me briefly discuss a few points before moving forward. First, CIwh-phrases can always surface in the scope of the three focus particles discussed here, when the latter have wide scope. Moreover, for *maque* 'only' and *fenque* 'even', wh-fronting and clefting (!) are impossible. This is surprising given what has been claimed in the literature by Beck (1996), Pesetsky (2000), Mathieu (1999), Sauerland and Heck (2003), Beck (2006), among other about wh-fronting and clefting as the only strategy to get the wh-phrase out of the scope of the focus particle. It is worth noting that, in all these constructions where the focus particles take wide scope, the only scope available is wh-phrase > *maque/fenque*, which means that the wh-phrase *somehow* gets matrix scope. Once the movement path of wh-phrases has been established, and I have sketched the analysis (Chapter 8), I shall address the topic of chain realization and come back to these patterns.

Table 7.1: Focus particles and wh-phrases in ValPa

| | Fronted | CI | Cleft |
|---|---|---|---|
| Wide *maque* | * | ok | * |
| *Maque* + subj (pre-verbal) | ?? | ok | ? |
| *Maque* + subj (post-verbal) | * | * | ? |
| *Maque* + DO | ok | ok | ok |
| *Maque* + IO | ok | ok | ok |
| Wide *fenque* | ?? | ok | ?? |
| *Fenque* + subj (pre-verbal) | ? | ok | ok |
| *Fenque* + subj (post-verbal) | ?? | ?? | ? |
| *Feque* + DO | ok | ok | ok |
| *Feque* + IO | ok | ok | ok |
| Wide *euncò* | ok | ok | ok |
| *euncò* + subj (pre-verbal) | ?? | ok | ? |
| *euncò* + subj (post-verbal) | ok | ok | ok |
| *euncò* + DO | ok | ok | ok |
| *euncò* + IO | ok | ok | ok |

The second discussion point is that, in the ValPa examples discussed in this section, we saw more IEs with focalized subjects. Here again, we see a split: post-verbal focalized subjects with *maque* and *fenque* are incompatible with wh-phrases *tout court*, whereas no such restriction is witnessed with *euncò*. There are several possible explanations as to why post-verbal focalized subjects cause an intervention, whereas pre-verbal focalized subjects. One possibility could be that focalized post-verbal subjects target the same position as wh-phrases in the LLP. As discussed in Chapter 6, it is possible certain kinds of Foci, e.g. New Information Focus, and wh-phrases target the same position in the LLP. This precise combination is impossible to test as New Information Focus occurs in answers to a wh-question. However, it is possible that they type of post-verbal focalized subjects we have seen in this Chapter target the same position ad wh-phrases, hence the unacceptability of these examples. This approach would, however, imply that non-subject focalized XPs target a different focus position or are focalized in situ. I leave this asymmetry open for future research.

### 7.1.5 Section summary

ValPa CIwh-phrases do not show IEs with negation, habitual adverbs, quantifiers, or focus particles. The lack of IEs with focus particles is particularly surprising, as Beck (2006) reports that their status as intervener is quite robust crosslinguistically.

Table 7.2: Interveners in ValPa

| | Negation | Habitual adverbs | Quantifiers | Focus particles |
|---|---|---|---|---|
| Cause IEs? | No | No | No | No |

The evidence from lack of IEs, regardless of the kind of intervener, speaks in favor of Hypothesis 2: wh-phrases do not remain in the LLP but move to their scope position, where they can take scope over the whole clause. However, these diagnostics do not help to establish when the movement occurs, as both overt (narrow syntactic) movement and covert (LF) movement have been shown to obviate IEs. The following section will introduce the first diagnostics that will help locate the movement more precisely: binding.

## 7.2 Binding

Binding conditions can be satisfied at any intermediate point in the movement chain, hence an anaphor contained in a DP may be bound by an antecedent in its surface position, base position, or any intermediate position (Fox, 1999; Barss, 1986; Müller, 1998; Bailyn, 2007, 2010; Lebeaux, 2009). For example, in the declarative (51-a), the reflexive can only be bound by the DP *the Queen*, as the other possible binder, *the Princess*, is outside *herself*'s binding domain, the embedded clause. On the other hand, the reflexive in the D-linked wh-phrase *which painting of herself* in (51-b) can be bound both by *the Queen*, while in its base position, and *the Princess*. On its way up to the HLP of the main clause, the wh-phrase transits in the embedded HLP, where it can be bound by *the Princess*.

(51) a. The Princess$_j$ thinks [that the Queen$_i$ liked this painting of herself$_{i/*j}$].

b. [Which painting of herself$_{i/j}$]$_k$ does the Princess$_j$ think $\_{k}$ [that the Queen$_i$ liked $\_{k}$]?

Only overt movement gives rise to new binging configurations. Covert (LF) movement, including Quantifier Raising (QR), does not. QP-movement, in cases where QP is adjoined to the wh-phrase, does no gove rise to new binding relations, see Sulemana (2019) on Bùlì. Similarly, Focus

Alternatives[7] do not give rise to new binding configurations because crucially the wh-phrase does not undergo movement.

In (52), the anaphor contained in the in situ wh-phrase is free, as there is no suitable antecedent to bind it in its binding domain. In-situ-wh in English undergo covert movement at LF (Pesetsky, 2000; Kotek, 2016), but LF is too late for the binding principles to be satisfied. The same is witnessed with QR (53).

(52) *Who$_k$ did the Princess$_i$ tell _$_k$ [that the King likes **which painting of herself$_i$**]?

(53) The King$_i$ said [the Queen$_k$ will sell every painting of herself$_k$/*himself$_i$].

We can thus resort to binding to diagnose the movement path of ValPa CIwh-phrases. ValPa behaves like English. In the declarative (54), there is no suitable antecedent to bind the reflexive in the embedded clause, as *Ivana* is feminine. The quantifier phrase *tsaque fotografia de sè memo* 'every picture of himself' at LF will undergo QR, yet this does not allow for the reflexive to be bound by *Marco* in the matrix clause, as LF movement does not give rise to new binding configurations. On the other hand, (55) is felicitous, as the reflexive gets bound by *Marco* in the matrix clause, as the wh-phrase *quinte fotografie de sè memo* transits through the embedded HLP on its way to the matrix HLP.

(54) *Marco$_i$ di [ que Ivana$_j$ llam-e tsaque fotografia de **sè$_i$ memo**].
Marco say.PRS.3SG COMP Ivana like-PRS.3SG every picture of REFL.3.M.SG
'Marco says that Ivana likes every picture of himself.'

[7] The same line of reasoning can be made about unselective binding (Baker, 1970; Pesetsky, 1987; Reinhart, 1983), discussed in Chapter 2. In this case, it is argued that an abstract Q-morpheme in the HLP binds wh-in-situ.

(55) [Quint-e fotografie de **sè$_i$ memo**]$_k$ Marco$_i$ di [$_{\_k}$ que Ivana$_j$
which-F.PL pictures.PL of REFL.3.M.SG Marco say.PRS.3SG COMP Ivana
llam-e $_{\_k}$] ?
like-PRS.3SG
'Which pictures of himself does Marco say that Ivana likes?'

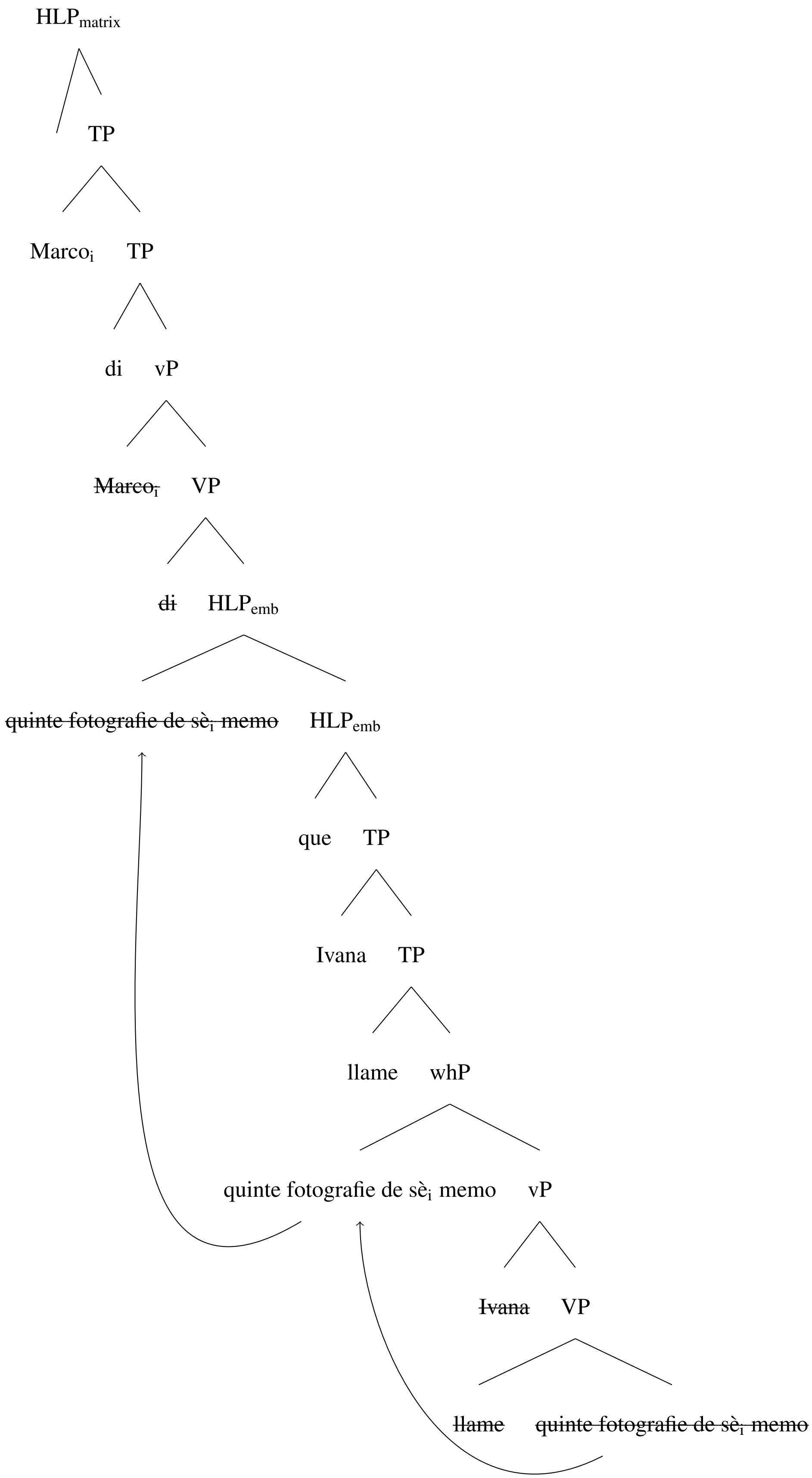
The example with a CIwh-phrase (56-a) is also felicitous. Like in (54), there is no suitable antecedent for the reflexive in the embedded clause–the Binding Domain of *sè memo-*, thus the only way that the reflexive in (56-b) can be bound is if the CIwh-phrase at some point in the derivation moves–at least–to the HLP of the embedded clause, as outlined in the simplified (57).[8]

(56) a. Marco$_i$ di [ que Ivana$_j$ llam-e quint-e fotografi-e de
Marco say.PRS.3SG COMP Ivana like-PRS.3SG which-F.PL pictures-PL of
**sè$_i$ memo**] ?
REFL.3.M.SG
'Which pictures of himself does Marco say that Ivana likes?'

b. Marco$_i$ di [$_{HLP}$ [quinte fotografie de **sè$_i$ memo**]$_k$ que Ivana$_j$ llame $_{\_k}$ ] ?

[8]Note that both in (56-b) and (57), I am sketching a derivation where the wh-phrase is moving out of the embedded clause. Therefore, the transit position of the wh-phrase would be structurally higher that the position where the complementizer *que* surfaces. If we were to adopt Rizzi's (1997) terminology, *que* would be in the head of the highest position in the HLP, ForceP, whereas the wh-phrase would transit through SpecForceP on its way up, hence the configuration in (57). I refer the reader to Chapter 6 for the details of the HLP. The same reasoning applies to other long-distance derivation, where within the HLP the wh-phrase surfaces to the left of the finite complementizer *que*.

(57)


HLPmatrix
TP
Marcoi
TP
di
vP
Marcoi
VP
di
HLPemb
quinte fotografie de sèi memo
HLPemb
que
TP
Ivana
TP
llame
whP
quinte fotografie de sèi memo
vP
Ivana
VP
llame
quinte fotografie de sèi memo

A legitimate question that arises at this point concerns the use of *sé memo* as opposed to the clitic *se*. The potential concern is that the binding relation in (56-b) is the result of the reflexive being focalized and therefore potentially interpreted through a logophoric reading, as argued by Pollard and Sag (1992); Reinhart and Reuland (1993); Safir (2004); Reuland (2011). Logophoricity can be defined as the use of a marked form of pronominal reference, such as the reflexive form, to refer to a referent salient in the discourse, often a participant (Charnavel and Sportiche, 2022). This would mean that, in (56-b), the reflexive is not syntactically licensed, but rather interpreted as co-referenced with a discourse participant. A full investigation of the status of full reflexive pronouns in VlaPa would be in order. Yet, for the present time, it suffices to state that, in some cases, *sé memo* is felicitous without any contrast or focalization, which rules out a focalized/contrastive analysis. Moreover, if indeed the use of *sé memo* in the previous examples followed from a logophoric reading, then cases like (54) should be grammatical, contrary to fact. What matters is the scope of the wh-phrase. In (58-a), the wh-phrase takes again matrix scope and both *Marco* and *Gianni* can bind *sè memo*, in the first embedded HLP, HLP2 in (58-a), and the second embedded HLP, HLP3 in (58-a), respectively.

(58) a. [$_{\text{HLP1}}$ Marco$_j$ l' à deut [$_{\text{HLP2}}$ que Gianni$_k$
Marco CL.NOM.3.SG have.PRS.3SG say.PST.PTCP COMP Gianni
so [$_{\text{HLP3}}$ que Ivana l' à atsit-ò
know.PRS.3SG COMP Ivana CL.NOM.3.SG have.PRS.3SG buy-PST.PTCP
quin-ta fotografia de **sè$_{j/k}$ memo** ]]] ?
which-F.SG picture of REFL.3.M.SG
'Which picture of himself did Marco say that Gianni knows that Ivana bought?'

b. [ M.$_j$ l'à deut [ que G.$_k$ so [ que I. l'à atsitò quinta fotografia de **sè$_{j/k}$ memo** ?]]]

On the contrary, in (59-a) the wh-phrase only moves to the HLP3, where it takes scope, and only *Gianni* can bind *sè memo*.

(59) a.

| | | | | | |
|---|---|---|---|---|---|
| [$_{\text{HLP1}}$ Marco$_j$ | l' | à | deut | [$_{\text{HLP2}}$ que | Gianni$_k$ |
| Marco | CL.NOM.3.SG | have.PRS.3SG | say.PST.PTCP | COMP | Gianni |

| | | | | | | |
|---|---|---|---|---|---|---|
| so | [$_{\text{HLP3}}$ quinta | fotografia | de | **sè memo**$_{k/*j}$ | Ivana | l' |
| know.PRS.3SG | which-F.SG | picture | of | REFL.3.M.SG | Ivana | CL.NOM.3.SG |

| | |
|---|---|
| à | atsitò. ]]] |
| have.PRS.3SG | buy-PST.PTCP |

'Marco said that Gianni knows which picture of himself Ivana bought.'

b. [Marco$_j$ l'à deut [ que G.$_k$ so [ quinta fotografia de **sè memo**$_{k/*j}$ I. l'à atsitò t ]]]

This data is strong evidence that ValPa CIwh-phrases do not remain frozen in the LLP, but move to the position they take scope from. This movement must happen in narrow syntax, as covert (LF) movement does not create new binding configurations, which speaks in favor of Hypothesis 2b (further movement up in narrow syntax). Furthermore, example (58-a) shows that the movement of the wh-phrase is not clause bound. Finally, it provides evidence that pronouns like *sè memo* 'himself', even when contained inside another DP, are anaphors through and through, as argued by Charnavel and Sportiche (2016) and ultimately Chomsky (1986).

The binding facts from examples like (58) are evidence that the CIwh-phrase containing the anaphor moves in a successive-cyclic fashion (Chomsky, 1973, 1977; McCloskey, 2000; Abels, 2012; Georgi, 2014a; van Urk, 2015; van Urk and Richards, 2015): instead of moving in one fell swoop from its base position to the matrix HLP, the wh-phrase transits through the HLP of each embedded clause on its way to the matrix HLP, as sketched in (57) for (56) (Seguin, 2025a). In these intermediate positions, the anaphor contained within the wh-phrase can be bound by a local antecedent. This means that questions like (56) have the exact same derivation as (55), but not necessarily the other way around: it does not show that wh-phrases *do* stop in the LLP on their way up to the HLP. It might be that from their base position CIwh-phrases, (56), are scrambled to the LLP with subsequent operator-driven movement to the HLP, whereas in examples with the fronted wh-phrase (55) the latter is moved to the HLP in one fell swoop. The second scenario seems unlikely given the large body of evidence showing that (wh-)movement happens in cycles and not in one fell swoop (McCloskey 2000; van Urk and Richards 2015; among many others), but it is nonetheless important to empirically establish whether (55) and (56) have the same derivation.

The Lebeaux effect (Lebeaux, 2009) consists of an asymmetry in the interpretation of arguments and adjuncts of wh-phrases. Wh-phrases containing an argument (60-a) must be interpreted in base position at LF, whereas those containing an adjunct (60-b) need not. In (60-a), co-reference between the R-expression *Marco* in the fronted wh-phrase and the pronoun *he* leads to a violation of Principle C of the Binding Theory, as the wh-phrase must be interpreted in base position, where *Marco* gets bound by *he*. In (60-b), on the other hand, co-reference between *Marco* and *he* is possible as the wh-phrase containing the adjunct need not be interpreted in base position. This is because the relative clause containing the R-expression in (60-b) (*that Marco took*), since it is an adjunct, is merged namely after the wh-phrase has escaped the c-command domain of the pronoun, (61).[9] Late merge is not available for (60-a), where *of Marco* is a complement of the wh-phrase and therefore already present in base position, as in (62).

(60) a. So, [which pictures of Marco$_j$]$_k$ did he$_{i/*j}$ hang on the wall $\_{k}$?

[9]See Takahashi and Hulsey (2009), Thoms (2019), and (Thoms and Heycock, 2022) for discussions and other approaches to ‘anti-reconstruction effects’.

b. So, [which pictures that Marco$_j$ took]$_k$ did he$_{i/j}$ hang on the wall $_{\_k}$?

(61) [$_{CP}$ which pictures that Marco$_j$ took [$_{TP}$ did he$_{i/j}$ [$_{VP}$ hang on the wall ~~which pictures~~ ]]]

(62) [$_{CP}$ which pictures of Marco$_j$ [$_{TP}$ did he$_{i/j}$ [$_{VP}$ hang on the wall ~~which pictures of Marco~~ ]]]

Constructing examples with an R-expression and a bound variable, we can diagnose the movement path of wh-phrases, see Fox (1999) for more details. Let's first look at the declarative baseline (63), with the R-expression *Ivana* and the bound variable *l'* 'he', which needs to be bound by *tsaque garson*. This bound reading is possible in (63) since the DP *la fotografie que l'à fà à Ivana* is in base position and *l'* is bound by *tsaque garson* 'every boy'. However, co-reference between *Ivana* and the benefactive *'llie* is impossible due to a Principle C violation.

(63) Tsaque garson$_j$ l' à stamp-ò per 'llie$_{i/*k}$
every boy CL.NOM.3SG have.PRS.3SG print-PST.PTCP for ACC.F.SG
la fotografia que l$_j$' à f-à à Ivana$_k$.
DET.DEF.F.SG picture COMP CL.NOM.3SG have.PRS.3SG do-PST.PTCP to Ivana
'Every boy$_j$ printed for her$_k$ the photo that he$_j$ has made for Ivana$_{i/*k}$. '

If we look at the interrogative counterpart of (63) with a CIwh-phrase, (64), we see that the bound reading is possible without incurring a Principle C violation. This is expected since CIwh-phrases surface in the LLP and thus higher than the benefactive.

(64) Tsaque garson$_j$ l' à stamp-ò [$_{LLP}$ [quin-ta fotografia
every boy CL.NOM.3SG have.PRS.3SG print-PST.PTCP which-F.SG picture

que l$_j$’ à f-à à Ivana$_k$]$_i$ per ‘llie$_k$ _$_i$ ]?
COMP CL.NOM.3SG have.PRS.3SG do-PST.PTCP to Ivana for ACC.F.SG
‘Which photo that he$_j$ has made for Ivana$_k$ has every boy$_j$ printed for her$_k$?’

Now, let’s turn to an example with a fronted wh-phrase, (65). Here, for the bound reading to be possible, the wh-phrase *quinta fotografia que l’à fà à Ivana* needs to be interpreted low enough for *tsaque garson* to bind *l’*, namely in the LLP (marked in the example as $^{ok}$_). It cannot be interpreted in its base position, otherwise we would stumble upon a Principle C violation (marked with *_). The sentence with the bound reading is acceptable, which means that the wh-phrase has been interpreted in the LLP. This in turn means that it must have transited through the LLP on its way to the HLP.

(65) [$_{HLP}$ Quin-ta fotografia que l$_j$’ à f-à à
which-F.SG picture COMP CL.NOM.3SG have.PRS.3SG do-PST.PTCP to
Ivana$_k$]$_i$ tsaque garson$_j$ l’ à stamp-ò [$_{LLP}$ $^{ok}$_$_i$ per
Ivana every boy CL.NOM.3SG have.PRS.3SG print-PST.PTCP for
‘llie$_k$ *_$_i$ ]]?
ACC.F.SG
‘Which photo that he$_j$ has made Ivana$_k$ has every boy$_j$ printed for her$_k$?’

Finally, if we construct an example with long-distance wh-movement, where both the binder for *tsaque garçon* and the potential binder for *Ivana* are in the main clause, like (66), the bound reading is still possible. This means that the fronted wh-phrase has been interpreted in the matrix LLP (marked as $^{ok}$_ in LLP1 in (66)), which in turn is evidence that the wh-phrase has transited through the matrix LLP on its way up.

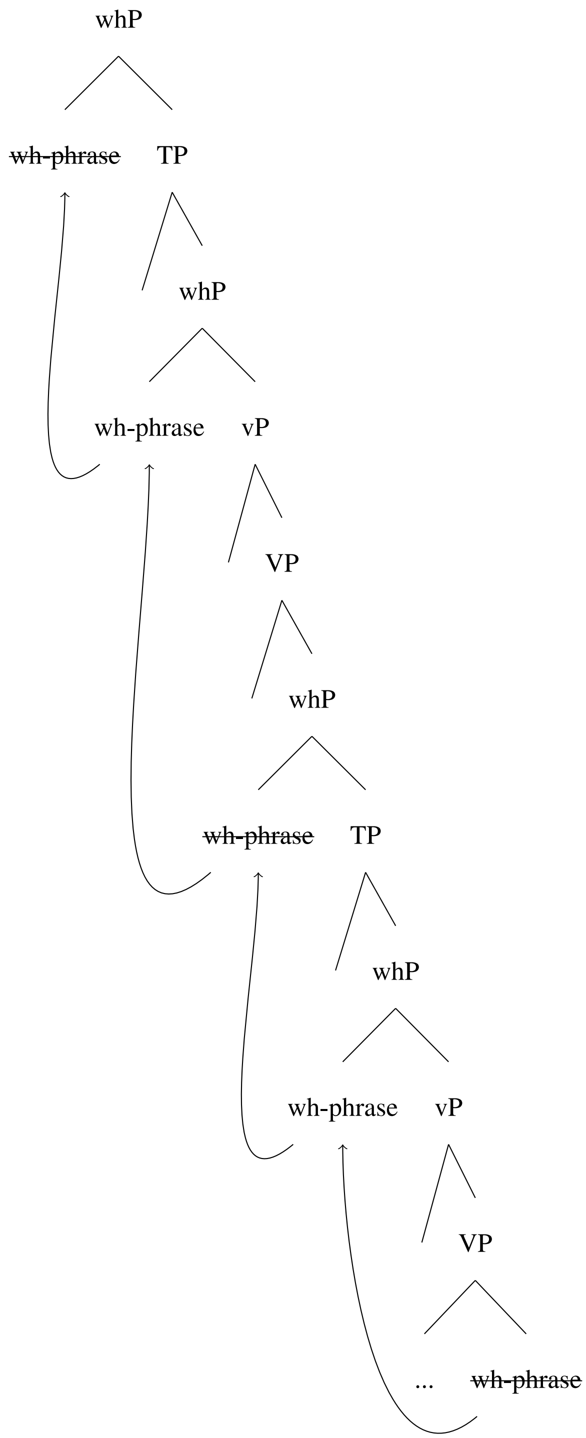
(66) [$_{HLP1}$ [Quin-ta fotografia que l$_j$’ à f-à à
which-F.SG picture COMP CL.NOM.3SG have.PRS.3SG do-PST.PTCP to

Ivana$_k$]$_i$ tsaque garson$_j$ l' à demando [$_{LLP1}$ $^{ok}$_$_i$ à
Ivana every boy CL.NOM.3SG have.PRS.3SG ask-PST.PTCP to
'llie$_k$ [$_{HLP2}$ de port-éi [$_{LLP2}$ *_$_i$ à meison *_$_i$ ]]]] ?
DAT.F.SG COMP bring-INF to home

'Which photo that he$_j$ has made for Ivana$_k$ has every boy$_j$ asked her$_k$ to bring home?'

The data presented in this section is important as it shows two things: that CIwh-phrases overtly move to their scope position, which speaks in favor of Hypothesis 2b. Moreover the data shows that wh-phrases always move successive-cyclically through the LLP on their way to their scope position, which correborates previous studies showing that wh-movement proceeds through every LLP and HLP on their way to their scope position (van Urk and Richards 2015; a.o.), as in (67). The following section will further confirm this.

(67)


whP
~~wh-phrase~~
TP
whP
wh-phrase
vP
VP
whP
~~wh-phrase~~
TP
whP
wh-phrase
vP
VP
...
~~wh-phrase~~

## 7.3 Parasitic Gaps

Parasitic gaps offer another useful diagnostic to determine the movement path of wh-phrases as well as the timing of the movement, since only A'-chains formed in narrow syntax license parasitic gaps (Engdahl, 1983; Culicover, 2001; Nunes, 2004). In Chapter 4, I showed that CIwh-phrases license parasitic gaps, but I only provided examples where both the original licensing gap and the parasitic gap-containing adjunct clause were in a matrix clause. In order to establish whether the CIwh-phrase remains in the LLP or moves further up, we need to resort to an example with an embedded CIwh-phrase and a parasitic gap-containing adjunct that could be interpreted low (in the embedded clause) or high (in the matrix one). In fact, as shown by Hewett (2023b) among many others, in cases of long-distance movement, a wh-chain can license PGs at any intermediate LLP (edge of vP in Hewett's terms) along its dependency path. This is illustrated by the Syrian Arabic example in (68-a) (baseline in (68-b)), where the PG-containing adjunct clause is adjoined to the matrix vP (the PG is marked as _). The derivation of (68-a) is presented in (69).

(68) a. **mi:n$_i$** ʕrafti [$_{CP}$ ʔin-ni raħ aħibb _$_i$ ] [ min ʔabl ma aʃu:f _$_i$ ]?
who$_i$ knew.2.F.SG that-1SG FUT like.1.SG from before C see.1.SG
'Who$_i$ did you know I would like before I ever met _$_i$?'

b. ʕrafti [$_{CP}$ ʔin-ni raħ aħibb Matt$_i$ ] [ min ʔabl ma {*aʃu:f _$_i$ / aʃu:f-u$_i$} ]?
knew.2.F.SG that-1SG FUT like.1.SG Matt from before C {see.1.SG / see.1.SG-him$_i$ }
'You knew I would like Matt$_i$ before I ever met {_$_i$ / him$_i$}.'

(Hewett, 2023b, p. 108-109)

(69) $[_{CP1}$ wh $[_{vP1}$ wh $[_{vP1}$ $[_{CPadjucnt}$ .... *pg* ] $[_{CP2}$ wh $[_{vP2}$ wh $[_{VP}$ .... wh ]]]]]]

The same pattern is witnessed in French, as reported by Sportiche (2018). An example of long-distance wh-movement licensing a PG in a matrix adjunct clause is reported in (70).[10]

(70) ?Dis-moi ce qu' il [ veut que tu
tell.IMP.2SG-DAT.1SG DEM.M.SG COMP NOM.3SG want.PRS.3SG COMP NOM.2SG
[ comprennes ] sans même mentionner *pg* ].
understand.SUBJ.2SG without even mention.INF
'Tell me what he [wants you to understand ] without (him) even mentioning *pg*'

(Sportiche, 2018, p. 315)

Since only overt A'-chains license parasitic gaps, both Hypothesis 1 (WYSIWYG) and Hypothesis 2a (Further movement up at LF) predict that embedded CIwh-phrases should not license parasitic gaps in structurally higher adjunct clauses. On the other hand, Hypothesis 2b (Further movement up in narrow syntax) predicts that embedded CIwh-phrases can license parasitic gaps in structurally-higher adjunct clauses. In the following examples, I am using PRO to show which subject (the one of the matrix clause or the one of the embedded) controls the subject of the adjunct clause.[11] This in turn is informative as to where the adjunct clause is located, namely as an adjunct to the matrix vP or the embedded vP.

[10]Glosses are my own.

[11]In the adjunct clauses, I am using PRO, because this is a case of adjunct control (Chomsky, 1981; Farkas, 1988; Hornstein, 2003). The subject of the adjunct clause must be co-referenced with the subject of the matrix clause, as shown in (i).

(i) *pro*$_j$ bey-en eun caféi [doanque PRO$_{j/*k}$ partì].
dring-IMP.1PL DET.INDEF.M.SG coffee before leave.INF
'Let's drink a coffee before leaving.'

In (71), the adjunct clause *apré ai tzeidò pg* modifies the embedded predicate.[12] We know this is the case, because PRO is controlled by the subject of the embedded clause. The embedded CIwh-phrase licenses the parasitic gap in the adjunct clause, precisely as the fronted counterpart in (71-b). Note that the gap in (71-a) and (71-b) is an actual parasitic gap and not a case of object drop: in the declarative baseline in (72), where there is no A'-chain, it is impossible to have a gap and a pronoun is necessary.

(71) **Context:** Your new colleague Clara is telling you about how she saw your other colleague, Susi, warm up her lunch and then throw it away. You have known Susi for a long time and she indeed often warms up her lunch and then decides not to eat it and throws it out. You are really curious about what she threw away this time, as her lunches always look very appetizing. So you ask her:

a. T'$_g$ à vu [que l'$_j$ à tapp-ò ya **dequé** [apré PRO$_j$ ai tzeid-ò *pg*]]?
CL.NOM.2SG have.PRS.2SG see.PST.PTCP COMP CL.NOM.3SG have.COND.PRS.1SG throw-PST.PTCP away what after have.INF warm.up-PST.PTCP
'What did you see her throw away after having warmed up?'

b. **Dequé**$_k$ t'$_g$à vu [que l'$_j$à tappò ya $_{-k}$ [apré PRO$_j$ ai tzeidò *pg*]]?

(72) T' à vu [que l' à tappò ya la seuppa [apré ai tzeid-éi-*(la)]].
CL.NOM.2SG have.PRS.2SG see.PST.PTCP COMP CL.NOM.3SG have.COND.PRS.1SG throw-PST.PTCP away the soup after have.INF warm.up-PST.PTCP.F.SG-CL.ACC.F.SG
'You saw her throw away the soup after having warmed it up.'

[12] I assume, following Hewett (2023b), that the temporal clause is an adjunct to vP, see (75).

At this point, we can modify the context to force a matrix interpretation of the parasitic-gap-containing adjunct clause, as in (73). Here, *apré ai tzeidò pg* modifies the matrix predicate (73-a), which we know by the fact that PRO is controlled by the subject of the matrix clause. This means that the parasitic gap is structurally higher than the wh-phrase *dequé* ‘what’, surfacing in the embedded LLP. Thus, in order to license the parasitic gap, *dequé* needs to move out of the embedded clause and into the matrix one, as in the wh-fronting example (73-b). Once again, the baseline, reported in (74), shows that in the absence of an A’-chain, it is impossible to have a null pronoun, and the clitic becomes obligatory.

(73) **Context:** You are venting to your mother about your picky kid refusing to eat the left-overs you had warmed up for dinner last night. Curious about what food annoyed her grandson this time, your mother asks:

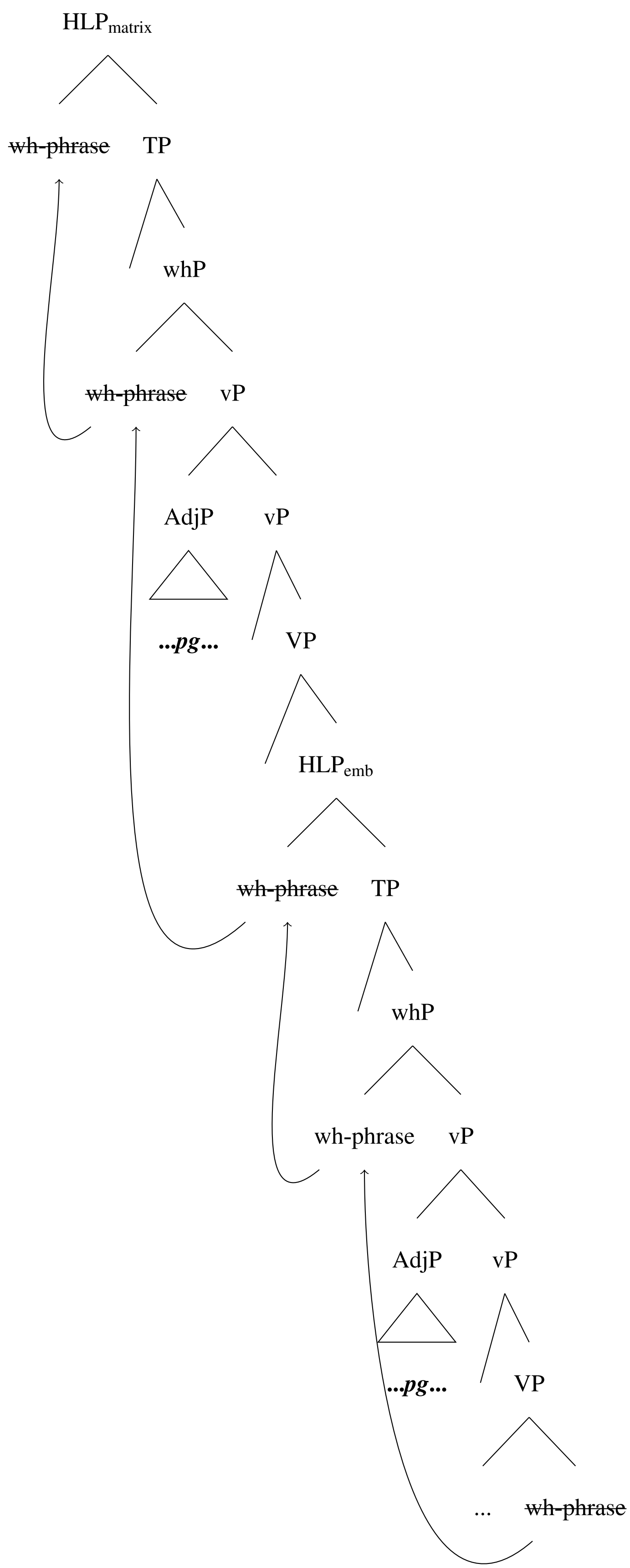
a. T’$_{g}$ à compr-éi [que l’$_{j}$
CL.NOM.2SG have.PRS.2SG understand-PST.PTCP COMP CL.NOM.3SG
arie pò medj-à **dequé**] [apré PRO$_{g}$ ai
have.COND.PRS.1SG NEG eat-PST.PTCP what after have.INF
tzeid-ò *pg*]?
warm.up-PST.PTCP
‘What did you understand he would not eat after having warmed up?’

b. **Dequé**$_{k}$ t’$_{g}$à comprei [que l’$_{j}$arie pò medjà $_{\_k}$] [apré PRO$_{g}$ ai tzeidò *pg*]?

(74) T’$_{g}$ à compr-éi [que l’$_{j}$
CL.NOM.2SG have.PRS.2SG understand-PST.PTCP COMP CL.NOM.3SG
arie pò medj-à la seuppa] [apré PRO$_{g}$ ai
have.COND.PRS.1SG NEG eat-PST.PTCP DET.DEF.F.SG soup after have.INF
tzeid-ei-*(la)].
warm.up-PST.PTCP.F.SG-CL.ACC.F.SG
‘You understood he would not eat the soup after having warmed it up.’

The evidence in (73) is crucial for three reasons. First, it converges with the binding evidence discussed in Section 7.2 and speaks in favor of an overt movement analysis of CIwh-phrases, as only overt A'-movement licenses parasitic gaps. Furthermore, it shows that movement is not clause-bound: in (56-a) *dequé* moves to the position it takes scope in, in the matrix HLP. This means that (71-a) and (71-b) are structurally identical: *dequé* has moved to the matrix HLP in narrow syntax, then deletion of the higher copies results in the output in (71-a). Finally, this evidence confirms once again that movement is successive-cyclic, as discussed in Chapter 7.2. ValPa CIwh-phrases license parasitic gaps anywhere between the position they surface in (75), the embedded LLP in (71-a), and the one where they take scope, (73-a). This piece of evidence provides further confirmation for Hewett's (2023b) claim, briefly addressed at the beginning of this section, that long-distance A'-dependencies license parasitic gaps at any vP edge position along their dependency path.

(75)



HLP$_{matrix}$
~~wh-phrase~~
TP
whP
~~wh-phrase~~
vP
AdjP
vP
***...pg...***
VP
HLP$_{emb}$
~~wh-phrase~~
TP
whP
wh-phrase
vP
AdjP
vP
***...pg...***
VP
...
~~wh-phrase~~

## 7.4 Chapter summary

After having established that CIwh-phrases in ValPa are not in situ but surface in a clause-internal position in the LLP, I have discussed two possible hypotheses. Hypothesis 1 (WYSIWYG) is ruled out by all diagnostic, summarized in Table 7.3,[13] that show that ValPa CIwh-phrases do not remain frozen in the LLP. The crucial evidence here comes from binding and parasitic gaps. Only overt A'-movement is able to create new binding opportunities and license parasitic gaps (Engdahl, 1983; Culicover, 2001; Nunes, 2004), which means that CIwh-phrases move to their scope position in narrow syntax, not at LF. Q-movement and operator binding (e.g. Focus Alternatives) do not allow the formation of new binding configurations, nor the licensing of parasitic gaps. Bonan's (2019) analysis is thus proven untenable for ValPa.

Table 7.3: Summary of diagnostics

| | Evidence for WYSIWYG | Evidence for further movement up |
|---|---|---|
| Intervention effects | No | Yes (overt/covert) |
| Inverse scope | No | Yes (overt/covert) |
| Binding | No | Yes (overt) |
| Parasitic Gaps | No | Yes (overt) |

Therefore, I can conclude that these diagnostics speak in favor of Hypothesis 2: CIwh-phrases move further up than the LLP and the movement is overt. Moreover, the evidence from binding and parasitic gaps shows that movement is not clause-bound: CIwh-phrases move to their scope-taking position, and they do so in a successive-cyclic fashion.

The evidence put forth in this section strongly supports the claim that ValPa displays overt-

[13]In Table 7.3, I report inverse scope as a separate diagnostic, even though I discuss it as a subtype of IEs in Section 7.1. As mentioned earlier in this chapter, this decision stems from the fact that inverse scope is an independent property of the language that deals with quantifiers' interpretation.

covert movement, namely movement in narrow syntax with deletion of higher copies in the chain (Bobaljik, 1995; Amaechi and Georgi, 2020). The question that arises at this point is whether this evidence is enough to fully discard the inverted Y-model of language in favor of the T-model. Just to briefly refresh the reader's memory about the discussion in Chapter 2, these two models differ in a fundamental way. In the inverted Y-model (Chomsky, 1993, 1995, 2000) shown in Figure 7.1, narrow syntax feeds into both LF and PF, and a distinction is made between movement that happens overtly (in narrow syntax) and movement that happens covertly (at LF). The former gives rise to syntactic, interpretative, and phonological effects (that is we can hear it), whereas the latter only gives rise to syntactic (broadly speaking) and interpretative effects. This distinction in timing got obscured in the T-model (in Figure 7.2). All movement happens overtly, and different copies in the chain can be pronounced (pronounce head of chain → old-school overt movement; pronounce lower copy in the chain → old-school covert movement).

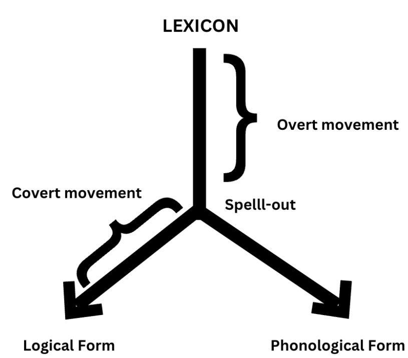



Figure 7.1: The inverted Y-model (Chomsky, 1993, 1995, 2000)

While the data discussed in this chapter indicates that there is such a thing as overt-covert movement, it is not enough to rule out the Y-model entirely and adopt the T-model. As I have discussed in Chapter 7.2, QR, a case of traditional covert movement, does not give rise to the same binding relation as (overt-covert) wh-movement does. Moreover, we must not forget the lack

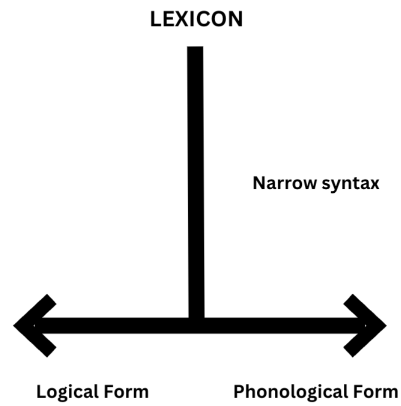



Figure 7.2: The Single Output Syntax or T-model (Bobaljik, 2002)

of parasitic-gap licensing in wh-in-situ languages like Mandarin. Under the T-model, wh-in-situ languages are actually cases of movement in narrow syntax with the deletion of higher copies in the chain, which predicts that parasitic gaps should be licensed as they are in English, contrary to fact (Lin, 2005). The same line of reasoning applies to QR, which does not license parasitic gaps (Culicover, 2001), although see Nissenbaum (2000) for a different take on the matter. Therefore, I conclude that the data put forth in this Chapter provides evidence in favor of overt-covert movement, but is not sufficient to claim that there is no 'traditional' covert movement.

## Chapter 8: Chain realization

In the previous chapter, I brought forth conspicuous evidence that CIwh-phrases in ValPa, (1-b), do not remain in the LLP, but move to their scope position. Moreover, evidence from PG licensing and binding showed that this leg of movement happens in narrow syntax, before Spell-out. This means that (1-a) and (1-b) are structurally equivalent and only differ in which copy in the chain is pronounced: pronouncing the head of the chain results in wh-fronting, as in (2-a), whereas pronouncing the intermediate copy results in a CIwh-phrase, as in (2-b). The tail of the chain can only be pronounced in echo questions, (2-c). Unlike Trevisan, ValPa does not display structural ambiguity in wh-fronting, the apparent optionality is thus the result of post-syntactic constraints on chain realization. This chapter will discuss *how* the decision on which copy to pronounce is taken.

(1) a. **À qui** t' à baill-à lo livro?
to who CL.NOM.2SG have.PRS.2SG give-PST.PTCP DET.DEF.M.SG book
'To whom did you give the book?'

b. T'à baillà **à qui** lo livro?

(2) a. [$_{\text{HLP}}$ **wh-phrase$_1$** [$_{\text{LLP}}$ ~~wh-phrase$_2$~~ [$_{\text{VP}}$ ~~wh-phrase$_3$~~ ]]]? **fronted**

b. [$_{\text{HLP}}$ ~~wh-phrase$_1$~~ [$_{\text{LLP}}$ **wh-phrase$_2$** [$_{\text{VP}}$ ~~wh-phrase$_3$~~ ]]]? **CI**

c. [$_{\text{HLP}}$ ~~wh-phrase$_1$~~ [$_{\text{LLP}}$ ~~wh-phrase$_2$~~ [$_{\text{VP}}$ **wh-phrase$_3$** ]]]? **echo**

In matrix questions, (1) and (2-a), excluding the copy in situ, the chain counts two copies, both of which can be spelled out. At this point, one could argue that the grammar freely chooses between copy 1 or copy 2, as should happen under true optionality. In order to establish if there is indeed true optionality, we need to look at examples with at least one level of embedding. In the previous chapter, I have shown that wh-phrases in ValPa undergo successive-cyclic movement from their base position to the one they take scope in, therefore leaving a copy at each intermediate LLP and HLP in their dependency path. Therefore, in (3), the A'-chain counts four copies, as in (4). If there were true optionality in choosing which copy to pronounce, not considering the copy in situ, then each copy in the chain should have 25% possibility of being pronounced.

(3) **Dequé** Gianni à deut à Maria [ que te
what Gianni have.PRS.3SG say.PST.PTCP to Maria COMP CL.NOM.2SG
de-i atsit-éi pe Tsalende]?
must-PRS.2SG buy-INF for Christmas
'What did Gianni tell Maria that you must buy for Christmas?'

This is, however, not the case. As can be seen in (4), only two copies can be pronounced: the head of the chain (4-a) and the one in the most local LLP to the extraction site (4-d), namely copy 1 and 4 in the sketched in (5). Pronouncing any of the other copies leads to unacceptable outcomes (4-b)-(4-c). Note that pronouncing multiple copies is impossible, (4-e).

(4) a. [$_{\text{HLP}}$ **Dequé** G. à deut [$_{\text{LLP}}$ ~~dequé~~ à M. [$_{\text{HLP}}$ que ~~dequé~~ te dei atsitéi [$_{\text{LLP}}$ ~~dequé~~ pe Tsalende [$_{\text{VP}}$ ~~dequé~~ ]]]]]?

b. *[$_{\text{HLP}}$ ~~dequé~~ G. à deut [$_{\text{LLP}}$ **dequé** à M. [$_{\text{HLP}}$ que ~~dequé~~ te dei atsitéi [$_{\text{LLP}}$ ~~dequé~~ pe Tsalende [$_{\text{VP}}$ ~~dequé~~ ]]]]]?

c. *[$_{\text{HLP}}$ ~~dequé~~ G. à deut [$_{\text{LLP}}$ ~~dequé~~ à M. [$_{\text{HLP}}$ **dequé** que te dei atsitéi [$_{\text{LLP}}$ ~~dequé~~ pe Tsalende [$_{\text{VP}}$ ~~dequé~~

]]]]]?

d. [$_{\text{HLP}}$ ~~dequé~~ G. à deut [$_{\text{LLP}}$ ~~dequé~~ à M. [$_{\text{HLP}}$ que ~~dequé~~ te dei atsitéi [$_{\text{LLP}}$ **dequé** pe Tsalende [$_{\text{VP}}$ ~~dequé~~ ]]]]]?

e. *[$_{\text{HLP}}$ **dequé** G. à deut [$_{\text{LLP}}$ ~~dequé~~ à M. [$_{\text{HLP}}$ que ~~dequé~~ te dei atsitéi [$_{\text{LLP}}$ **dequé** pe Tsalende [$_{\text{VP}}$ ~~dequé~~ ]]]]]?

(5) [$_{\text{HLP}}$ **wh-phrase$_1$** [$_{\text{LLP}}$ ~~wh-phrase$_2$~~ [$_{\text{HLP}}$ ~~wh-phrase$_3$~~ [$_{\text{LLP}}$ **wh-phrase$_4$** [$_{\text{VP}}$ ~~wh-phrase$_5$~~ ]]]]]?

Therefore, the following questions arise at this point: *why* only these two copies can be pronounced? And *how* is this decision taken by the grammar?

The fact that not every intermediate copy can be spelled out adds might be seen as a slight complication, as the grammar has basically two decisions to take. The first is to ”discard” the copies that can *never* be overtly realized, namely copy 2, 3, as in (4-b), (4-c), as well as copy 5 (I am not considering echo questions). The second decision is to select, out of the two pronounceable copies (4-a)-(4-d), which one to pronounce. However, this could also be seen as one ‘single action’, in which the grammar scans the entire chain and chooses for pronunciation one single copy (either the head or the penultimate copy). As we will see later in the section, my analysis does not view this operation as two distinct actions. In any case, as far as copy selection for pronunciation, it is unlikely that the chain realization patterns in (3) are the result of a rule like (6).

(6) **Rule X:** Given an n amount of copies in a wh-chain, where copy 1 is the head of the chain, either pronounce copy 1 or copy n-1.

As discussed in Chapter 2, up until relatively recently, the default assumption was that given an overt movement chain, the copy that gets pronounced is the head of the chain (Bobaljik, 2002; Bošković, 2002). And this is, in fact, what we see in many languages, e.g., Italian and English. ValPa seems to constitute an exception this this *very rough* generalization,[1] as the grammar can choose to pronounce either the head of the chain or the copy in the most local LLP to the extraction site. In this case, the questions become *why* and *how* the grammar makes these decisions.

There are two possible approaches to this puzzle. The first approach is purely post-syntactic. If we consider the possible outcomes in (3), *potentially* there are five copies that can be pronounced. And one way to account for the pattern in (3) is to postulate post-syntactic constraints that regulate the decision to pronounce a given copy and not others. For expository purposes, I will make use of a table layout like those adopted in Optimality Theory tableau (Prince and Smolensky, 1993, 2004),[2] merely to illustrate the line of reasoning. It appears that there are two generalizations that we can draw from chain realization patterns in ValPa. The first one is basically an economy principle, which following Nunes (2004) and Bianchi (2019) can be defined as Economy of Spellout (the specific term is introduced by Bianchi (2019)). Economy of Spellout, as in (7), prompts the grammar to ”keep as little as possible”.

(7) Economy of Spellout

Spell out at most one copy in a movement chain.

[1]I am using the words *very rough*, as indeed here I am only considering languages where only one copy per (wh)-chain can be pronounced. And even in this case, ValPa is not the sole exception to the trend to pronounce the head of the chain. This is also found in Romanian (Bošković, 2002) and Bulgarian (Bošković, 2002; Franks, 2017) a.o. (see Chapter 5.2). Moreover, there are languages where more than one link in the chain can be pronounced at the same time. This strategy is often referred to as wh-copying and it is found in e.g., the variety spoken in La Strozza Valle Imagna (Manzini and Savoia, 2005), see Chapter 5.1.

[2]I am, however, not making any statements about whether a ranking of constraints is what is responsible for the different outcomes. I remain agnostic, in this thesis and beyond, about whether phonology operates on rules or ranked constraints.

In ValPa, it is not possible to pronounce more than one copy in a wh-chain. Therefore, we could argue that the constraint Economy of Spellout disallows the overt realization of more than one copy in the chain. This constraint will rule out any questions with two or more overtly realized copies in the chain. However, note that it is impossible to *not* pronounce *any* copy in the chain. This is not only true of ValPa, but of movement chains more in general and it is an inviolable one.[3] Bianchi (2019) calls this constraint Recoverability, (8). In short, the grammar forces you to pronounce at least one copy. These two constraints would capture the pattern we see in ValPa.

(8) Recoverability

Spell out at least one copy in a movement chain (if the moved element has phonological content).

The second generalization is that there seems to be sensitivity to timing. The reason why I am talking about timing rather than structure is that, as it is widely argued (Uriagereka, 1999; Chomsky, 2001; Bešlin, 2024), syntactic structure is sent to the interfaces not as one single chunk, but in small pieces. There is not one single event of Spell-out, namely the point in which syntactic structure is sent off to LF and PF, but several smaller Spell-out events. The derivation is thus sent to the interfaces one piece at a time, starting from the bottom. In short, Spell-out is cyclic[4] in the sense that it happens over one cycle, or phase, at a time. For the sake of the subsequent discussion of Spell-out conditions, I am going to assume that vP, CP, and DP are phases (Chomsky,

[3]On the other hand the constraint in (7) is violable. For instance, some varieties of German and the Lombard variety spoken in La Strozza Valle Imagna allow multiple overtly realized chain links, see Manzini and Savoia (2005) and Chapter 5.1.

[4]The notion of cyclicity, despite becoming mainstream in the early '2000s with the advent of phase theory (Chomsky, 2000), was around much earlier and already featured in early work by Chomsky (1965, 1973, 1986).

2008; Gallego, 2010; Müller, 2011).[5,6] In order to define what phases are and how they operate, Chomsky (2000, 2001) proposed the Phase Impenetrability Constraint (PIC). Under the PIC$_1$ (9), given a phase HP and its complement YP (the domain, in []), the domain YP is sent to Spell-out as soon as HP merges with its sister, (9-b). YP is therefore the Spell-out domain. In short, a given phase's domain is sent to Spell-out as soon as the phase is completed.

(9) **Phase Impenetrability Condition** (PIC) (Chomsky, 2000)

a. If $\psi$ is a phase with head **H**, then its complement (the phase domain) is not accessible for operations outside of $\psi$. Only the head **H** and its specifiers (namely the phase edge) are accessible for such operations.

b. [$_{ZP}$ Z [$_{HPphase}$ **H** **[**$_{YP}$ ... **]**]]

Shortly after, Chomsky (2001, 2004, 2008) revised the PIC by proposing a softer version.[7,8] In

[5]As we have seen in Chapters 4 and 6, the edge of vP is more elaborate than previously thought. If one were to adopt the cartographic approach, then the highest position in the periphery serves as the escape hatch: SpecForceP for the HLP and allegedly SpecwhP for the LLP.

[6]Whether vP is a phase is a genuine question. While several linguists have argued in favor of this, especially van Urk and Richards (2015), others have shown that vP, or at least some instances of vPs, are in fact not phases. Consider for instance Chomsky (2001), den Dikken (2017), and Bešlin (2023) on certain vPs being non phasal. For the present analysis, as it will become clear later in this chapter, it is not particularly relevant whether vP is a phase or not, in that copy pronunciation is the result of a certain Spec-head Agree relation, which results in reflexes in the form of overt realization of the copy in that specifier. As I have shown in Chapter 7, in particular section 7.2, there is independent evidence that wh-phrases transit through the LLP regardless of whether that copy is overtly realized or not.

[7]The reason was that the PIC proved to be too strict and failed to account for some agreement patterns. Therefore, Chomsky (2001, 2004, 2008) proposed a more lenient condition: the PIC$_2$, 7. According to the PIC$_2$, the domain of a given phase HP remains available for operations to elements outside the phase until the next phase head, J, is merged. This also means that the Spell-out domain YP is sent to the interfaces later than under the traditional PIC.

(i) **Phase Impenetrability Condition 2** (PIC$_2$)

a. If $\psi$ is a phase with head **H**, then its complement (the phase domain) is only accessible for operations outside of $\psi$, *until the next higher phase-head **J** has been merged.* At this point, only the head H and its specifiers (namely the phase edge) are accessible for such operations.

b. [$_{JP}$ **J** [$_{WP}$ ... [$_{ZP}$ Z [$_{HPphase}$ **H** **[**$_{YP}$ ... **]**]]]]

[8]Also, see Bešlin (2024) for a reinterpretation of successive-cyclicity effects in terms of Featural Relativized

what follows, I will resort to the classic PIC in (9) to describe the patterns. Assuming a bottom-up syntactic derivation and multiple Spell-outs, then it follows that the copies that can be pronounced are in different Spell-out domain and, hence, will be considered for realization at PF at different *times* in the derivation. More specifically, if we consider (10), then copy$_4$ and copy$_5$ will be considered for realization way before the only other copy that we know for fact, from cases like (3), that can be pronounced: copy$_1$.

(10) [$_{\text{HLP}}$ **wh-phrase$_1$** [$_{\text{LLP}}$ ~~wh-phrase$_2$~~ [$_{\text{HLP}}$ ~~wh-phrase$_3$~~ [$_{\text{LLP}}$ **wh-phrase$_4$** [$_{\text{VP}}$ ~~wh-phrase$_5$~~ ]]]]]?

Therefore, the generalization is that timing is crucial in the sense that, simply put, either you realize the chain as soon as possible (meaning in the lowest possible phase, by pronouncing the copy in the embedded LLP) or you realize the chain as late as possible, as a last resort. In this case, you pronounce the highest copy in the chain. If one were to capture this generalization in terms of constraints, the constraints could be: ”realize as soon as possible (ASAP)” and ”realize as late as possible (ALAP)”. Inserting these constraints in an Optimality Theory style table, as in 8.1 illustrates their interaction.

Since in ValPa exactly one copy in a wh-chain can be pronounced, the constraints Recoverability and Economy of Spellout are not ranked with respect with each other (shown with a dashed line). The same applied to the other two constraints ”ASAP” and ”ALAP”, for the same reasoning: only one copy in this chain can be realized. However, the constraints Recoverability

Minimality, which gets rid of the redundancy between absolute locality restrictions (exemplified by Phase Theory) and relative locality restrictions (exemplified by Minimality). The only syntactic locality principle in the grammar is minimality, which regulates *all* probe-goal relations. Communication between narrow syntax, LF, and PF and transmission of information at the interfaces is regulated by a modified version of the PIC, which Bešlin (2024) calls Transfer.

Table 8.1: Possible constraints responsible for chain realization

| | Recoverability | Economy of Spellout | ASAP | ALAP |
|---|---|---|---|---|
| pronounce copy$_4$ ☜ | √ | √ | √ | * |
| pronounce copy$_1$ ☜ | √ | √ | * | √ |
| pronounce copy$_3$ | √ | √ | * | * |
| pronounce copy$_3$ & copy$_4$ | √ | * | √ | * |
| pronounce copy$_3$ & copy$_2$ | √ | * | * | * |

and Economy of Spellout are ranked above ”ASAP” and ”ALAP”. The ranking I am proposing in Table 8.1 would, thus, derive wh-questions in ValPa correctly. As I mentioned earlier, I am not resorting to Optimality Theory to explain chain realization, but merely to present the pattern in a different way, which highlights that there are two things at play here: quantity (of copies) and timing of the decision on copy pronunciation. As I mentioned earlier in this section, one possibility is that in fact to argue that the decision on which copy to pronounce is not mediated by syntax, at least not directly. If we assume cyclic spell-out and structure dependence, then it becomes hard to state that this decision is totally independent from the syntax. Syntax does not ‘mark’ in some way the copies that can be pronounced, which is a possible take on the puzzle that I shall address in the following section.

Table 8.2: Possible constraints responsible for chain realization

| | Recoverability | Economy of spellout | ASAP | ALAP |
|---|---|---|---|---|
| pronounce copy$_4$ ☜ | √ | √ | √ | * |
| pronounce copy$_1$ ☜ | √ | √ | * | √ |
| pronounce copy$_3$ | √ | √ | * | * |
| pronounce copy$_3$ & copy$_4$ | √ | * | √ | * |
| pronounce copy$_3$ & copy$_2$ | √ | * | * | * |
| pronounce copy$_5$ ☜ | √ | √ | √ | * |

In Table 8.1 I did not consider the possibility of pronouncing the lowest copy, the tail of the chain, which we know is only realized in Echo questions, which might not involve movement at all. If we consider copy$_5$, as in Table 8.2, we see that with the current setup, we should be able to pronounce it as well, contrary to facts, as it satisfies all the constraints. This is a problem for the generalization. A possible solution would be to claim that the lowest Spell-out domain is in fact larger. If, following Fox and Pesetsky (2005a), we argue that the Spell-out domain is in fact the whole vP, including its periphery and hence the LLP, then copy$_5$ and copy$_4$ are in the same Spell-out domain and copy$_4$ can be chosen over copy$_5$ without creating a conflict for realize ASAP. Another possible approach is to consider extra-syntactic factors, in particular prosody. I shall return to this in section 8.2.2. The following section will discuss the second possibility: that syntax does in fact inform post-syntactic components on how to realize a wh-chain.

## 8.1 Reflexes of (successive-cyclic) movement

Another way to account for the ValPa chain realization patterns is to assume that syntax conveys to post-syntactic components that some copies can be phonetically realized. There are two ways in which we can approach this.

On the one hand, we could simply argue that the whP in the HLP and the whP in the most local LLP both host a [WH] feature, which informs PF that the copy in its specifier can be spelled out. This approach is theoretically intriguing because it allows us to explain the attested patterns, as well as disregard copies in intermediate positions, which are not in the spec-head configuration with an interrogative operator head, carrying a [WH] feature. Moreover, this approach would allow us to neatly frame why in languages like English and Italian only the head of the chain can be pronounced: because, unlike in ValPa, only whP in the HLP hosts a [WH] feature. The second possibility is that the pronunciation of a lower copy in the chain is a reflex of successive-cyclic movement. I will address reflexes of movement in the following section.

Syntactic features that drive successive-cyclic movement are known to potentially affect spell-out. The literature on phonological reflexes of successive-cyclic movement is vast, with one of the most well-known descriptions probably being McCloskey's (2001) work on Irish long-distance wh-movement. Reflexes of movement on a head H are normally analyzed as the result of an Agree relation between the H and the XP, which is moved to its specifier (Torrego, 1984; Rizzi, 1990; Kinyalolo, 1991; Collins, 1993; Schneider-Zioga, 1995; Chung, 1998).

Georgi's (2014a; 2014b; 2017) work on reflexes of successive-cyclic movement is particularly relevant for the present analysis. In her thesis, Georgi (2014a) argues that despite successive-cyclic movement being a universal property, languages differ in how they display reflexes of movement. Reflexes of movement can have semantic (e.g., reconstructions effects, like the ones discussed in Chapter 7.2), morphosyntactic (e.g., stranding, subject auxiliary inversion, a speficic morpheme), or phonological (tonal changes) effects; see Abels (2012) for an overview. Reflexes of movement can surface on the head that triggers movement (e.g., complementizer agreement in Irish; McCloskey 2002) or on the moved XP, which transits through its specifier (e.g., stranding; McCloskey 2001). In an investigation of reflexes that involve an Agree relation between a head and the moved element, Georgi (2014a, 2017) studied a variety of languages and identified four patterns of reflexes of successive-cyclic movement in the HLP. The patterns are reported in (11),[9] where R marks the presence of a phonological reflex on the complementizer.

(11) Georgi's (2014a) patterns

a. Pattern I: Reflexes in all clauses

[9] I decided to report Georgi's patterns as they appear in her thesis (Georgi, 2014a), therefore using CP instead of the HLP notation I have been using when discussing ValPa.

$[_{CP1}$ wh C-**R** ...$[_{CP2}$ C-**R** ... $[_{CP3}$ C-**R** ... t ]]]

b. Pattern II: reflexes solely in the matrix clause

$[_{CP1}$ wh C-**R** ... $[_{CP2}$ C ... $[_{CP3}$ C ... t ]]]

c. Pattern III: reflexes only in embedded clauses

$[_{CP1}$ wh C ... $[_{CP2}$ C-**R** ... $[_{CP3}$ C-**R** ... t ]]]

d. Pattern IV: no reflex in any clause

$[_{CP1}$ wh C ... $[_{CP2}$ C ... $[_{CP3}$ C ... t ]]]

Pattern I, where reflexes are overt in all clauses crossed by movement, is found in Irish. The default form of the complementizer is *go*, which is found in clauses without an A'-chain, like (12-a). In clauses with long-distance movement, like (12-b), the complementizer in each CP that is crossed by movement takes the form *a*, glossed as *aL*. In this example, we only have one level of embedding, but if we were to have five, then each complementizer would surface as *a*.

(12) a. $[_{CP}$ Dúirt mé $[_{CP}$ **gu**-r shíl mé $[_{CP}$ **go** meadh sé ann ]]]
said I *go*-PST thought I *go* would.be he there
'I said that I thought that he would be there.'

b. $[_{NP}$ an tainm $[_{CP}$ $OP_k$ **a** hinndeadh dúinn $[_{CP}$ **a** bhí $\__k$ ar an áit ]]]
the name *aL* was.told to.us *aL* was on the place
'the name that we were told was on the place'

(McCloskey, 2002, p. 3)

Georgi (2014a,b) argues that the complementizer surfaces as *a* as a result of Internal Merge and a subsequent Agree relation between the C head and the XP transiting through its specifier. Another case of Pattern I is witnessed in *u*-chains in Wolof (Niger-Congo), in which the *silent* wh-phrase triggers agreement of the complementizer in each HLP in its dependency path, as outlined in (13).

(13) $[_{CP}$ $\emptyset_k$ **f**-u a defe $[_{CP}$ **f**-u Maryam wax $[_{CP}$ **f**-u ñu teg tééréb
Q CL-u 2SG think CL-u Maryam say CL-u 3PL put book
b-i $\_{k}$ ]]]?
CL-DEF-PROX
'Where do you think Maryam said they put the book?'

(Torrence, 2012, p. 1171)

Georgi (2014a) also considers copy pronunciation as a reflex of successive cyclic movement. Certain German dialects display Pattern I, as shown by Felser (2004), (14) (see also Fanselow and Ćavar 2001; 2002).

(14) Wen glaubst du, wen / *dass Peter meint, wen Susi heiratet?
who believe you who / *that P. thinks who S. marries
'Who do you believe Peter thinks that Susi is marrying?'

(Felser, 2004, p. 558)

On the other hand, Duala (Niger-Congo) displays Pattern II, where reflexes only occur in the matrix HLP. In Duala, objects and adjuncts that undergo A'-movement trigger the insertion of the marker *no* after the finite verb, which surfaces in T. Crucially, under long A'-movement, *no* surfaces only in the matrix clause, as shown in (15). Considering copy pronunciation as a reflex of successive cyclic movement, English, which only allows pronunciation of the head of the chain, displays Pattern II.

(15) [$_{CP}$ Ni kalati$_k$ nde na ta **no** na kwalane Kuo [$_{CP}$ na a-angamente wana $_{\_k}$]].
that book FOC I PST NO I tell Kuo that 3SG-must bring
'That's the book I told Kuo that he should bring.'

(Epée, 1976, p. 196)

Similarly, Chamorro (Austronesian) displays complementizer agreement only in matrix clauses (Chung, 1998). Other languages pertaining to this group are Ewe (Niger-Congo; form of subject pronoun), Indonesian (focus marking) and Bùlì (Niger-Congo; complementizer agreement).

Kiitharaka (Niger-Congo) displays Pattern III, reflexes only in embedded clauses, (16). In cases of overt A'-movement in Kiitharaka, the moved XP surfaces in the matrix CP in (16). In cases of long A'-movement, the prefix *n*,[10] glossed as a focus marker, surfaces as prefixed to the verb in all non-matrix clauses. Another instance of Pattern III is found in Dinka (Nilo-Saharan), with *ke* marking at the edge of vP (van Urk and Richards, 2015).

(16) [$_{CP}$ N-uu$_k$ u-ku-thugania [$_{CP}$ ati John **n**-a-ug-ir-e [$_{CP}$ Lucy
FOC-who 2SG-PRES-think that John FOC-SM-say-PERF-FV Lucy
**n**-a-ring-ir-e $_{\_k}$]]?
FOC-SM-beat-PERF-FV
'What did you think John said John beat?'

(Muriungi, 2005, p. 67-68)

Finally, in several languages, A'-movement does not result in any reflexes. This is the case for complementizer agreement in some *an*-chains, namely chains with an overt wh-phrase, in Wolof (Torrence, 2012). In (17-a), there is complementizer agreement in every embedded CP, whereby the complementizer surfaces as *k*. On the other hand, in (17-b) the complementizer surfaces in

[10] When the stem begins with a consonant, the allomorph *i* occurs.

its default *l* form. As the Wolof data shows, one language can display more than one pattern, in this case, Pattern III and Pattern IV. (Georgi, 2014a, 2017).

(17) a. [$_{CP}$ K-an$_k$ l-a-nu wax [$_{CP}$ **k**-u jigéén j-ifoog [$_{CP}$ **k**-u ma
CL-an EXPL-a-3PL say CL-u woman CL-DEF.PROX think CL-u 1SG
dóór $_{-k}$]]]?
hit
'Who did they say that the woman thinks that I hit?'

b. [$_{CP}$ K-an$_k$ l-a-nu wax [$_{CP}$ **l**-a jigéén j-ifoog [$_{CP}$ **l**-a
CL-an EXPL-a-3PL say EXPL-a woman CL-DEF.PROX think EXPL-a
ma dóór $_{-k}$]]]?
1SG hit
'Who did they say that the woman thinks that I hit?'

(Torrence, 2012, p. 1152,1173)

The difference between the presence and absence of reflexes of movement, according to Georgi (2014a, 2017), lies in the ordering of two operations: (internal) Agree and Merge. The reflexes of movement just discussed are the result of the feeding configuration in (18). The crucial aspect of this account is that Agree is upward; therefore, the probe H will look for a goal in its specifier (Baker, 2008; Zeijlstra, 2012). In other words, the goal must c-command the probe.[11] Movement of the XP to SpecHP thus feeds the Agree relation between XP and the head H, which gets its feature [F] checked, because H searches for a probe in its specifier. But crucially, to get to the feeding configuration in (18), Merge must apply before Agree, here marked by >.

(18) [$_{HP}$ XP$_{[F]k}$ [$_{H'}$ H [F] [$_{ZP}$ ... t$_k$ ... ]]] **Merge > Agree**

**agreement**

[11]Although see Georgi (2014a), especially Chapter 3, for cases where Agree is downwards, which gives rise to counter-bleeding effects, such as Anti Agreement Effects in Berber.

(Georgi, 2014b, p. 11)

Georgi (2014a,b, 2017) argues that in languages with a reflex of movement, e.g., Irish (12), the head which exhibits the reflex first triggers internal Merge, that is movement of XP to its specifier, and then upward Agree. The order is thus Merge > Agree. If the order is reversed, namely (upward) Agree > Merge, we get counter-feeding results: the probe on H cannot be valued because there is no goal in its search domain (Spec,HP), since XP still hasn't moved to SpecHP. The lack of a valued feature [F] on H results in the lack of its morphological realization and hence of the reflex of movement. Georgi (2014a, 2017) resorts to different ordering between Merge and (upward) Agree to derive the presence or absence of a reflex. More specifically, Georgi (2014a, 2017) argues that all patterns outlined in (11) can be accounted for with three features: a probe feature [AGR] present on every C (triggering upward Agree), a [WH] feature on the final landing position (matrix CP), and an edge feature [EPP] (triggering movement through intermediate steps).[12] I propose a sketch of a derivation in (19).

(19) [$_{\text{CP}}$ [WH] [AGR] ... [$_{\text{CP}}$ [EPP] [AGR] ... [$_{\text{CP}}$ [EPP] [AGR] ... ]]]

Table 8.3: Possible orders of Merge and Agree (adapted from Georgi (2017))

| **Order of features** | **Final step** | **Non-final step** | **Pattern** |
|---|---|---|---|
| [WH],[EPP] > [AGR] | feeds Agree | feeds Agree | I |
| [WH] > [AGR] > [EPP] | feeds Agree | counter-feeds Agree | II |
| [EPP] > [AGR] > [WH] | counter-feeds Agree | feeds Agree | III |
| [AGR] > [WH],[EPP] | counter-feeds Agree | counter-feeds Agree | IV |

If both the final movement step, triggered by a [WH] feature, and non-final movement steps,

[12]Originally, Georgi (2014a,b, 2017) uses different labels for the features, namely [∗F□∗], [•F•], and [•EF•] respectively. To avoid possible confusion, I will resort to these more transparent labels.

triggered by an [EPP] feature, apply before Agree, as in the first line of Table 8.3, then they feed Agree, which results in reflexes in every clause (Pattern I). The exact opposite happens in Pattern IV, where none of the movements feeds Agree. When one type of movement applies before and the other after Agree, we get Pattern II and III. This is what happens in Duala, where *no*-marking is triggered by wh-movement to Spec,CP only in the final clause (Pattern II). This means that Duala has the order [WH] > [AGR] > [EPP]. Since [EPP] triggers movement only after Agree takes place, there are no reflexes of movement in any intermediate step. On the other hand, [WH] triggers movement before Agree and thus feeds Agree and results in a reflex of movement in matrix CP.

Before moving back to the ValPa chain-realization facts, it is important to point out two other relevant aspects of Georgi's account. Even though she focuses primarily on reflexes in the HLP domain, she mentions that these reflexes can be witnessed in any intermediate landing position of an A'-chain, including the edge of vP, as we see with *ke* marking at the edge of every vP in Dinka (van Urk and Richards, 2015). Next, Georgi's account allows us to capture optional patterns. Since Merge and Agree obligatorily apply, the only way to account for optionality is to have a variable order of certain operations. For instance, in (20), [AGR] and [EPP] are not ordered with respect to each other.

(20) [WH] > [AGR] | [EPP]

The fixed order of [WH] > [AGR] means that the final movement step happens before Agree, which in turn always result is reflexes of movement in the matrix CP. Nevertheless, [EPP] can be freely ordered with respect to [AGR]. If it is put after [AGR], it applies after Agree, resulting in a counter-feeding relation and Pattern II. If it is put before [AGR], then movement applies before Agree, resulting in a feeding relation. This would mean that reflexes actually turn up everywhere: Pattern I. In the following section, I will apply this rationale to ValPa and try to account for the chain-realization patterns we have observed.

### 8.1.1 Copy pronunciation as a reflex of movement

Recall that copy pronunciation is a type of reflex of movement (Georgi, 2014a, 2017). Let us imagine for a second that ValPa is an obligatory wh-fronting language like English. In that case, example (21-a), with the head of the chain being pronounced, would be a realization of Pattern II. This means that the order is [WH] > [AGR] > [EPP]: Merge is only able to feed Agreein the matrix HLP. The derivation would proceed as in (22).

(21) a. **Dequé** Gianni à deut à Maria [ que te
what Gianni have.PRS.3SG say.PST.PTCP to Maria COMP CL.NOM.2SG
de-i atsit-éi pe Tsalende]?
must-PRS.2SG buy-INF for Christmas
'What did Gianni tell Maria that you must buy for Christmas?'

b. Gianni à deut à Maria [ que te dei atsitéi **dequé** pe Tsalende]?

Agree

(22) [$_{\text{HLP}}$ **dequé** [WH] [AGR] [$_{\text{LLP}}$ ~~dequé~~ [EPP] [AGR] [$_{\text{HLP}}$ ~~dequé~~ [EPP] [AGR] [$_{\text{LLP}}$ [$_{v\text{P}}$ ~~dequé~~ [EPP] [AGR] ~~dequé~~ ]]]]]

Now let us imagine that ValPa displayed overt wh-movement, but only the copy in the most local LLP to the extraction site can be pronounced; this would be a new pattern, namely, Pattern

V (reflexes only in the most embedded clause).[13] In this case, we could easily capture what is happening in (21-b) by arguing that the wh-position in the most local LLP to the extraction site (here also the most embedded one) does in fact host a [WH] and that the Pattern witnessed in (21-b) is the same as the ones in (21-a) and (22). Let us walk through it. For the sake of exposition, I will briefly assume that the wh-position in the matrix HLP does not host a [WH] feature, but just an [EPP] feature, as in (22). The order is still [WH] > [AGR] > [EPP], therefore it follows that only movement to the most local LLP position will trigger an Agree relation between the head of the phrase and the wh-phrase in its specifier, resulting in copy pronunciation. Movement to any other intermediate position, as well as to the matrix HLP, does not feed Agree and therefore does not result in reflexes of movement.

At this point, following Georgi (2014a, 2017), we can introduce the relative ordering of operations, as in (23), to capture the optionality between pronouncing the head of the wh-chain or the copy in the most local LLP. In order to derive both (21-a) and (21-b) within the same grammar, we need to assume that both whP in the matrix HLP and whP in the most local LLP host a [WH] feature, as shown in (24) below. The order of operations in ValPa is shown in (23).

(23) **ValPa ordering**: [WH] | [AGR] > [EPP]

Since Agree always precedes movement driven by edge features, in projections where there is an [EPP] feature (matrix LLP and embedded HLP), movement counter-feeds Agree and those

[13] Georgi (2014a) actually briefly discusses this possible pattern, which she calls Pattern V. She argues that past participle agreement in French is only realized in cases of A'-extraction and crucially is only realized on the most embedded verb. Nevertheless, in her thesis, she concludes that pattern V is different from patterns I to IV, in that it does not result from the order of Merge and Agree. Instead, she proposes that the movement-related morphology of past participle agreement is the spell-out of stranded functional material. Georgi and Stark (2021) circled back to this puzzle and argued that the past participle agreement in French is not the result of A'-movement.

copies can never be pronounced. The optionality arises in projections with a [WH] feature. If movement driven by a [WH] feature is ordered before Agree, then it feeds Agree, thus resulting in copy pronunciation in the most embedded LLP. This is sketched in (24). On the other hand, if movement driven by a [WH] feature is ordered after Agree, then it counter-feeds Agree and the copy in its specifier does not get pronounced. The same happens in the HLP, (25)

Agree

(24) [$_{\text{HLP}}$ ~~dequé~~ [WH] [AGR] [$_{\text{LLP}}$ ~~dequé~~ [EPP] [AGR] [$_{\text{HLP}}$ ~~dequé~~ [EPP] [AGR] [$_{\text{LLP}}$ **dequé** [WH] [AGR] [$_{\text{vP}}$ ~~dequé~~ ]]]]

Agree

(25) [$_{\text{HLP}}$ **dequé** [WH] [AGR] [$_{\text{LLP}}$ ~~dequé~~ [EPP] [AGR] [$_{\text{HLP}}$ ~~dequé~~ [EPP] [AGR] [$_{\text{LLP}}$ ~~dequé~~ [WH] [AGR] [$_{\text{vP}}$ ~~dequé~~ ]]]]

Recall that ValPa does not allow multiple wh-phrases, therefore it is impossible to pronounce two or more copies in the chain. This is, however, not at issue for the analysis. Since [WH] can precede or follow [AGR], there are only two possible outcomes: pronounce copy x or don't pronounce copy x. Therefore, there is 50-50 chance of pronouncing the copy in the embedded LLP. In case that copy is pronounced, then the head of the chain cannot get pronounced, as independent constraints in the language prevent the pronunciation of another copy in that chain. This also follows from economy constraints, prompting the grammar to "keep as little as possible" (Nunes, 2004).[14] In case where neither copy is pronounced, the derivation is ruled out by the constraints

[14]While I did not discuss his analysis at length in this dissertation, Nunes (2004) suggests that deletion of copies in a chain follows from a more general principle of feature elimination, outlined in 14. Therefore, Nunes argues that the difference between copies in a chain lies in the number of checking relations a given copy is associated with. If a given copy in the chain is engaged in more Agree relations, it will require fewer applications of FF-Elimination, thereby being the optimal candidate to survive Chain Reduction (deletion of superfluous copies) and be phonetically

that requires at least one copy in the chain to be pronounced.

Before moving to the next section, I would like to address a concern about the need for a [WH] feature in the most local LLP to the extraction site, and crucially only in that one. In Chapter 6, I have argued that wh-movement is driven by a [WH] feature. However, if successive-cyclicity is driven by an [EPP] feature on each periphery's edge (van Urk and Richards, 2015; Hewett, 2023b) and the whP in the HLP hosts a [WH] feature, then the presence of the same feature on whP in the most embedded LLP–or any other periphery for what matter–would be redundant. Syntactically, this feature would be 'useless'. In fact, we know from the Lebeaux (1998) effect discussed in Chapter 7.2, that wh-phrases transit through each LLP (and HLP) on their way to their scope position, regardless of whether they can be pronounced in those positions or not. So far, I could not think of an analysis in which syntax is involved in the decision, that does not require a similar postulation. The only way out would be once again to claim that there is over-generation, including of illicit outputs which are then filtered out at a later stage. The next section will discuss another potential factor influencing or having a relation to copy pronunciation, namely, main stress assignment.

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realized.

(ii) Formal Feature Elimination
Given the sequence of pairs $\sigma$ = <(F; P)$_1$; (F; P)$_2$; ... ; (F; P)$_n$>; suchthat $\sigma$ is the output of Linearize, F is a set of formal features, and Linearization and Phonetic Realization of Chains P is a set of phonological features, delete the minimal number of features of each set of formal features in order for s to satisfy Full Interpretation at PF.
(Nunes, 2004, p.31)

In this analysis, the relevant (pronounceable) copies enter an Agree relation with an operator position, which makes them richer in terms of features under the *Formal Feature Elimination*. Thus, my analysis and Nunes's are similar, but differ in what makes a copy "different".

## 8.2 Nuclear Pitch Assignment as a reflex of movement

In the previous section, I have proposed an analysis of copy pronunciation as the result of a specific (and in some cases optional) ordering of Merge and Agree. Under this analysis, the pattern of optionality in copy pronunciation is the result of the presence (or absence) of a given feature in the syntax. The question that arises at this point, however, is whether the decision on which copy to pronounce has effects on other phenomena, such as the ones at the syntax-prosody interface. In this section, I will briefly introduce the basic terminology and discuss a possible typology of prosodic patterns in wh-questions. Then, I will first dive headfirst into the prosody of wh-questions in ValPa and propose a generalization of the data. Following that, I will discuss other relevant analyses on the syntax-prosody interface in Italian by Bocci and Cruschina (2018) and Bocci et al. (2021) and propose an analysis of the ValPa data.

In what follows, I will not delve deep into phonological notions and prosodic mapping rules, but will adopt Bocci's (2013) and Bocci et al.'s (2021) terminology. The authors make use of the Autosegmental-Metrical model of intonation (Pierrehumbert, 1980; Ladd, 1983, 1996), in which pitch accents are analyzed as tonal specification that signal the prominence of a given element. Within a prosodic constituent, the most prominent pitch accent is the Nuclear Pitch Accent (NPA). Looking at (27), the NPA is assigned to *Sue*, which is the most prominent elements in the sentence. In this section I shall discuss the NPA of wh-questions and therefore, following Bocci et al. (2021), I will only focus on the main phrasal stress or sentential stress, namely the element that bears the highest level of prominence in the metrical structure of the entire utterance.

### 8.2.1 A typology of NPA assignment in wh-questions

The literature generally acknowledges that a focused element taking sentential scope must be maximally prominent in the prosodic structure and, therefore, associate with the sentence's main stress (**??**). This is illustrated in examples (26) and (27), where the constituent bearing main stress appears in bold.

(26) A: What is your friend eating?

B: She is eating a per**sim**mon.

(27) A: Who called?

B: **Sue** called.

As discussed in Chapter 6, wh-movement is normally associated with focus and wh-phrases are argued to be focalized. From a syntactic perspective, this parallel is captured in the claim that wh-phrases and focalized constituents target the same projections (Rizzi, 1997; Kahnemuyipour, 2001; Bianchi and Bocci, 2012; Rizzi and Bocci, 2017). Also from a semantic standpoint, both wh-phrases and focalized constituents (like *Sue* in (27)) are viewed as introducing a set of alternatives (Hamblin, 1973; Rooth, 1985, 1992; Erteshik-Shir, 1986; Erteschik-Shir, 1997; Beck, 2006). Given these parallels, linguists have started investigating the syntax-prosody interface of focus, which by extension includes wh-elements.

The expectation is, thus, that wh-phrases would display the same prosodic patterns as other focalized elements (e.g., New Information Focus, as in (26) and (27)) and bear the NPA. However, as Ladd (1996) points out, this is not the case: "logic seems to suggest that the WH-word is the focus of the question, and yet, in English at least, the WH-word does not normally bear the most prominent accent" (Ladd, 1996, p.170). In English wh-questions, the NPA falls by default on the stressed syllable of the rightmost constituent of the sentence, as in (28), exactly like in declarative sentences, see (26). This means that, as far as the NPA assignment is concerned, the language does not differentiate between questions and declaratives. The same pattern is witnessed in Spanish (Hualde and Prieto, 2015).

(28) a. Where are you **go**ing? **English**

b. Who did you just **call**?

c. Which book did you **buy**?

Other languages display different patterns. For instance, in Romanian, Greek, and Hungarian, in wh-questions the NPA falls on the wh-phrase (Ladd 1996; see also Jitcă et al. 2015 for Romanian and Alexopoulou and Baltazani 2012 on Greek; a.o.). Japanese, a wh-in-situ language, also puts the NPA on wh-phrases (Ishihara, 2004). The pattern is reported in (29) for Romanian.

(29) a. **Unde** mergi? **Romanian**
where go.2SG
'Where are you going?'

b. **Când** a plecat?
when has left
'When did it leave?'

c. **Cine** a chemat?
who a has called
'Who called?'

(Ladd, 1996, p. 227)

From the typological distinction proposed by Ladd (1996), we could divide languages into two groups: languages in which wh-questions follow the same prosodic pattern as declaratives (English and Spanish) and those that assign the NPA to the wh-phrase, as in Romanian. Nevertheless, as soon as we look at the prosody of Italian we notice that Ladd's (1996) typology falls short. In Italian declarative sentences, the NPA falls on the rightmost overt element, as in (30). On the other hand, in wh-questions the NPA falls on the lexical verb, regardless of the type of verb or the overall structure of the questions, (31)-(32)-(33) (Calabrese, 1982; Marotta, 2001, 2002; Cinque, 1993; Zubizarreta, 1998).

| | | | | |
|---|---|---|---|---|
| (30) | Ho | compra-to | i | **ca**ch-i. |
| | have.PRS.1SG | buy-PST.PTCP | DET.DEF.M.PL | persimmon-PL |

'I bought persimmons.'

| | | | | | |
|---|---|---|---|---|---|
| (31) | Cosa | hai | com**pra**-to | a-l | mercato? |
| | what | have.PRS.2SG | buy-PST.PTCP | at-DET.DEF.M.SG | mercato |

'What did you buy at the market?'

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| (32) | A | chi | hai | rega**la**-to | il | libro | de-lla | Ferrante? |
| | to | who | have.PRS.2SG | gift-PST.PTCP | DET.DEF.M.SG | libro | of-DET.DEF.F.SG | Ferrante |

'To whom did you gift the Ferrante's book?'

| | | | | | |
|---|---|---|---|---|---|
| (33) | Chi | ha | **chie**-sto | un | aumento? |
| | who | have.PRS.3SG | ask-PST.PTCP | DET.INDEF.M.SG | rise |

'Who asked for a pay rise?'

(Bocci and Cruschina, 2018, p. 468)

In case of long-distance wh-movement, there is a strong tendency for the NPA to fall not on the matrix verb, but on the embedded one, as can be seen in (34) (Bocci, 2013; Bocci and Cruschina, 2018; Bocci et al., 2021).

(34) Chi$_k$ ha detto [che ha invi**ta**-to _$_k$
who have.PRS.3SG say.PST.PTCP COMP have.PRS.3SG invite-PST.PTCP
a-lla festa]?
to.DET.DEF.F.SG party
'Who did (s)he say (s)he invited to the party?'

Therefore, the prosody proposed in Ladd (1996) must be amended to include a third type, which is represented by Italian, in which in (bare) wh-questions the NPA is assigned to the lexical verb. The updated typology is reported in Table 8.4.

Table 8.4: Ladd's (1996) typology, updated

| | NPA placement | languages |
|---|---|---|
| Type 1 | same as declaratives rightmost element | English, Spanish |
| Type 2 | wh-phrase | Romanian, Hungarian, Greek |
| Type 3 | most embedded lexical verb | Italian |

The following section will describe the prosody patterns in ValPa wh-questions. As far as I know, this is the first description of the prosody of a Francoprovençal language.

### 8.2.2 Prosody of ValPa wh-questions

ValPa has lexical stress that does not fall on a predetermined syllable. In general, stress falls on either the ultimate or penultimate syllable, as shown in the following examples where the accented syllable appears in bold. In general, stress either falls on the ultimate or the penultimate syllable. In this sense, ValPa patterns like Occitan (Sichel-Bazin et al., 2015) and differs from French, where the stress always falls on the last syllable (Roca, 1999).

(35) a. L' è par**tì**.
CL.NOM.3SG be.PRS.3SG leave.PST.PTCP
'He left.'

b. dze**leu**nna.

'chicken'

c. ca**è**ya

'chair'

Like in Italian, in declarative sentences the NPA falls on the rightmost element. As can be seen in Figure 8.1, the material following the verb in declarative is not deaccented.

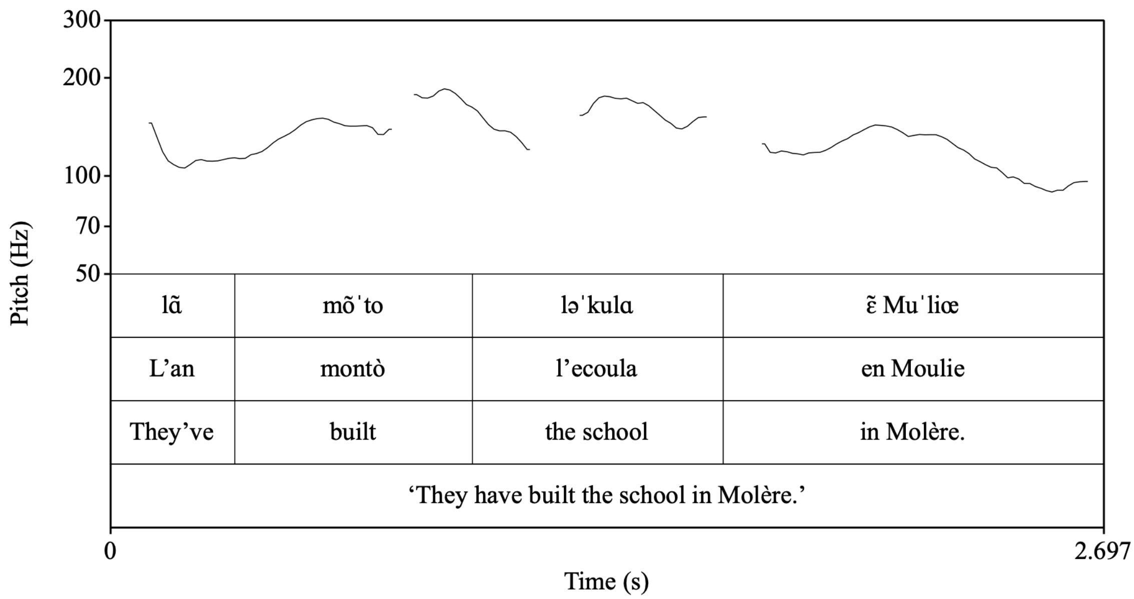

Figure 8.1: Prosodic contour of a ValPa declarative sentence

In bare wh-questions with a fronted wh-phrase, like (36), the NPA is not assigned to the wh-phrase but to the main verb, as in Italian. This can be seen in Figure 8.2, where *mon**tò*** bears the main prominence and what follows is deaccented.

(36) **Dequé**$_k$ l' an mont-ò en Moulie $_{-k}$?
what CL.NOM.3PL have.PRS.3PL build-PST.PTCP in Molère
'What did they build in Molère?'

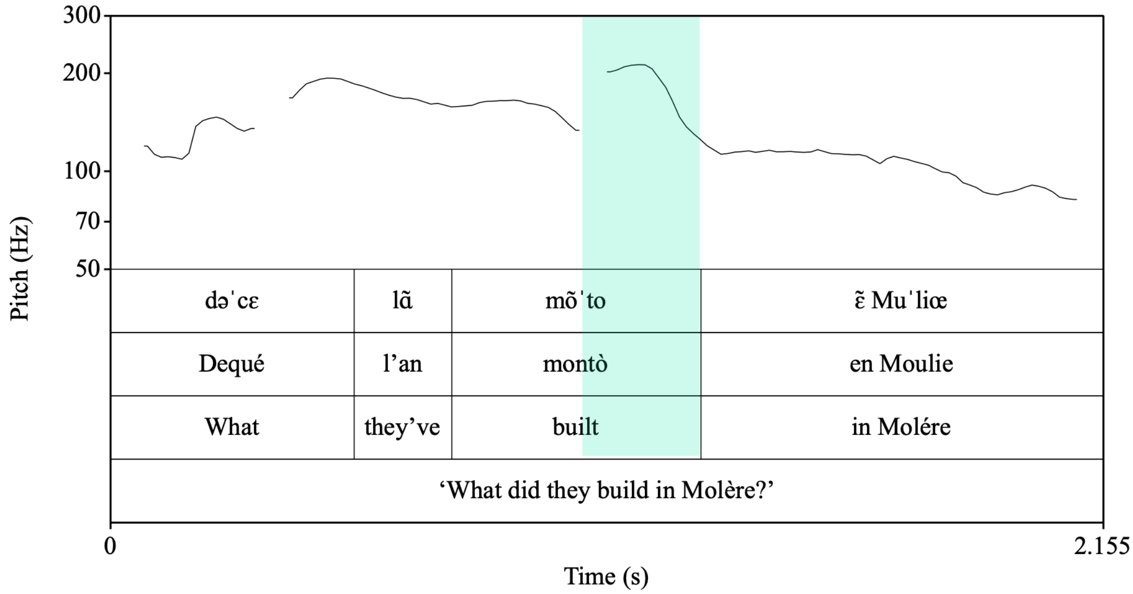


Figure 8.2: Prosodic contour of a matrix wh-question with a fronted wh-phrase

Moreover, in case of long-distance wh-questions, the NPA falls on the NPA falls on the embedded lexical verb, as can be seen in the prosodic contour of (37) in Figure 8.5 further in this chapter.

(37) **Dequé**$_k$ t' an deut [que l' ari-on
what CL.DAT.2SG have.PRS.3PL say.PST.PTCP COMP CL.NOM.3PL have.COND-3PL
mont-ò en Moulie $_{-k}$]?
build-PST.PTCP in Molère
'What did they tell you they would build in Molère?'

Since Italian is a wh-fronting language, Ladd (1996); Marotta (2001, 2002); Bocci (2013); Bocci and Cruschina (2018); Bocci et al. (2021) did not investigate patterns with a CIwh-phrase. In ValPa, we see that in matrix wh-questions with a CIwh-phrase, like in (38), the NPA falls on the wh-phrase and not on the verb, as shown in Figure 8.3.

(38) L' an mont-ò **dequé**$_k$ en Moulie $_{\_k}$?
CL.NOM.3PL have.PRS.3PL build-PST.PTCP what in Molère
'What did they build in Molère?'

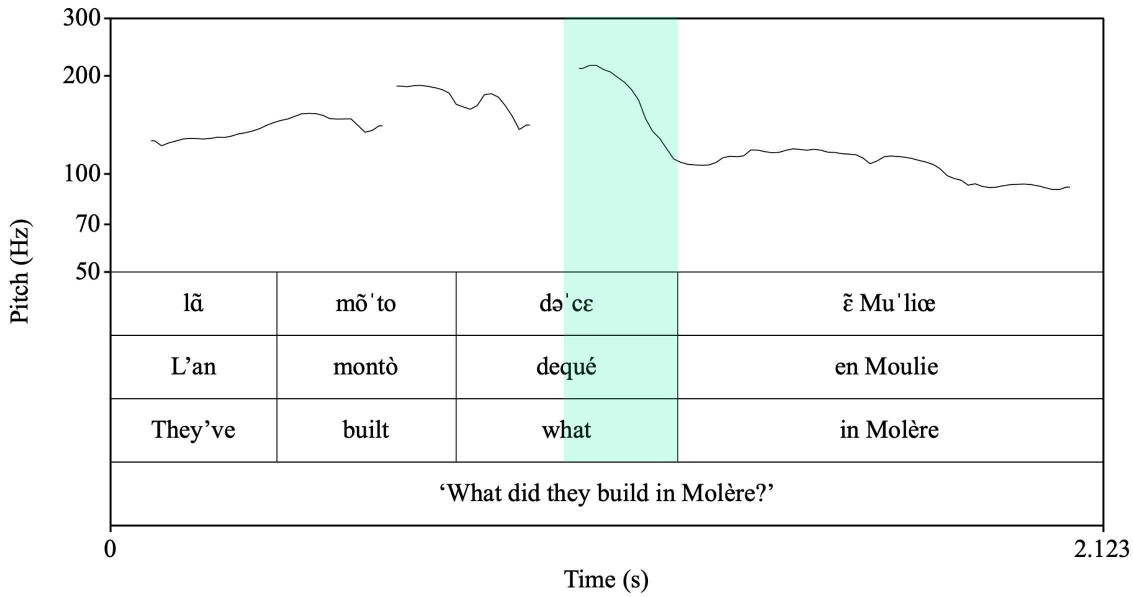


Figure 8.3: Prosodic contour of a matrix wh-question with a CIwh-phrase

And once again, in the presence of a CIwh-phrase in the embedded clause, like (39) the NPA is not assigned to the lexical verb, but to the CIwh-phrase. This is shown in Figure 8.4.

(39) T' an deut [que l' ari-on
CL.DAT.2SG have.PRS.3PL say.PST.PTCP COMP CL.NOM.3PL have.COND-3PL
mont-ò **dequé**$_k$ en Moulie $_{\_k}$]?
build-PST.PTCP what in Molère
'What did they tell you that they would build in Molère?'

Therefore, ValPa presents a pattern that does not fit into Ladd's (1996) original typology, nor in the revisited typology I proposed in Table 8.4. In case of wh-fronting, ValPa patterns

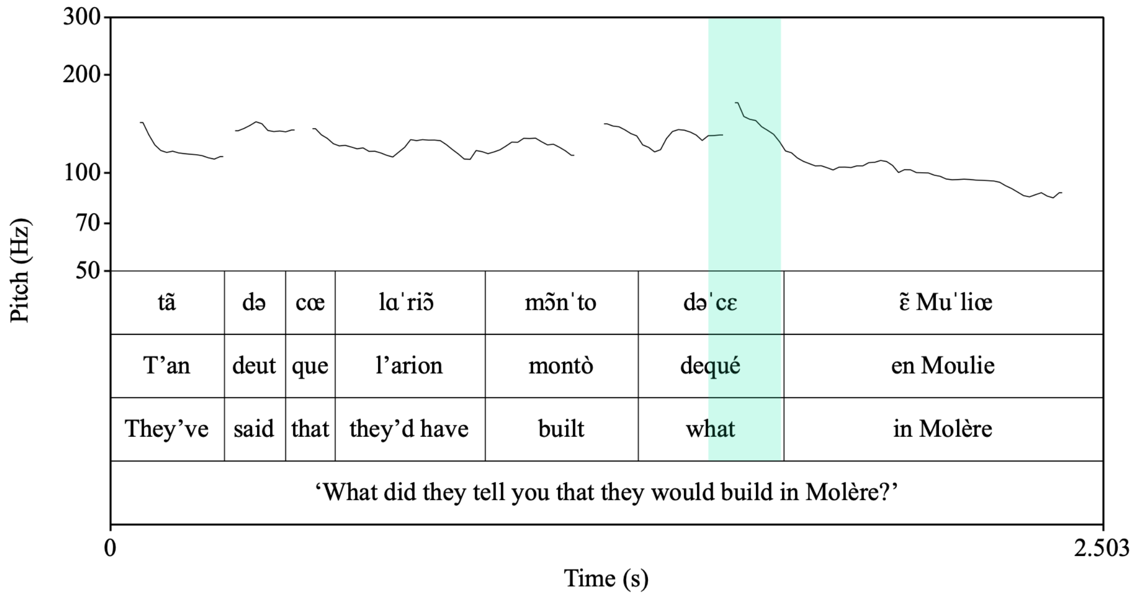


Figure 8.4: Prosodic contour of a long-distance wh-question with a CIwh-phrase

like Italian and the NPA is assigned to the lexical verb closest to the extraction site (in case of long-distance wh-movement that is the embedded verb), meaning that ValPa is–at least in part–a language of Type 3. However, the NPA assignment facts in questions with CIwh-phrases do not fit in any of the Types described in Table 8.4. This pattern therefore suggests that we must add a Type 4, in which the NPA is assigned to CIwh-phrases. ValPa is, therefore, a mixture of Type 3 and Type 4. The updated typology is reported in Table 8.5.

Table 8.5: Ladd's (1996) typology, updated again

| | NPA placement | languages |
|---|---|---|
| Type 1 | same as declaratives rightmost element | English, Spanish |
| Type 2 | wh-phrase | Romanian, Hungarian, Greek |
| Type 3 | most embedded lexical verb | Italian, ValPa |
| Type 4 | CIwh-phrase | ValPa |

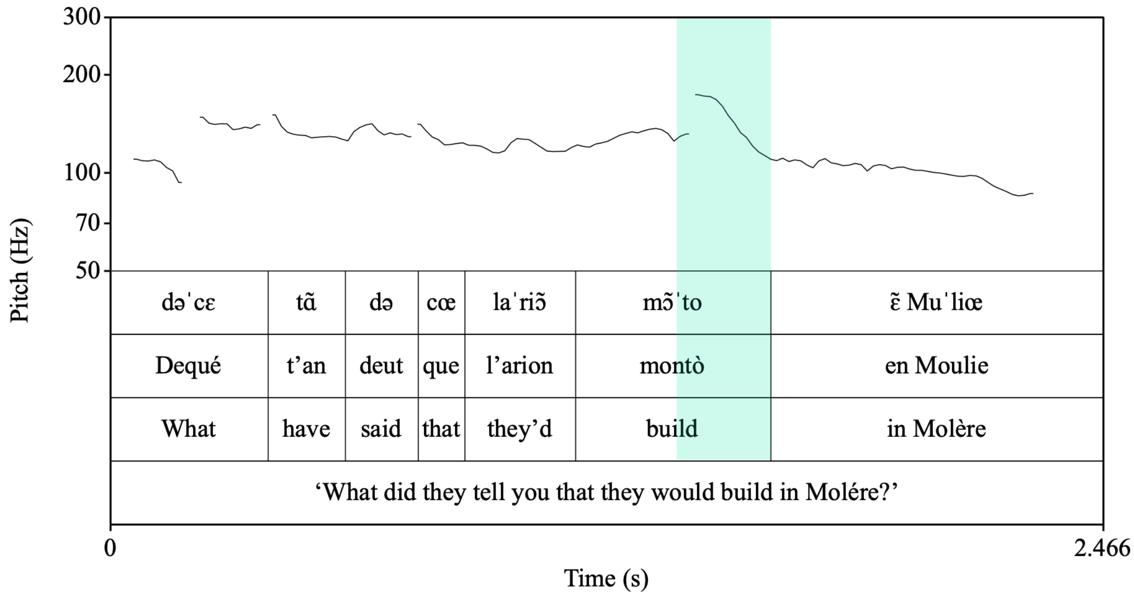


Figure 8.5: Prosodic contour of a long-distance wh-question with a fronted wh-phrase

### 8.2.3 An analysis of NPA assignment in wh-questions

In this section, I will discuss a relevant analysis by Bocci et al. (2021), building on previous work by Bocci (2013) and Bocci and Cruschina (2018), on the syntax-prosody interface in Italian wh-questions that, and adapt it to the ValPa data.

Calabrese (1982) claims that the NPA assignment witnessed in Italian follows from a specific phonological requirement that the wh-phrase and the verb form a single intonational phrase. Wh-phrases are focal elements and, as such, inherit a focus feature, which Calabrese labels [F]. Due to this feature, focal elements appear adjacent to the main verb (on a similar note, see also Bianchi et al. 2018). This way, the wh-phrase and the verb constitute the main intonational phrase of the sentence. Then, following the rules of stress assignment in Italian, the rightmost overt element within this intonational phrase, namely the verb, bears the NPA. This is shown in (40) for a case of long-distance wh-movement. The wh-phrase is extracted from an embedded clause but still forms an intonational phrase ($\iota$) with the verb (marked in []), sandwiching all other phonological phrases ($\phi$) in between.

(40) a. Che cosa gli hai detto che ha
what CL.DAT.M.SG have.PRS.2SG say.PST.PTCP COMP have.PRS.3SG
**fa**-tto Carlo?
do-PST.PTCP Carlo
'What did you say Carlo has done?'

b. [[Che cosa]$_\phi$ [gli hai detto]$_\phi$ [che ha fatto]$_\phi$ ~~che cosa~~]$_\iota$ [Carlo]$_\phi$?

(Bocci et al., 2021, p. 415)

Elaborating on Calabrese's work, Marotta (2001, 2002) argues that bare wh-phrases in Italian are phonologically weak and as such cannot bear the NPA. In the literature, the term "clitic-like" is often used to refer to bare wh-phrases, but Marotta adopts Cardinaletti and Starke's (1999) terminology,[15] according to which weak means "phonologically weak", based on the fact that wh-phrase cannot bear the NPA, parallel to clitic pronouns. Nevertheless, as Cardinaletti and Starke (1999) note, weak elements can occur on their own and can be coordinated, unlike clitic. Therefore, we must be cautious in using the terms "weak" and "clitic-like" interchangeably. In what follows, I shall use the term "(phonologically) weak" as it was meant by Cardinaletti and Starke (1999). Since bare wh-phrases cannot bear the NPA, the latter is assigned to the 'closest' phonologically heavier element: the main verb. In support of her claim, Marotta (2001) reports examples of *perché* questions, where the question word is typically assigned the NPA, because it is a strong element and is generated in the HLP (Rizzi, 2004, 1997).[16] Unfortunately, Marotta

[15]Cardinaletti and Starke (1999) discuss various aspects of pronouns, including interpretation, preference of use, internal structure, and position targeted.

[16]However, there is in my opinion a more fitting account of this asymmetry that has nothing to do with the weight of the question word, but rather by their movement path. While the bare wh-phrases discussed here all undergo movement, *perché* is externally merged directly in the HLP of the clause. Thus, this is more of a syntactic

(2001) did not test long-distance wh-questions, but her analysis makes really clear predictions: regardless of the length of movement, the NPA should be assigned to the closest non-weak element to the wh-phrase, namely the matrix verb. Marotta's (2001; 2002) analysis, therefore, would make a prediction that contrasts with the claim and analysis by Calabrese (1982) reported above.

In their study of NPA assignment in long-distance wh-questions, Bocci and Cruschina (2018) and subsequently Bocci et al. (2021) address precisely the prediction made by Marotta (2001). The authors resort to two sets of production experiments to investigate the placement of NPA in wh-questions with one level of embedding. In short, their findings prove Marotta's prediction to be incorrect. Let us walk through the examples. The authors tested two sets of wh-questions: short extraction (from the matrix clause) and long extraction (from the embedded clause). Two stimuli from their study, with the context given to the recording speakers, appear in (41) and (42).

(41) **Context**: *Gianni lavora in una agenzia di pubblicità e si occupa degli stagisti. Al termine di un periodo di stage, deve indicare al direttore i due stagisti più promettenti, che potrebbero essere assunti. Gianni ha fatto amicizia con Lucia, una stagista molto in gamba, e decide di discutere apertamente con lei della situazione; quindi le chiede:*

'John works in an advertising agency and takes care of the interns. At the end of an internship, he must point out to the director who the best interns are, so that they can be hired. John made friends with Lucy, a smart intern, and decided to talk to her about the situation; so he asks her:'

phenomenon rather than a phonological one, as it will be clear soon.

Chi$_k$ pens-a $\_{k}$ che ti dov-r-ei presenta-re
who think-PRS.3SG COMP CL.ACC.2SG must-COND-1SG introduce-INF
a-l direttore?
to-DET.DEF.M.SG director

'Who thinks that I should introduce you to the director?'

(Bocci et al., 2021, p. 417)

(42) **Context**: same as (41).

Chi$_k$ pens-i che dov-r-ei presenta-re $\_{k}$ a-l
who think-PRS.2SG COMP must-COND-1SG introduce-INF to-DET.DEF.M.SG
direttore?
director

'Who do you think I should introduce to the director?'

(Bocci et al., 2021, p. 418)

As we can see in Figure 8.6,[17] in cases of short wh-extraction like (41), the NPA is always assigned to the main verb, ***pen****sa*. In cases of long wh-extraction, the NPA is primarily assigned to the embedded main verb *presen****ta****re*, (42), as can be seen in 8.7. NPA assignment to the matrix main verb is possible, albeit dispreferred.

The authors argue that NPA assignment in Italian is a phonological reflex of successive-cyclic wh-movement. More specifically, it is the [FOCUS] feature that is responsible for the NPA assignment. Before looking at a derivation, I report in (43) the set of syntax-prosody interface principles that the authors assume. In short, the NPA is assigned to the rightmost phonologically overt element bearing a [FOCUS] feature.

[17] The images are reproduced here as they are in the original, despite the unclear IPA transcription in the second line in the image.

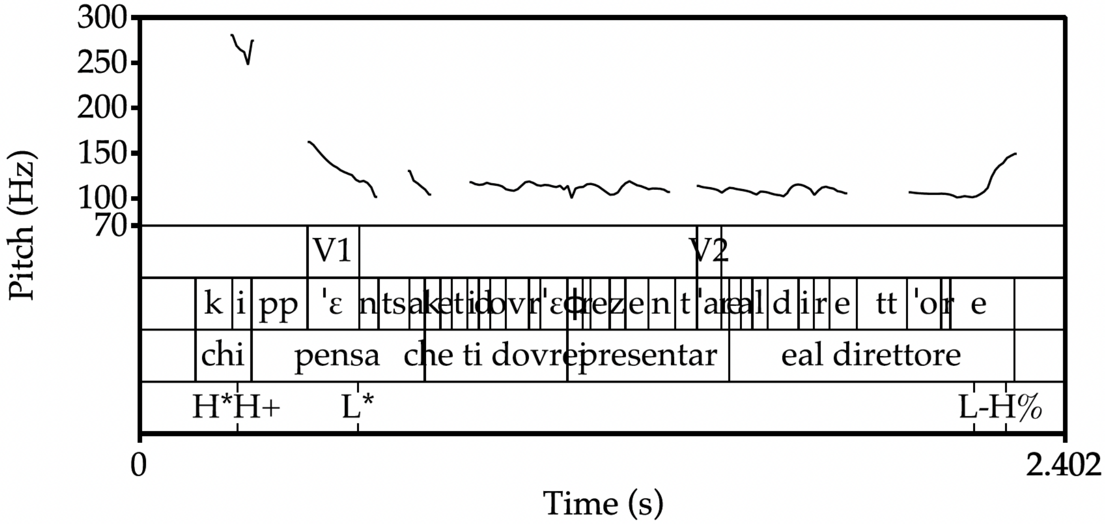


Figure 8.6: Pitch contour of a wh-question with short-distance movement: NPA is assigned to the matrix lexical verb (Bocci et al., 2021, p. 421).

(43) The algorithm for NPA assignment (Bocci et al., 2021):

a. The NPA must be assigned to an element that is phonologically overt and non-clitic (Calabrese, 1982; Nespor and Vogel, 1986). Thus, among the wh-copies in a wh-movement chain, only the highest copy is eligible for NPA assignment, the lower ones being subject to phonological deletion.

b. When the syntactic structure contains one or more occurrences of the [FOCUS] feature, the NPA must be assigned to a syntactic element that is marked with this feature (irrespective of whether the feature is interpretable or not on that element).

c. The NPA is assigned to the rightmost element that satisfies (a) and (b). If the sentence does not contain any occurrence of the [FOCUS] feature, the NPA is assigned to the rightmost element by default (Calabrese, 1982; Katz and Selkirk, 2011).

In Bocci et al.'s account, wh-phrases carry a [FOCUS] feature on top of their canonical

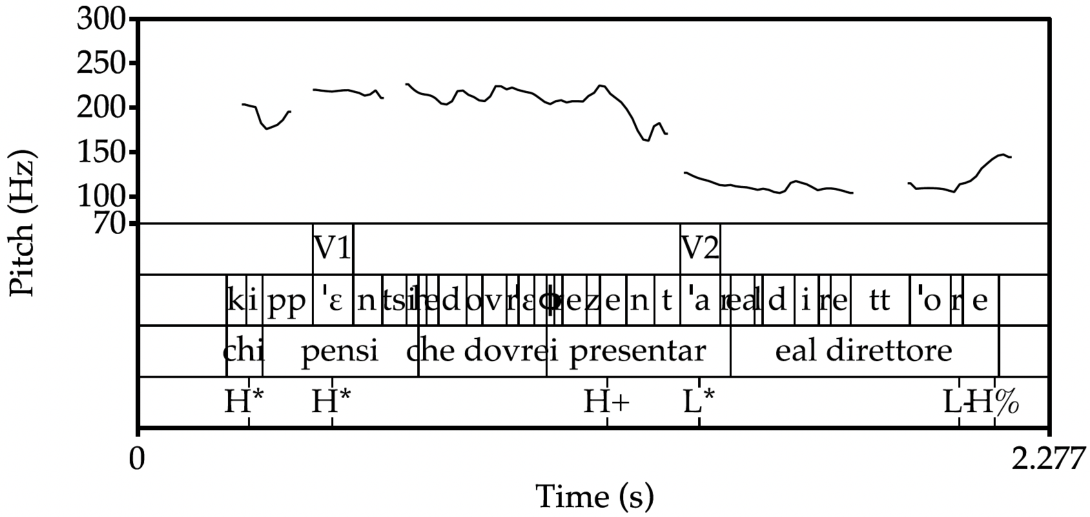


Figure 8.7: Pitch contour of a wh-question with long-distance movement: NPA is assigned to the embedded lexical verb (Bocci et al., 2021, p. 421).

[WH] feature. The [FOCUS] feature is then transmitted by the wh-phrase to each intermediate position it transits through up until the matrix CP, namely *v* and C. This can be seen in Figure 8.8 for (41) (deleted copies are marked in between < ... >). The rightmost overtly realized element that bears a [FOCUS] feature is the matrix *v*, which hosts the main verb, therefore the NPA is assigned to the latter. On the other hand, in cases of long-distance wh-movement, like (42), the rightmost overtly realized element bearing a [FOCUS] feature is the embedded verb, which inherits the [FOCUS] feature when the wh-phrase transits through its specifier, as shown in Figure 8.9.[18]

To sum up, in Bocci et al.'s (2021) account, syntactic features have a say in the mapping from syntax to prosody. Additionally, their analysis fits well with a successive-cyclic account of wh-movement.[19] In the remained of this section, I will model Bocci et al.'s (2021) analysis on

[18] In their analysis it is, however, crucial, that the {WH, FOCUS} bundle is present at every intermediate step. If intermediate steps only involved a general edge feature, e.g., [EPP] it would be impossible to account for the NPA facts discussed here, as the NPA is tied to the presence of the [FOCUS] feature.

[19] The analyses discussed so far differ in a crucial way. Calabrese's (1982) and Marotta's (2001; 2002) try to model the prosodic account as reflecting the final Spell-out (basically the surface word order). On the other hand, the

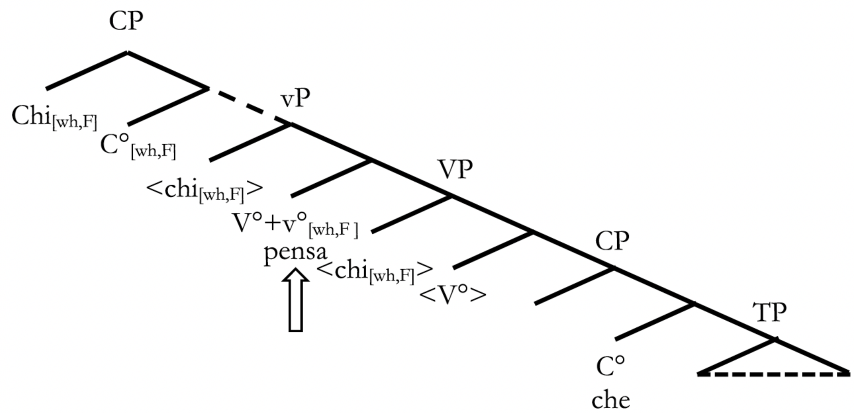


Figure 8.8: Derivation of (41) (Bocci et al., 2021, p. 435).

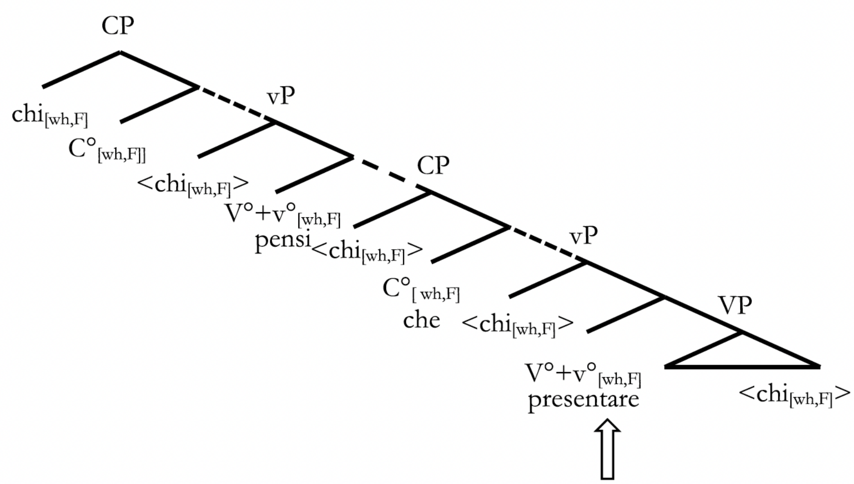


Figure 8.9: Derivation of (42) (Bocci et al., 2021, p. 436).

the ValPa.

As discussed in the previous section, ValPa patterns in part like Italian: if the head of the chain gets pronounced, the NPA falls on the lexical verb closest to the extraction site. Therefore, in these cases, we can just adopt Bocci et al.'s (2021) algorithm for NPA assignment sketched in

Bocci (2013) and Bocci et al. (2021) are arguing that successive cyclic effects are also reflected in prosodic patterns. Bocci's (2013; 2021) approach raises a more general question, namely whether prosody is recursive the way syntax is. While this question is beyond the scope of this dissertation, I refer the reader to Wagner (2005, 2010) and Elfner (2012, 2015, 2018) for arguments in favor of a cyclic account of prosody and Cheng and Downing (2016) a.o. for arguments against.

(43) as is. For instance, in (44) and (45),[20] the algorithm will assign the NPA to the rightmost overt and non-weak element, namely the lexical verb closest to the extraction site, which has inherited the feature bundle [WH] and [FOCUS] from the wh-phrase transiting through whP in the LLP.

(44) **Dequé** t' à atsit-ò?
what CL.NOM.2SG have.PRS.2SG buy-PST.PTCP
'What did you buy?'

(45) [$_{\text{whP}}$ **dequé** [WH] [FOCUS] [$_{\text{TP}}$ t'à [$_{\text{XP}}$ **atsitò**$_{\textbf{[WH][FOCUS]}}$ [$_{\text{whP}}$ ~~dequé~~ [WH] [FOCUS] ~~atsitò~~$_{\text{[WH][FOCUS]}}$ [$_{\text{vP}}$ ~~atsitò~~ [$_{\text{VP}}$ ~~atsitò~~ ~~dequé~~ ]]]

A question that might arise at this point is whether the fact that the verb moves out of the vP is an issue for this analysis. Bocci et al. (2021) argue that, in transiting through the edge of vP, the wh-phrase transfers its features to the head *v*, where then the verb transits on its way up (see also Ledgeway and Lombardi, 2005 and Schifano, 2018.) Since the main verb undergoes head movement to v, it inherits the features of the wh-phrase. As you might recall from the discussion in Chapter 3.2, in ValPa, all verbs move out of the vP, to a functional position below TP. The question that arises is whether adopting a layered and fine-grained LLP instead of simply resorting to the edge of vP, like Bocci et al. (2021) do, is problematic for the analysis. Let us consider a matrix question like (44) and the corresponding sketch in (45), where the functional projection targeted by the past participle is labelled XP. Assuming that head movement cannot skip intermediate heads but must transit through each head in between its external merging position and the position it surfaces in (Travis, 1984),[21] the verb is bound to also transit through every head in

[20] In (45), I omitted the **[AGR]** feature for clarity of exposition.
[21] See also Matushansky (2006) and Dékány (2018) for discussions on head movement, including cases of long head movement.

the LLP. Therefore, the wh-phrase *dequé* and the past participle *atsitò* transit through whP in the LLP, finding themselves in a Spec-head relation, in which the verb can inherit the [WH] [FOCUS] feature bundle from *dequé*, as in the simplified (45). As the verb moves further up to XP, it carries the {[WH] [FOCUS]} feature bundle. Now let us consider questions with a CIwh-phrase, as in (46) and (47).

(46)

| | | | |
|---|---|---|---|
| T’ | à | atsit-ò | **dequé**? |
| CL.NOM.2SG | have.PRS.2SG | buy-PST.PTCP | what |

‘What did you buy?’

(47) [$_{\text{whP}}$ ~~dequé~~ [WH] [FOCUS] [$_{\text{TP}}$ t’à [$_{\text{XP}}$ atsitò$_{\text{[WH][FOCUS]}}$ [$_{\text{whP}}$ **dequé** [WH] [FOCUS] ~~atsitò$_{\text{[WH][FOCUS]}}$~~ [$_{\text{vP}}$ ~~atsitò~~ [$_{\text{VP}}$ ~~atsitò~~ ~~dequé~~ ]]]

The NPA assignment algorithm in (43) also works for these questions, as it will assign the NPA to the rightmost overt and non-weak element that bears the [WH] and [FOCUS] bundle: the CIwh-phrase. Therefore, if we assume that ValPa wh-phrases all bear a bundle of features like [WH] and [FOCUS], then we can just adopt the analysis put forth in Bocci et al. (2021). The NPA is assigned to the rightmost overt element that bears a [FOCUS] feature: the CIwh-phrase. Therefore verb movement is not an issue for the original account in Bocci et al. (2021) nor for its adaptation to the syntax-prosody mapping in ValPa questions.

There are two remaining questions at this point. The first question is about the alleged weak/clitic nature of bare wh-phrases. As stated above, Marotta (2001, 2002) defines Italian bare wh-phrases “phonologically weak”, because of their inability to bear the NPA, unlike wh-phrases for instance in Hungarian (Ladd, 1996). Bocci et al. (2021), on the other hand, use the term ‘non-clitic’ to refer to elements that can bear the NPA in Italian in their NPA algorithm in (43).

Earlier in this section, I argued that the term clitic is inappropriate to refer to wh-phrases. Unlike clitics (Cardinaletti and Starke, 1999), wh-phrases can occur in isolation (e.g., in questions like *Quan?* 'Where?') and can be coordinated (e.g., *Di' me yeiu e quan!* 'Tell me where and when!'). Moreover, throughout this dissertation, I have shown that there is no verb adjacency requirement for ValPa wh-phrases, which can be separated from the verbal complex by e.g., a full subject DP in case of fronted wh-phrases or a manner adverb in case of CIwh-phrases (see Chapter 4.4). Therefore, it is safe to state that bare wh-phrases in ValPa are not "clitic-like". However, the data discussed in this section suggests that the term 'weak', as used by Marotta (2001, 2002) to define bare wh-phrases like *cosa* 'what', is also not appropriate for ValPa wh-phrases, which can in fact bear the NPA when surfacing clause-internally. There is no doubt that bare wh-phrases like *dequé* 'what' are phonologically lighter than e.g., D-linked wh-phrases like *quin livro* 'which book', which I address in the next section, and the phonological weight of the wh-phrase might have an effect on the prosody of the question. Nevertheless, characterizing wh-phrases as weak is inappropriate for ValPa. Therefore, the distinctions proposed by Marotta (2001, 2002) (weak vs strong) and Bocci et al. (2021) (clitic vs non-clitic) seem unsuitable for ValPa wh-phrases.

The second question concerns the [FOCUS] feature postulated by Bocci et al. (2021). In Chapter 6, I have shown that wh-phrases can in fact co-occur in the same periphery, contra what has been largely claimed in the literature (Rizzi, 1997; Rizzi and Bocci, 2017), and argued that this is evidence that wh-movement and focus-movement are driven by distinct features, which I label [WH] and [FOC]. It, thus, follows that including a [FOCUS] feature in wh-movement, pace Bocci et al. (2021), look prima facie problematic. However, adopting Bocci et al.'s (2021) account and introducing a [FOCUS] feature is not an issue. In their account, the purpose of the [FOCUS] feature is to ensure the proper mapping from syntax to LF, as well as a proper syntax-prosody mapping. The authors do not discuss this directly, but it is entirely possible that this [FOCUS] feature is distinct from the [FOC] feature that drives the movement of contrastively-focalized constituents, as I have argued in Chapter 6 and Seguin (in press). The names of the features are arbitrary and it is indeed the case that [FOC] and [FOCUS] are very similar. We could simply re-label the former [CONTRAST] for clarity.[22] Therefore, I support the adoption of [FOCUS] to refer to the feature at work in the NPA assignment and syntax-prosody interface. In ValPa wh-questions, then, like the Italian ones discussed by Bocci et al. (2021), the [WH] feature drives successive cyclic movement. On the other hand, the [FOCUS] feature ensures the proper mapping from syntax to phonology and NPA assignment. This way, we can adopt Bocci et al.'s (2021) NPA assignment algorithm without modications[23] and, most importantly, the analysis for

[22]Recall, moreover, that at the end of Chapter 6, where I speculate on the position of all kinds of foci in the language, I have suggested that New Information Focus might target the same position targeted by wh-phrases in virtue of both elements not being exhaustive (they can both occur in mention-some question-answer pairs). On the other hand, Contrastive and Corrective Focus (and possibly Mirative Focus as well) appear to target a contrastive/exhaustive position in the peripheries. This division is partly supported by work order patterns and restrictions on occurrence. Therefore, it is plausible that these two groups of focus-like elements target different positions. These facts suggest that their movement is also driven by different features and we could have two features at play here, [FOC] for contrastively- and correctively-focalized constituents and [WH] for wh-phrases (and perhaps New Information Focus).

[23]It would still be possible to part from the analysis proposed in Bocci et al. (2021) and discard the [FOCUS] for the derivation of wh-chains in ValPa. In this case, wh-phrases would only host a [WH] feature, as proposed in the previous section. Of course, we would need to slightly modify the NPA assignment algorithm as in 23, with the added features marked in violet. The revised algorithm in 23 would capture the ValPa and the Italian data.

(iii) The algorithm for NPA assignment, adapted from Bocci et al. (2021):

a. The NPA must be assigned to an element that is phonologically overt and not a clitic (Calabrese, 1982; Nespor and Vogel, 1986).
b. When the syntactic structure contains one or more occurrences of the [focus] or [WH] feature, the NPA must be assigned to a syntactic element that is marked with this feature (irrespective of whether the feature is interpretable or not on that element).
c. The NPA is assigned to the rightmost element that satisfies (a) and (b). If the sentence does not contain any occurrence of the [focus] or [WH] feature, the NPA is assigned to the rightmost element by default (Calabrese, 1982; Katz and Selkirk, 2011).

Alternatively, there could be crosslinguistic variation in terms of feature bundling and in wh-questions some languages have the bundle [FOCUS] [WH], whereas others only have one of the two. I leave this question open for future research.

NPA assignment in ValPa is still compatible with the analysis sketched in the previous section, adapted from Georgi (2014a, 2017), which accounts for the optionality in copy pronunciation. This is shown in (48), where the crucial heads–whP in the matrix HLP and embedded LLP–host both a [WH] and a [FOCUS] feature.

(48) [$_{\text{HLP}}$ ~~dequé~~ [WH] [FOCUS] [AGR] [$_{\text{LLP}}$ ~~dequé~~ [EPP] [AGR] [$_{\text{HLP}}$ ~~dequé~~ [EPP] [AGR] [$_{\text{LLP}}$ **dequé** [WH] [FOCUS] [AGR] [$_{\text{vP}}$ ~~dequé~~ ]]]]

In the case of CIwh-phrases, the [WH] feature will ensure movement through whP in the embedded LLP and feed Agree (for both the [WH] and the [FOCUS] feature), which in turn results in the copy in its specifier to be overtly realized. Then, at the syntax-prosody interface the algorithm in (43) will assign the NPA to the rightmost overt element that bears the [FOCUS] feature: the wh-phrase.

### 8.2.4 The prosody of D-linked and other 'heavy' wh-phrases

So far, I have focused on the prosody of questions with bare wh-phrases and disregarded D-linked wh-phrases, e.g., *quin livro* 'which book' as well as other heavier PP wh-phrases. This section will explore the prosody of questions with D-linked wh-phrases as well as heavier non-D-linked ones, like *avouë qui* 'with whom'.

As we have already seen in several places throughout this thesis, bare wh-phrases and D-linked ones differ in several aspects. First, D-linked wh-phrases (e.g., the ValPa *quin livro* 'which book', *quinte treifole* 'which potatoes') are phonologically heavier than bare wh-phrases (e.g., *dequé* 'what', *quan* 'when'). Moreover, these two groups of wh-phrases also differ in their semantics. D-linked wh-phrases prompt an answer from a predetermined set of items in the discourse (Pesetsky, 1987; Cinque, 1990), as in (49).

(49) T' à port-ò **quin-ta** **torta** à l'
CL.NOM.2SG have.PRS.2SG bring-PST.PTCP which-F.SG cake to DET.DEF.F.SG
écoula?
school
'Which book did you bring to school?'

Finally, bare and D-linked wh-phrases differ in their distribution. As I have shown in Chapter 6.4, ValPa as well as Italian D-linked wh-phrases are less restricted in their occurrences with peripheries. This occurs because they do not target the same positions as bare wh-phrases and most likely undergo Topic movement, argued for Hindi (Dayal, 1996, 2002), Japanese (Yoshihisa et al., 2004), German (Grewendorf, 2012), Hungarian (Lipták, 2001), and Tsez (Polinsky, 2001). This Topic movement analysis also explains why they can be extracted from wh-islands (Rizzi, 1990) and why they show no superiority effects in multiple wh-questions in English (Pesetsky, 2000; Kotek, 2014). Moreover, in the early days of cartography, Rizzi (2001) noted an asymmetry between Italian bare wh-phrases like *che* 'what', *dove* 'where', *quando* 'when' and interrogative elements like *perché* 'why' and *come mai* 'how come': the former require to be adjacent to the verb, whereas the latter do not. This asymmetry led Rizzi (2001) to argue that these two groups target different projection in the HLP: bare wh-phrases target FocP (or QembP, see Chapter 6) in the bottom part of the HLP, whereas *perché* and *come mai* target IntP in the middle of the HLP (see the discussion in Chapter 6). Similarly, D-linked wh-phrases do not have to be verb adjacent. Given these facts, Rizzi (2001) argued that D-linked wh-phrases do not target FocP, but IntP, like *perché* and *come mai*. Crucially, the verb-adjacency requirement for bare wh-phrases is correlated with the impossibility of the wh-phrases to bear the NPA (Marotta, 2001, 2002). *perché* and *come mai*, on the other hand, can bear the NPA, as can be seen in (50). Through production experiments and a corpus study, Bocci and Avesani (2015) investigate the placement of the main prominence in wh-questions in Italian, and properly generalize Marotta's (2001; 2002) observations. Wh-elements that strictly require verb-adjacency include bare wh-phrases like *dove* 'where' and aggressively non-D-linked elements, cannot bear the NPA, which is assigned to the main verb. This can be seen in Figure 8.10.

(50) Per**ché** Mario non vien-e a cena?
why Mario NEG come-PRS.3SG to dinner
'Why isn't Mario coming to dinner?'

On the other hand, wh-phrases that do not need to be verb-adjacent, such as D-linked wh-phrases and interrogative elements like *perché* and *come mai* tend to bear the NPA. This can be seen in Figure 8.11 for a D-linked wh-phrase, where the NPA falls on the whole wh-phrase *chi di loro*. However, as can be seen in Figure 8.12, within D-linked wh-phrases, the NPA can also fall only on the wh-word *chi* 'who' (Bocci, 2013).

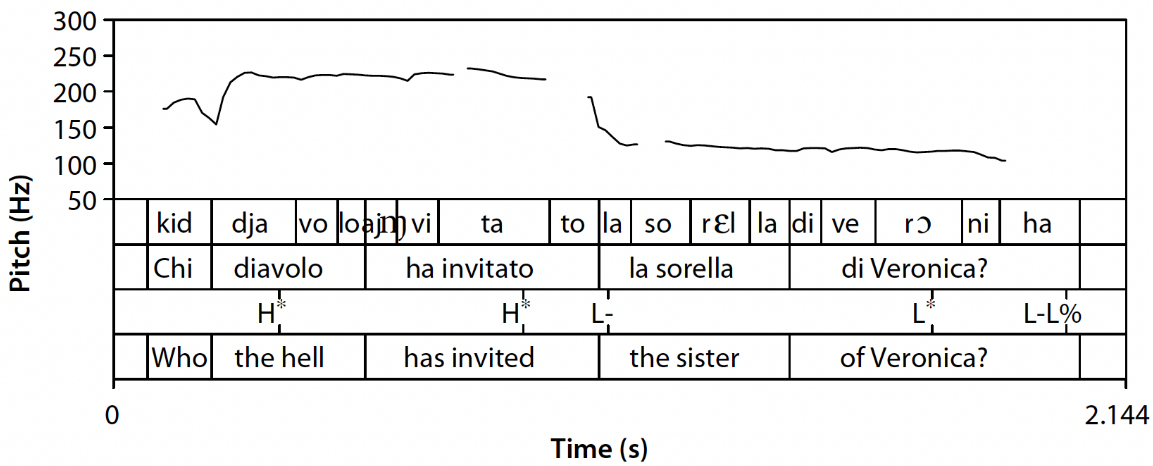


Figure 8.10: Prosodic contour of a an agressively non-D-linked wh-question (Bocci, 2013, p. 164)

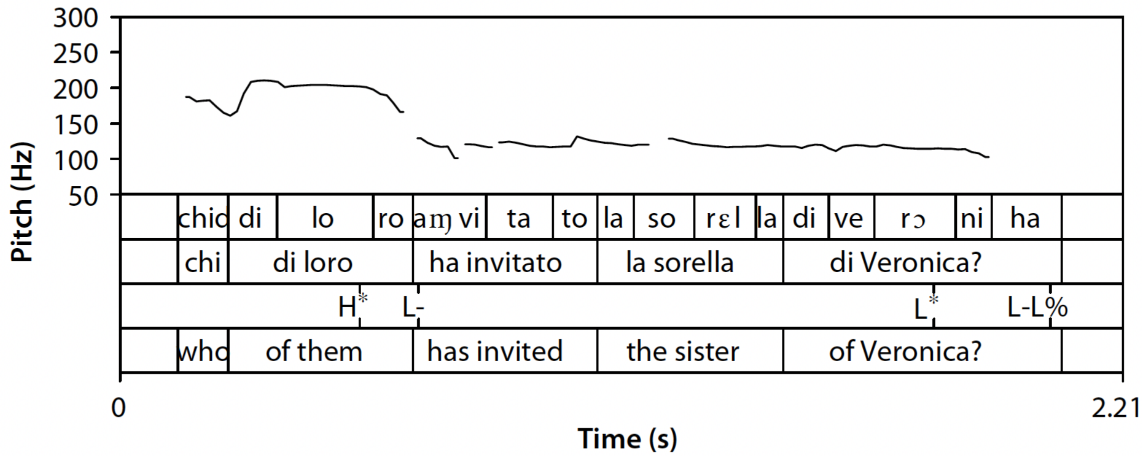


Figure 8.11: Prosodic contour of a D-linked wh-question (Bocci and Avesani, 2015, p. 31)

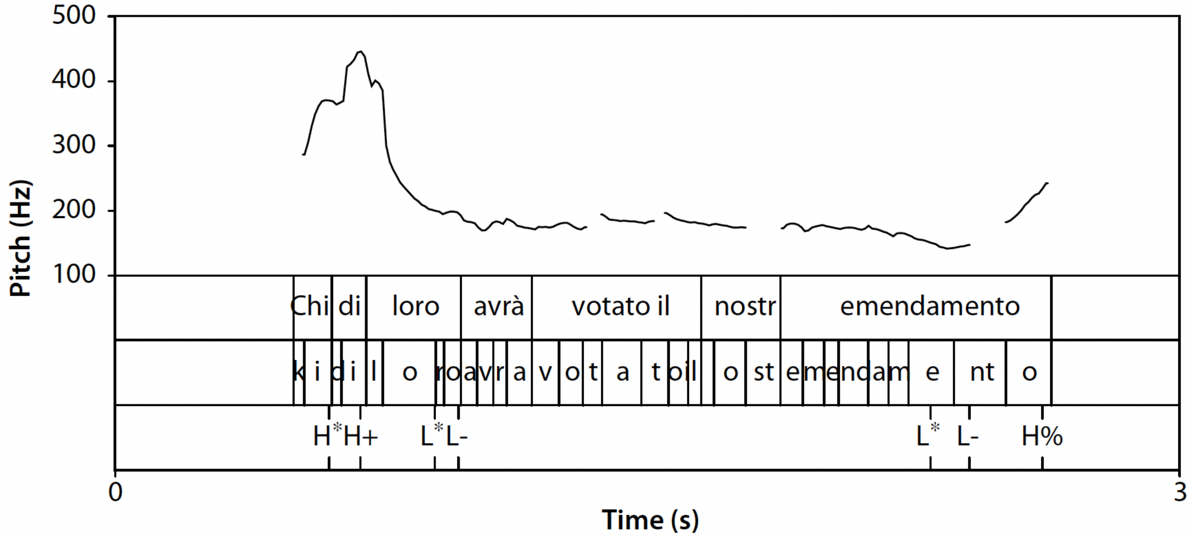


Figure 8.12: Prosodic contour of a D-linked wh-question (Bocci, 2013, p. 171)

Given these facts, the correlation between phonological weight of the wh-phrase and its ability to bear the NPA falls short. Aggressively non-D-linked wh-phrases, namely wh-phrases that are non-D-linked and express a strong negative feeling (Pesetsky, 1997), are phonologically heavier than bare wh-phrases like *dove* 'where'. Moreover, their weight is comparable to that of D-linked wh-phrases. As Bocci (2013) argues, *chi diavolo* 'who the hell' in Figure 8.10 is almost equivalent, from a phonological point of view, to *chi di loro* 'who of them' in Figure 8.11. Yet, the former never associates with the main prominence, while *chi di loro* bears the NPA. The prosodic facts in Italian are straightforward: the weight of the wh-phrase does not have an effect on the prosody of the questions. The fact that both *perché* and D-linked wh-phrases bear the NPA, while bare wh-phrase cannot, can be linked to their different syntactic status and positions targeted in the HLP.

Back to ValPa, previous analysis of the prosody of wh-questions in Italian by Bocci (2013); Bocci and Avesani (2015); Bocci and Cruschina (2018); Bocci et al. (2021) predict that we should not see an effect of phonological weight on the NPA assignment patterns: D-linked wh-phrases should bear the NPA, regardless of their position, as should *perqué* 'why'.

<table>
<tr><td>(51)</td><td>a.</td><td>Quin-ta</td><td>ecoulla</td><td>l'</td><td>an</td><td>mont-ò</td><td>en</td><td>Moulie?</td></tr>
<tr><td></td><td></td><td>which-F.SG</td><td>school</td><td>CL.NOM.3PL</td><td>have.PRS.3PL</td><td>build-PST.PTCP</td><td>in</td><td>Molère</td></tr>
<tr><td></td><td></td><td colspan="7">'Which school did they build in Molère?'</td></tr>
<tr><td></td><td>b.</td><td colspan="7">L'an montò quinta ecoulla en Moulie?</td></tr>
</table>

This prediction is borne out. If we take an example like (51-a), with a fronted D-linked wh-phrase, we notice that the NPA falls on the wh-phrase and not on the main verb, as we can see in Figure 8.13. In case the wh-phrase surfaces clause-internally, as in (51-b), the NPA is assigned to the wh-phrase. This can be seen in Figure 8.14. These findings are perfectly in line with what has been argued for Italian (Bocci, 2013; Bocci and Avesani, 2015; Bocci et al., 2021).

Moreover, *perqué* 'why', as in (52), likewise bears the NPA in ValPa, as can be seen in Figure 8.15. This is also in line with claims in the literature on Italian (Calabrese, 1982; Marotta, 2001, 2002; Bocci, 2013; Bocci and Avesani, 2015; Bocci et al., 2021).

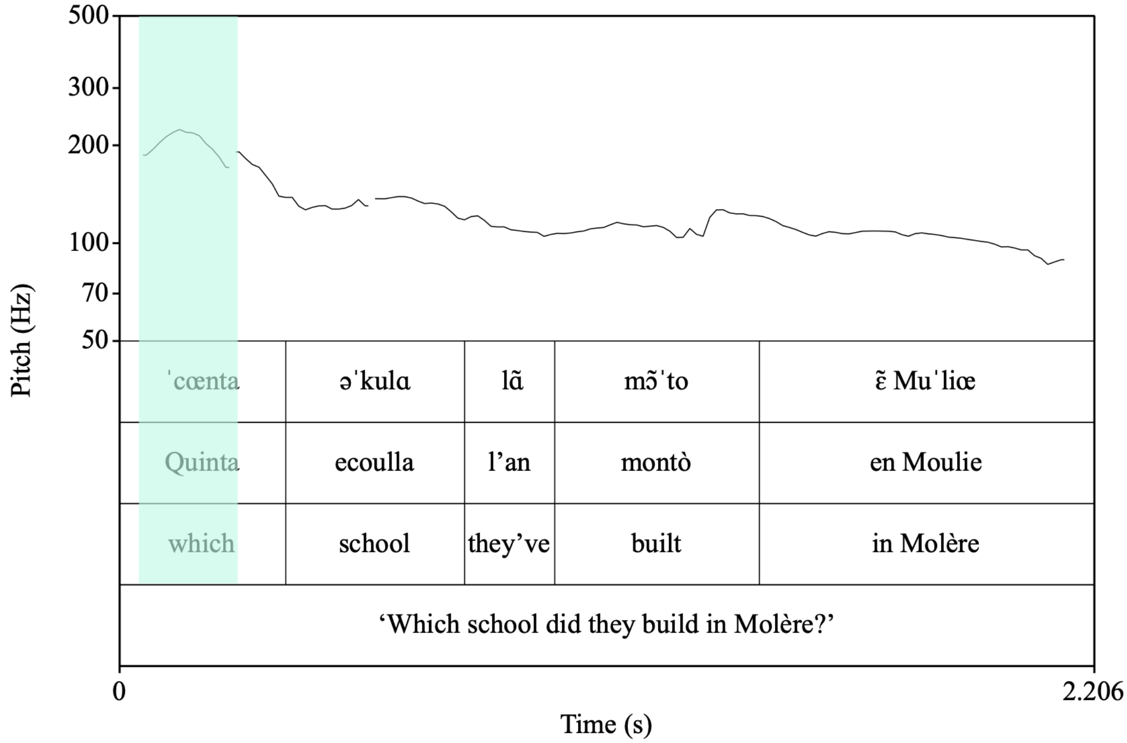


Figure 8.13: Prosodic contour of matrix question with fronted-linked wh-phrase

(52) Perqué t' à deut que llam-e lo lahéi?
why CL.NOM.2SG have.PRS.2SG say.PST.PTCP COMP like-PRS.3SG DET.DEF.M.SG milk
'Why did you say that he likes milk?'

Nevertheless, if we look at examples with a bare wh-phrase which is syntactically heavier, e.g., *avouë qui* (53), we notice that the NPA falls on the wh-phrase, both when it is fronted, as in Figure 8.16,[24] and when it surfaces clause-internally, as in Figure 8.17. This pattern is surprising and does not follow from Bocci's (2013), Bocci and Avesani's (2015), and Bocci et al. (2021)'s (2021) analyses.

[24]Note that in Figure 8.16, the NPA slightly spans over the subject clitic pronoun *te*. Since it is a clitic pronoun, the latter can never bear sentential stress, I believe it is merely an effect of adjacency. However, more research is needed to thoroughly investigate the mechanisms responsible for stress assignment in the language.

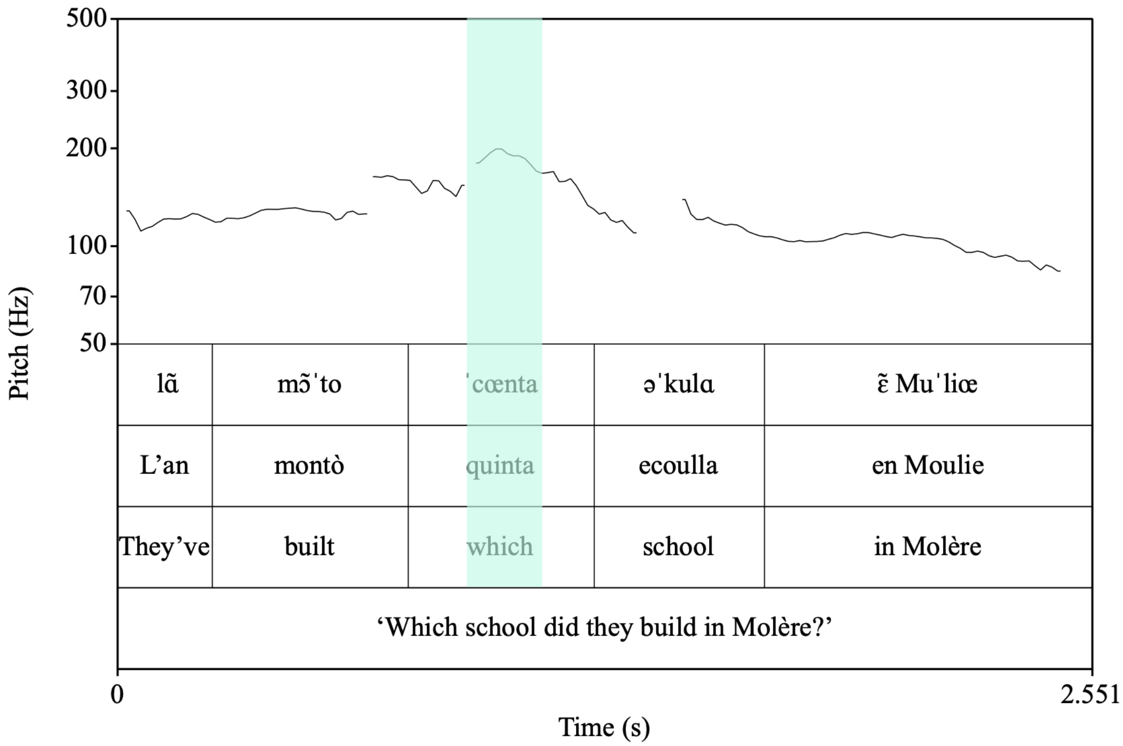


Figure 8.14: Prosodic contour of matrix question with CI D-linked wh-phrase

(53) a. **Avouë qui** te l’ à mont-ée
with who CL.NOM.2SG CL.ACC.F.SG have.PRS.2SG build-PST.PTCP.F
l’ ecoulla en Moulie?
DET.DEF.F.SG school in Molère?
‘With whom did you build the school in Molère?’

b. Te l’à montée avouë qui l’ecoulla en Moulie?

The pattern in Figures 8.16 and 8.17 appears to contradict Bocci (2013), Bocci and Avesani (2015), and Bocci et al. (2021) that the phonological weight of the wh-phrase does not influence the NPA assignment patterns and the prosody of the questions. In ValPa, all ‘heavy’ interrogative elements (*perqué*, D-linked wh-phrases, and non-D-linked PP wh-phrases) bear the NPA, regardless of their position. Thus, the claim that D-linked wh-phrases bear the NPA solely because they target a different position with regard to bare wh-phrases is being challenged by the ValPa data.

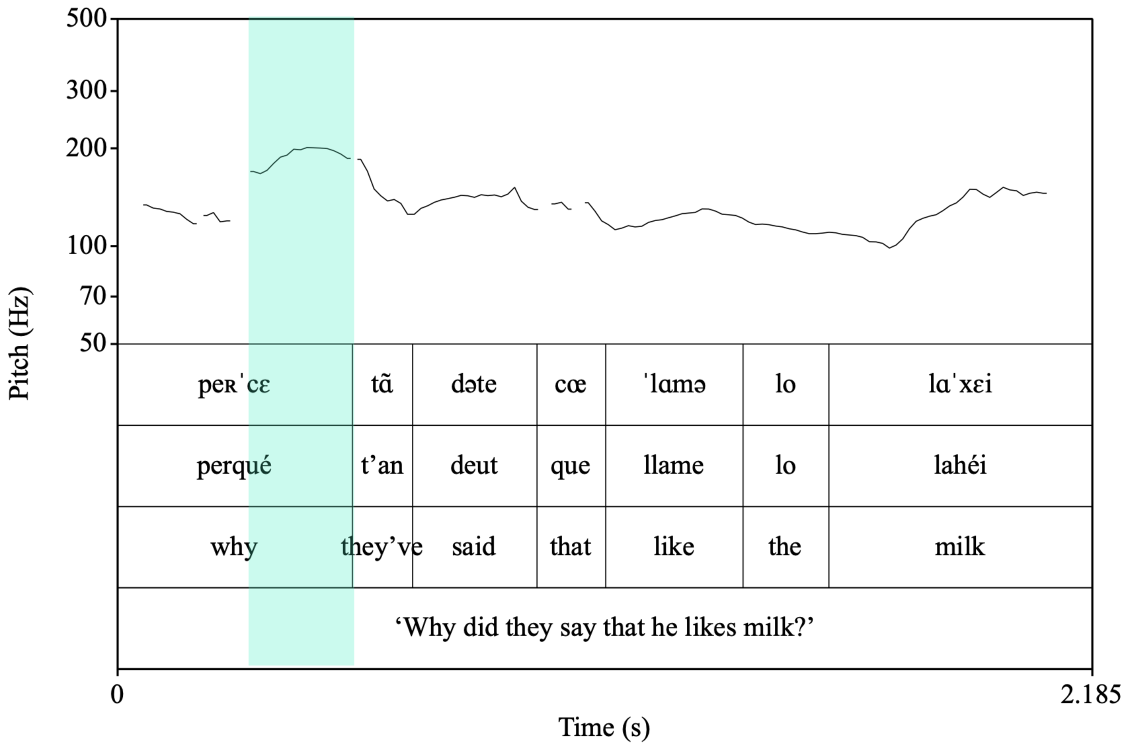


Figure 8.15: Prosodic contour of a *perqué* question

The prosody patterns of ValPa wh-questions discussed in this subsection can be summarized as follows. In questions with bare wh-phrases, ValPa patterns like Italian. The NPA is assigned to the rightmost element that bears a [FOCUS] feature: in case of fronted wh-phrases it is the verb, while in cases of CIwh-phrases it is the wh-phrase. These data points support the analysis put forth in Bocci et al. (2021) that the assignment of the NPA of bare wh-questions in Italian is structure-dependent and informed by syntactic features, more precisely a [FOCUS] feature. In cases of wh-fronting in ValPa, while transiting through whP in the LLP on its way to the matrix HLP, the wh-phrase transfers its [FOCUS] [WH] feature bundle onto the head of whP. Since the verb undergoes head-movement out of the vP and to a functional projection below TP (see Chapter 3), it is able to inherit the feature bundle while it transits through the head af whP. Then, by the time syntax is mapped onto phonology, the head of the chain is pronounced and

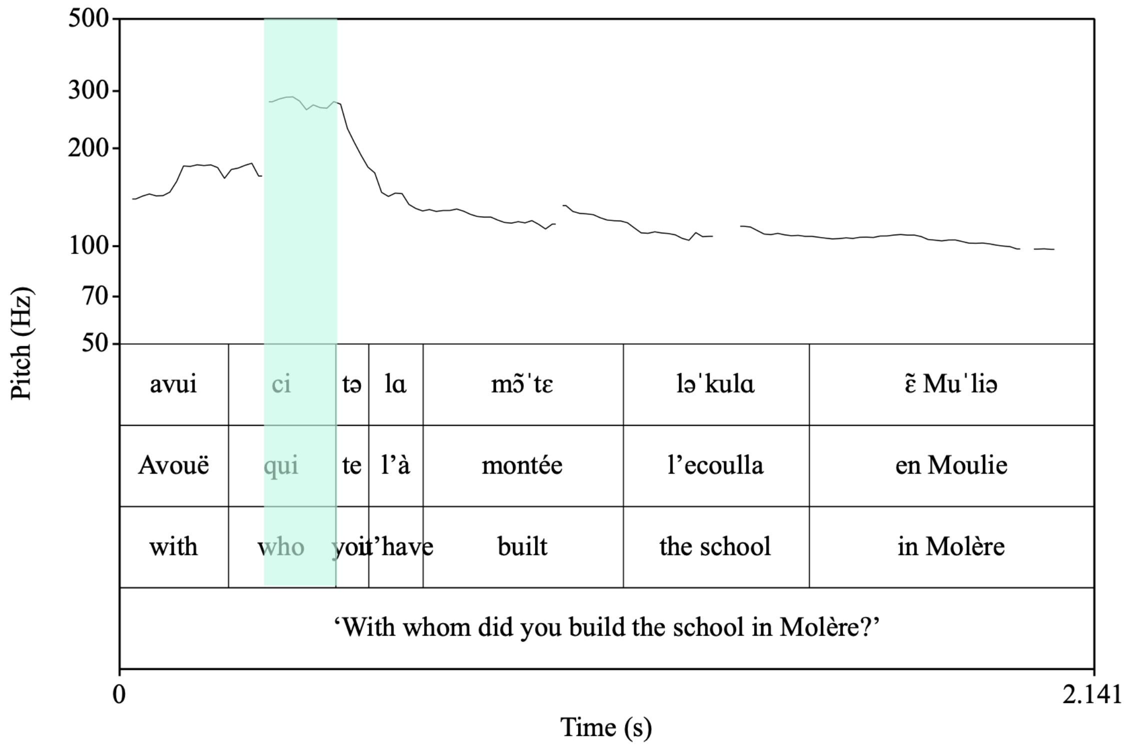


Figure 8.16: Prosodic contour of a question with a fronted PP wh-phrase

the NPA algorithm enforces assignment of the main stress to the rightmost overt element bearing a [FOCUS] feature: the lexical verb. On the other hand, in the case of CIwh-phrases, the rightmost overt element bearing a [FOCUS] feature is the wh-phrase, which is thus assigned the NPA. Next, I have shown that, unlike in Italian, in ValPa the phonological weight of the wh-phrases appears to have an influence on the prosody of questions. All 'heavy' interrogative elements (D-linked, non-D-linked wh-phrases like *avouë qui* 'with whom', and *perqué* 'why') bear the NPA, regardless of their position. This could be problematic for Bocci et al.'s (2021) analysis. Yet, in this subsection I limited myself to one category of 'heavy' non-D-linked wh-phrases, namely with-PPs, a category which Bocci (2013); Bocci and Avesani (2015), and Bocci et al. (2021) did not investigate. Therefore, it is hard to make generalizations or even a proper comparison between the two languages and more research is needed. The groups of wh-phrases that should

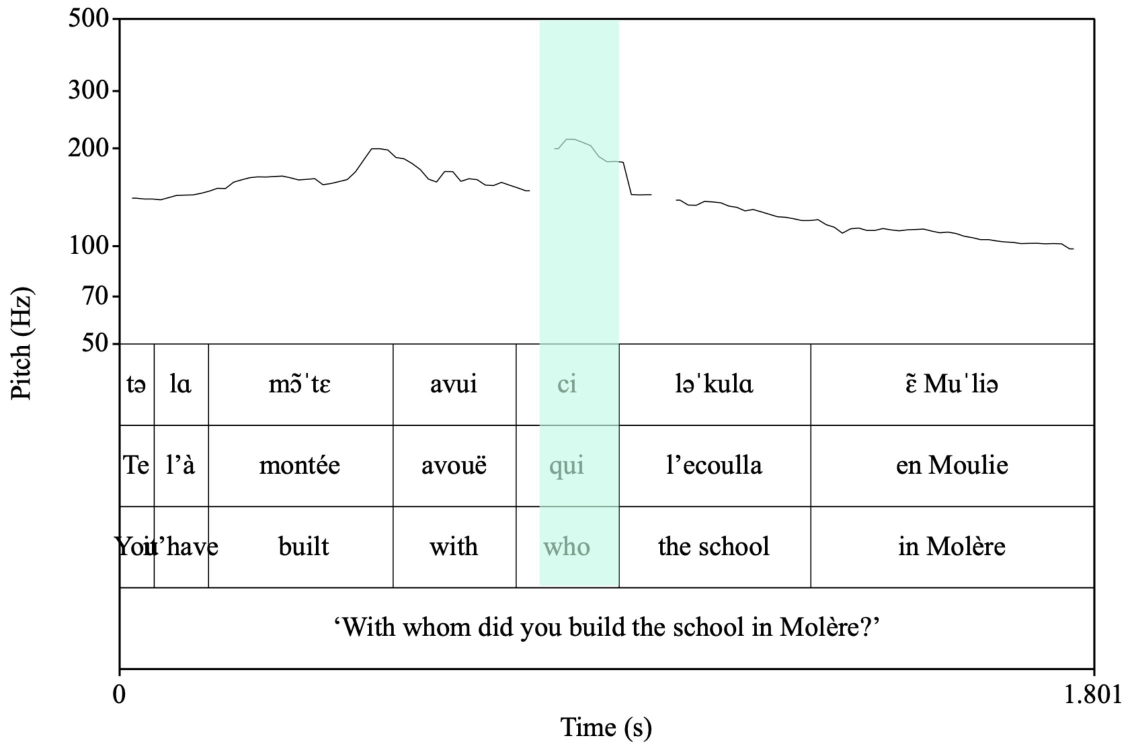


Figure 8.17: Prosodic contour of a question with a clause-internal PP wh-phrase

be contrasted include: bare vs D-linked wh-phrases and bare DP like *dequé* 'what' vs PPs like *avouë qui* 'with whom'. Unfortunately, as discussed in Chapter 4, ValPa does not distinguish between D-linked wh-phrases and non-D-linked ones like *what book*, which renders the comparison impossible. Furthermore, for a more complete study, the prosodic contours of Contrastive and New Information Focus, as well as that of topics ought to be investigated. Topics are particularly relevant, given the widespread claim in the literature, which I have argued in favor with ValPa data in Chapter 6.4, that D-linked wh-phrases are syntactically and semantically similar to topics and do in fact target topic positions in the HLP and LLP. It is entirely possible that there are two separate algorithms, one operating on wh-chains and one on topic-like-chains, even though this would not explain the prosodic patterns witnessed in ValPa questions with PP wh-phrases.

### 8.2.5 Chapter summary

In this chapter, I have discussed several things. In Section 8.1, I have analyzed the ValPa chain realization patterns in terms of reflexes of successive-cyclic movement, following Georgi (2014a,b, 2017). In particular, I argued that the optionality in copy pronunciation can be accounted for with a specific ordering of (internal) Merge and Agree operations. The matrix HLP and the most local LLP to the extraction site host a [WH] feature. Since Merge driven by the latter is ordered before upward Agree, movement feeds Agree, which results in reflexes of movement in the form of copy pronunciation. On the other hand, the other intermediate positions only host an edge feature, [EPP]. Movement driven by this feature is ordered after Agree and therefore counter-feeds Agree, which results in no reflexes in the form of copy pronunciation. This analysis allows us to account for the optionality in copy pronunciation.

In Section 8.2, I have discussed another relevant body of research on reflexes of successive-cyclic movement by Bocci (2013); Bocci and Avesani (2015); Bocci and Cruschina (2018); Bianchi et al. (2018); Bocci et al. (2021), who argue that the assignment of the Nuclear Pitch Accent (NPA) in Italian wh-questions is a reflex of successive cyclic movement. Instead of occurring on the (bare) fronted wh-phrase, the NPA in Italian falls on the main verb. The authors argued that this is due to the fact that the main verb is the rightmost element bearing a [FOCUS] feature, by virtue of the head of v inheriting the [FOCUS] (plus the regular [WH]) feature from the wh-phrase transiting through its specifier. I have applied the same rationale to ValPa and showed that ValPa behaves as predicted by Bocci et al. (2021) a.o.: in case of fronted wh-phrases the NPA falls on the main verb, whereas in case of CIwh-phrases the NPA falls on the wh-phrase, which is the rightmost element bearing the relevant feature for the NPA assignment. However, in ValPa there also seems to be an effect of phonological weight: non-D-linked heavier wh-phrases like *avouë qui* 'with whom' also bear the NPA. This fact is not predicted by the analysis proposed by Bocci et al. (2021). However, more research is needed to understand the NPA patterns in ValPa and inform a comprehensive theory. The next chapter will discuss how pragmatic restrictions influence chain realization.

# Chapter 9: Does pragmatics affect chain realization?

In the previous chapter, I discussed the optionality in copy pronunciation and proposed an analysis that gives rise to a 50%50 chance of pronouncing the head of the chain or the copy in the most embedded LLP. However, as briefly mentioned in Chapter 4, there is no true optionality in ValPa: pronouncing the head of the chain is the default choice, while CIwh-phrases, as in (1-b), are pragmatically marked and limited to certain contexts, I have tentatively defined as highly presuppositional (see Chapter 4 and Seguin, 2025b).

(1) a. **À qui** te baill-e le gneu? **Fronted**
to who CL.NOM.2SG give-PRS.2SG DET.DEF.PL walnut.PL
'To whom will you give the walnuts?'

b. Te baille **à qui** le gneu? **Clause-internal**

This chapter will explore in more detail the pragmatics of various questions in ValPa to better understand the restrictions on CIwh-phrases. Then, I will discuss how the pragmatic restrictions can be accounted for in the analysis sketched in this dissertation and the implications for the traditional grammar models (Y-model and T-model).

## 9.1 The pragmatics of ValPa CIwh-phrases

In the literature, it is largely argued that wh-questions always carry some degree of presupposition (Hamblin, 1973; Kadmon, 2001; Beaver, 2001). More specifically, this is an existential presupposition, namely the presupposition of the existence of an entity that satisfies the predicate and for which the presupposition is true (Lasersohn, 1993; Bonomi, 1997; Beaver and Denlinger, 2020). For instance, (2) introduces the presupposition that there exists an individual who has been seen by Susan at the cinema.

(2) Who did Susan see at the cinema?

(3) Q: {Susan saw Nika at the cinema, Susan saw Maša at the cinema, Susan saw Alex at the cinema, Susan saw Katherine at the cinema...}

The denotation of a wh-question is a set of alternatives (Hamblin, 1973). For (2), the set of alternatives is reported in (3). In answering (2), the interlocutor will pick an alternative from the set Q, e.g., *Susan saw Alex at the cinema*. Yet, it is well known that presuppositions can be accommodated (Heim, 1988; von Fintel, 2008; Kripke, 2009; Abrusán, 2016). For instance, among the people hearing (2), there could be an interlocutor unaware that Susan saw other people at the theater, because they were sure she went to another city entirely, or she was the only person at the theater. In this case, the person would accommodate the presupposition accordingly. Similarly, the presupposition can be cancelled. For instance, the interlocutor could reply *Nobody*, thus denying that Susan saw anyone.

As mentioned in Chapter 4, ValPa CIwh-phrases are pragmatically marked. The default question formation strategy is to pronounce the head of the chain, as in (4-a), whereas the structure in (4-b) is pragmatically restricted. More specifically, (4-a) and (4-b) do not introduce the same existential presupposition.

(4) a. **À qui** te baill-e le gneu? **Fronted**
to who CL.NOM.2SG give-PRS.2SG DET.DEF.PL walnut.PL
'To whom will you give the walnuts?'

b. Te baille **à qui** le gneu? **clause-internal**

In ValPa, a question with a fronted wh-phrase like (5) can receive a negative answer, whereas its counterpart with a CIwh-phrase cannot (6). Furthermore, only a question with a fronted wh-phrase can be embedded under an alternative question, as in (7-a), whereas a question containing a CIwh-phrase cannot (7-b). Therefore, ValPa questions with a CIwh-phrase introduce a stronger existential presupposition than questions with fronted wh-phrases (Lasersohn, 1993; Bonomi, 1997; Beaver and Denlinger, 2020).

(5) A: **Qui** t' à encountr-ò ì martsà?
who CL.NOM.2.SG have.PRS.2.SG meet-PST.PTCP at.DET.DEF.M.SG market
'Who did you meet at the market?'

B: Gneun.
nobody
'Nobody.'

(6) A: T' à encountr-ò **qui** ì martsà?
CL.NOM.2.SG have.PRS.2.SG meet-PST.PTCP who at.DET.DEF.M.SG market
'Who did you meet at the market?'

B: #Gneun.
nobody

‘Nobody.‘

(7) a. **Dequé** t' atsit-e ì martsà où t'
What CL.NOM.2SG buy-PRS.2SG at.DET.DEF.M.SG market or CL.NOM.2SG
atsit-e ren?
buy.PRS-2SG nothing
‘What will you buy at the market or is it the case that you won't buy anything?’

b. #T'atsite **dequé** ì martsà où t'atsite ren?

In (6), the use of a CIwh-phrase introduces the presupposition that there exists a set which must contain *at least one* individual x that satisfies the proposition expressed by the question, namely that the interlocutor has met x at the market. On the other hand, wh-questions with a fronted wh-phrase can receive a negative answer, which suggests that they do not necessarily introduce an existential presupposition. I would, therefore, restate the presupposition of (5) as at most weak, in that questions with a fronted wh-phrase convey that the question may have a non-empty answer. The distribution of aggressively non-D-linked wh-phrases confirms this. Aggressively non-D-linked wh-phrases express a strong negative connotation and are typically defined as carrying no presupposition (Pesetsky, 1987). Aggressively non-D-linked wh-phrases are quite limited in ValPa, as speakers prefer expressing such questions via emphatic intonation. Moreover, swear words, which are common in aggressively non-D-linked wh-phrases, are mostly borrowed from Italian, (8). Yet, wh-phrases like *que cazzo* are disallowed clause-internally (8), which is expected if this position is limited to highly presuppositional contexts.

(8) a. **Que cazzo** te di?
what *** CL.NOM.2SG say.PRS.2SG
’What the hell are you saying?’

b. *Te di **que cazzo** ?
CL.NOM.2SG say.PRS.2SG what ***
'What the hell are you saying?'

Similar claims have been made for French wh-in-situ (Chang, 1997; Boucher, 2010; a.o.). The word order in (9-a) introduces at most a weak presupposition, whereas the one in (9-b) a strong presupposition. As Chang (1997) states, this is confirmed by the fact that it is only felicitous to answer *rien* 'nothing' to (9-a).

(9) a. **Qui** as-tu vu?
who have.PRS.2SG-NOM.2SG see.PST.PTCP
**French**

'Who did you see?'

b. Tu as vu **qui**?

(Chang, 1997, p. 39)

(10) A: **Que** Marie a-t-elle achet-é? **French**
what Marie have.PRS.3SG-∅-NOM.3.F.SG buy-PST.PTCP
'What did Marie buy?'

B: Rien.
nothing
'Nothing.'

(Chang, 1997, p. 42)

Therefore, ValPa and French have different strategies to express the pragmatic contribution of the question. Crucially, in ValPa, the distinction is tight to copy pronunciation: pronouncing the copy in the LLP triggers existential presupposition, whereas pronouncing the head of the chain does not.

The difference between fronted and CIwh-phrases in ValPa mirrors the distinction between weak and strong presupposition triggers proposed by Abusch (2010) and Abrusán (2016), a.o. Abrusán (2016) adopts Heim's (1988) idea that presuppositions can be accommodated based on the local context, if the hearer is *very* certain of the "new" presupposition. Imagine someone did not know that Alexander has a dog. In hearing (11), they will accommodate the presupposition accordingly. The trigger in (11) is defined as 'soft' or weak (Abrusán, 2016), as it can be accommodated without too much trouble and does not require to be backed up by the context.

(11) Alexander brought his dog to the vet.

*presupposes*

Alexander has a dog.

However, not all presuppositions can be accommodated without a context to back them up, as it was shown by von Fintel (2008) and Kripke (2009), a.o. This is the case in (12), where the use of *too* triggers the presupposition that someone else besides Sophie had lunch in NY. The presupposition triggered by the use of *too* in (12) should be easily accommodated, as there are millions of people having lunch in NY every day. However, this is not the case: uttering (12) out of the blue and without a context to back it up will lead to a conversational breakdown (von Fintel, 2008). In order for the presupposition to be accommodated in (12), we need a context, for instance, a conversation about people having lunch in NY. *Too* in (12) is, therefore, defined as a 'hard' or strong presupposition trigger (Abrusán, 2016): it needs to be contextually licensed.

(12) Sophie had lunch in NY too!

*presupposes*

Someone else had lunch in NY.

This seems to be very similar to what we see in ValPa questions, where questions with a CIwh-phrase pattern like (12). There is a presuppositional component to them, like with *too*, but the presupposition is not enough to license them in the discourse. They need to be locally licensed in the context, to use Heim's (1988) terms. This would also explain the patterns we witnessed with negation in Chapter 7.1. Presupposition projects past negation (Beaver and Denlinger, 2020). For instance, (13) still presupposes that Miky has a dog.

(13) Miky didn't bring her dog to the vet.

*presupposes*

Miky has a dog

In ValPa wh-questions, we saw that having a CIwh-phrase in the scope of a negation is perfectly acceptable, as in (14-b), but there is a presupposition that something was in fact bought at the market and something else wasn't. For instance, it could be that the speaker has just uttered that they did not buy everything that was on the shopping list. Once again, (14-b) needs a licensing context, whereas its fronted counterpart in (14-a) does not.

(14) a.

| | | | | | | |
|---|---|---|---|---|---|---|
| **Dequé** | t' | à | <u>pò</u> | atsit-ò | ì | martsà? |
| what | CL.NOM.2SG | have.PRS.2SG | NEG | buy-PST.PTCP | at.DET.DEF.M.SG | market |

'What didn't you buy at the market?'

b. T'à <u>pò</u> atsitò **dequé** ì martsà?

Therefore, we could define ValPa questions with a CIwh-phrase as triggering a strong existential presupposition (Lasersohn, 1993; Bonomi, 1997; Beaver and Denlinger, 2020). Their use conveys that there is an entity that satisfies the predicate and for which the presupposition is true. For instance, in (15), that entity is an item that was purchased at the market. This nicely fits with the impossibility of a question with a CIwh-phrase to receive a negative answer, (6), or be embedded in an alternative question, (7), as we have seen above.

(15)

| T' | à | atsit-ò | **dequé** | ì | martsà? |
|---|---|---|---|---|---|
| CL.NOM.2SG | have.PRS.2SG | buy-PST.PTCP | what | at.DET.DEF.M.SG | market |

'What did you buy at the market?'

This behaviour is similar to that witnessed with strong presupposition triggers (e.g., *too*) in Abrusán's (2016) terms, while questions with a fronted wh-phrase, like (16), pattern more like soft triggers. Yet, there are differences. The most important one is that the trigger in *too* is lexicalized, whereas in the case of wh-phrases it is not. In questions, it is the choice of which copy in the chain to pronounce that has an effect on the presupposition.

(16) a.

| **Dequé** | t' | à | atsit-ò | ì | martsà? |
|---|---|---|---|---|---|
| what | CL.NOM.2SG | have.PRS.2SG | buy-PST.PTCP | at.DET.DEF.M.SG | market |

'What did you buy at the market?'

The following example pair is particularly useful to show this difference. The speaker uttering (17) and the interlocutor might very well presuppose that Tcheunne will go on holiday. It might be, for instance, that he always goes on holiday in the summer. Nonetheless, the question cannot be uttered to introduce a new topic into the discourse, one that has not been previously mentioned or is inferable from context. Thus, in (17), the wh-phrase must be fronted. The use of a CIwh-phrase is not licensed because the presupposition is not supported by the current context. In this sense, *yeui* in (17) acts like a strong presupposition trigger, much like *too*.

(17) **Context**: It's January and you are in the library studying for the finals with your friend. At one point, you ask him:

a. **Yeui** v-a Tcheunne en vacanse ci tsatèn?
Where go-PRS.3SG Tcheunne in holiday DEM.M.SG summer
'Where is Tcheunne going on holiday this summer?'

b. #Va **yeui** Tcheunne en vacanse ci tsatèn?

On the other hand, in (18), the CIwh-phrase is licensed, as the question on where to go for lunch is relevant in the given context, being almost noon (and Italians caring immensely about food).

(18) **Context**: It's January and you are in the library studying for the finals with your friend. At 11.30, you ask him:

a. **Yeui** n' all-en medj-éi vouì?
Where CL.NOM.1PL go-PRS.1PL eat-INF today
'Where are we going for lunch today?'

b. N'allen medjéi **yeui** vouì?

Térosier (2025) highlights a similar difference in the pragmatics of wh-questions in Martinican Creole, a variety of Antillean Creole. In Martinican Creole, wh-questions can contain a clausal determiner, glossed as LA, which occurs is clause final position, (19-b). Unlike default wh-questions, (19-a), LA wh-questions, (19-b) trigger a strong existential presupposition.

(19) a. Kisa ki fet? **Martinican Creole**
what COMP do.PST
'What happened?'

b. Kisa ki fet la?
what COMP do.PST LA
'What happened (given our shared knowledge that something happened)?'

(Térosier, 2025, p. 2)

(19-b) does not allow a negative answer and cannot be uttered out of the blue: it needs contextual saliency, as can be seen in the following examples.

(20) Context: After an exchange of salutations… **Martinican Creole**

a. Kisa ou fè yè oswè?
what 2SG do yesterday at.night
'What did you do last night?'

b. #Kisa ou fè yè oswè a?
what 2SG do yesterday at.night LA
'What did you do last night (given our shared knowledge that you did something last night)?'

(Térosier, 2025, p. 9)

(21) B: Ki koté ou alé?
WH place 2SG go
'Where did you go?' [B:]

Ki koté ou alé a?
WH place 2SG go LA
'Where did you go (given our shared knowledge that you went somewhere)?'

(Térosier, 2025, p. 9-10)

Therefore, ValPa CIwh-phrases and LA-marked questions in Martinican Creole seem to be strong triggers for existential presupposition. The difference is that in Martinican Creole this is lexicalized, whereas in ValPa this is tied to copy pronunciation. In the next section, I will discuss evidence from French, Italian, and ValPa that a distinction in terms of presupposition is too coarse-grained and propose a more fine-grained one based on activation levels. The next section will also set the foundation for a typology of the pragmatics of non-fronted wh-phrases in Romance.

### 9.1.1 Towards a more fine-grained distinction and a typology of 'low' wh-phrases in Romance

As discussed in the previous section, ValPa CIwh-phrases are only licensed in pragmatically restricted contexts. More precisely, CIwh-phrases are strong presupposition triggers and, hence, require to be locally contextualized. In this section, I will discuss two studies on the licensing of 'low'[1] wh-phrases in French and Italian and compare them to the ValPa pattern, leading the way toward the sketching of a richer typology of low wh-phrases in Romance.

For decades, wh-in-situ in French has been described as limited to strong presuppositional contexts (Chang, 1997; Boucher, 2010; a.o.). More recent studies have come to challenge this claim. In discussing licensing contexts for non-fronted wh-phrases in older varieties of French, Larrivée (2019) argues that it is not presupposition that licenses wh-in-situ, but 'discourse acti-

[1] I will refrain from using the term wh-in-situ as well as the term 'low' to refer to non-fronted wh-phrases, especially when speaking about Italian, because it is unclear whether these are surfacing in situ, or whether they are actually ex-situ, like in ValPa. The majority of studies on French suggest that they are in fact in-situ (Chang, 1997; Boucher, 2010; Mathieu, 1999; Baunaz, 2011; Baunaz et al., 2023), although Belletti (2006) and Kato (2020) argue that they are displaced to the LLP. The claim that Italian also has low wh-phrases in information-seeking questions by Garassino (2022) is unprecedented and therefore it is unclear where these wh-phrases are. All in all, the use of non-fronted or low neutrally conveys that the wh-phrase is not surfacing in the HLP of the clause.

vation' (Dryer, 1996) and he distinguishes two levels. A question is explicitly activated if the propositional content of the question was mentioned in the discourse, as in (22),[2] where the activating chunk of discourse is reported in italics.

(22) A: Dans les jeu-x antique-s euh *ils* *se* **French**
in DET.DEF.PL game-PL ancient-PL ehm NOM.3PL.M REFL
*dop-ai-ent* quand même avec des méthode-s un
dope-PST-3PL anyway with PART.PL method-PL DET.INDEF
peu bizarre-s mais [...]
little weird-PL but
'In the old (olympic) games they'd dope themselves with weird methods...'

B: Ils se dop-ai-ent **comment**?
NOM.3PL.M REFL dope-PST-3PL how
'How did they take drug?'

A: Ils pren-ai-ent euh de-s plante-s.
NOM.3PL take-PST-3PL ehm PART-PL plant-PL
'They took plants.'

(Larrivée, 2019, p. 120)

On the other hand, a question is non-activated if it introduces a new topic into the discourse, one that has not been previously mentioned nor is inferable from the context, as in (23). As (22)-(23) show, both contexts license wh-in-situ in modern-day colloquial French, unlike previously argued (Chang, 1997; Boucher, 2010). As Larrivée (2019) and Baunaz and Bonan (2023) argue, true optionality is a recent development of the French language, which started in the 1970s.

(23) Finalement tu trouv-es **comment** la vie à Orléans? **French**
so NOM.2SG find-PRS.2SG how DET.DEF.F.SG life in Orléans?

[2]The examples reported by Larrivée (2019) come from the dataset of spoken French ESLO corpus (`http://eslo.huma-num.fr/`, more specifically from the sub-corpus ESLO 2, containing data collected from 2008. The glosses are my own.

'So, how you find living in Orléans?'

(Larrivée, 2019, p. 120)

Garassino (2022) identifies another context in which wh-in-situ is licensed: inferable. A question is inferable when its propositional content is not explicitly mentioned, but is easily retrievable through the speaker's knowledge of the world (Prince, 1981; Gundel et al., 1993), as in (24).[3] Another common occurrence of wh-in-situ in French is represented by specific and common social constructs, where the speaker anticipates a predictable discourse move (25), a subtype of inferrable contexts.

(24) A: Et qu'est-ce que tu as achet-é d'autre alors? **French**
and what NOM.2SG have.PRS.2SG buy-PST.PTCP other then
'And so, what else did you buy?'

B: Et ben on a achet-é la table
and well NOM.3SG have.PRS.3SG buy-PST.PTCP DET.DEF.F.SG table
avec le-s quatre chaise-s. Sept-cent balles.
with DET.DEF-PL four chair-PL. seven-hundred balls
'Well, we bought a table with four chairs. 700 euros.'

A: Pour mett-re **où**?
for put-INF where
'To put where?'

(Garassino, 2022, p. 35)

(25) Ça fait **combien** s'il vous **French**
DEM.3SG.N make.PRS.3SG how.much REFL-NOM.3SG.M DAT.2PL
plaî-t?
please-PRS.3SG
'How much is this please?' (Rossi-Gensane and Ursi, 2020, p. 154)

[3]This example, like many reported in Garassino (2022), comes from the corpus of spoken languages C-ORAL-ROM (Cresti and Moneglia, 2005). Glosses are my own.

Furthermore, Garassino (2022) argues that Italian allows ‘low’ wh-phrases, albeit it is more restrictive than French and only allows them if the propositional content of the question was activated in the preceding linguistic context (26).[4]

(26) A: **Italian**

| | | | | | |
|---|---|---|---|---|---|
| Va | bene, | ved-o | che | hai | *risol-to.* |
| go.PRS.3SG | well, | see-PRS.1SG | COMP | have.PRS.2SG | resolve-PST.PTCP |

‘Ok, it seems you’ve fixed that.‘

B:

| | | | |
|---|---|---|---|
| Risol-to | **cosa**? | Vieni | fuori. |
| resolve-PST.PTCP | what? | come.IMP.2SG | outside |

‘Fixed what? Come outside.‘ (Garassino, 2022, p. 46)

In ValPa, CI-wh-phrases are licensed by activation (or explicit mention) in the preceding linguistic context, as outlined in (27), where the activating part is in italics.

(27) A:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Ivana | e | Marco | m’ | ont | deut | que | *part-on* |
| Ivana | and | Marco | CL.DAT.1SG | have.PRS.3PL | say.PST.PTCP | COMP | leave-PRS.3PL |
| en | vacanse. | | | | | | |
| on | holiday | | | | | | |

‘Ivana and Marco told me they will go on holiday.‘

B:

| | | |
|---|---|---|
| E | part-on | **quan**? |
| and | leave-PRS.3PL | when |

‘And when do they leave?’

CIwh-phrases are also licensed when the propositional content of the question is inferable from the context, linguistic or extra-linguistic, and the speaker’s knowledge of the world, as shown in previous examples as well as in (28). Finally, CIwh-phrases are felicitous in common social constructs, like at a cash register, (29).

[4]The Italian data analyzed in Garassino (2022) come from the Perugia Corpus (PEC) Spina (2014). Glosses are my own.

(28) **Context:** This year, you and all the people living in your area have been harvesting blueberries like crazy. Of the endless supply of blueberries you harvested, you have made jam, pies, put them under spirit, and frozen them for future use. Yet, you have a few extra kilos. You try to gift them, but nobody you know wants them, as everyone is in the same situation as you, so you store them in the cellar, hoping to find a recipient soon. A few days later, you and your partner go to the cellar to pick up a bottle of wine and you see that the blueberries are not there. Puzzled, you ask your partner:

a.

| | | | | | |
|---|---|---|---|---|---|
| T' | à | baill-à | **à qui** | le | loufie? |
| CL.NOM.2SG | have.PRS.2SG | give-PST.PTCP | to whom | DET.DEF.PL | blueberry.PL |

'To whom did you give the blueberries?'

(29)

| | | | |
|---|---|---|---|
| Te | de-yo | **veu**? | |
| CL.DAT.2SG | owe.PRS-1SG | how | much |

'How much do I owe you?'

Unlike in French, ValPa CIwh-phrases are infelicitous if the propositional content of the clause is non-activated (Larrivée, 2019) or inferable (Garassino, 2022). This is shown in (17), repeated below as (30), where the wh-phrase must be fronted. On the other hand, in (31), the CIwh-phrase is licensed because of its inferability in the current context.

(30) **Context**: It's January and you are in the library studying for the finals with your friend. At one point, you ask him:

a.

| | | | | | | |
|---|---|---|---|---|---|---|
| **Yeui** | v-a | Tcheunne | en | vacanse | ci | tsatèn? |
| Where | go-PRS.3SG | Tcheunne | in | holiday | DEM.M.SG | summer |

'Where is Tcheunne going on holiday this summer?'

b. #Va **yeui** Tcheunne en vacanse ci tsatèn?

(31) **Context**: It's January and you are in the library studying for the finals with your friend. At 11.30, you ask him:

a. **Yeui** n' all-en medj-éi vouì?
Where CL.NOM.1PL go-PRS.1PL eat-INF today
'Where are we going for lunch today?'

b. N'allen medjéi **yeui** vouì?

Table 9.1: Pragmatic licensing of non-fronted wh-phrases in French, Italian, ValPa, Catalan, and Romanian

| Language | echo | Activated | Inferable | Non-activated |
|---|---|---|---|---|
| French | + | + | + | + |
| ValPa | + | + | + | - |
| Italian | + | + | - | - |
| Catalan | + | - | - | - |
| Romanian | - | - | - | - |

The comparative analysis of the licensing status of 'low' wh-phrases in French, Italian, and ValPa raises some interesting points. While it would be necessary to carry out a proper corpus analysis of ValPa to draw firm conclusions (which would be hard given that there are no corpora of spontaneously spoken ValPa), the data presented in this section suggests that ValPa finds itself precisely halfway between the very allowing modern-day French and the quite restrictive Italian. All these languages allow low wh-phrases in echo questions, but allow them in other contexts. Contrast that with Catalan, where the occurrence of low wh-phrases is restricted to echo questions (Wheeler et al., 1999; Dols and Mansell, 2017). Finally, in Table 9.1, I have included Romanian, which never allows pronunciation of a lower copy in the wh-chain for pragmatic purposes (see Chapter 5.2). Even in echo questions, wh-phrases must surface in the HLP, as can be seen in

(32).[5]

(32) a. *Ion a adus CE? **Romanian**
Ion has brought what
'Ion has bought WHAT??'

b. CE Ion a adus?

(Bošković, 2002, p. 370)

There appears to be a well-defined typology in the licensing of 'low' wh-phrases. As it stands, Table 9.1 reads as an implicational hierarchy: if a language allows 'low' wh-phrases in non-activated contexts, then it should allow them in inferable and activated contexts as well, as French does. If a language allows 'low' wh-phrases in inferable contexts, then it should also allow them in activated ones, but not in non-activated ones, like ValPa.

At this point, several questions arise. First, if Table 9.1 is indeed to be interpreted as an implicational hierarchy, then this typology makes specific predictions (at least within the Romance group). The first prediction is that there should not be any language that allows 'low' wh-phrases in inferable contexts but not in activated contexts, or one that allows 'low' wh-phrases in non-activated contexts but not in inferable or activated ones. Moreover, since the pragmatic restrictions witnessed across Romance are on the occurrence of the 'low' wh-phrases (fronted wh-phrases being the default), we should not expect to encounter a language ValPa-Prime, in which 'low' wh-phrases are allowed in any contexts, including non-activated ones, while fronted ones are restricted to, say, inferable and activated contexts. There are additional questions about potential diachronic changes and language contact. Given that the true optionality in French

[5] As I have shown in Chapter 5.2, in Romanian it is only possible to pronounce a lower copy in the chain to avoid a PF crash in sequences of homophonous wh-phrases or in island constructions.

questions is relatively recent (Larrivée, 2019; Baunaz and Bonan, 2023), it is possible that ValPa and Italian also find themselves in the same path of diachronic change.[6] Moreover, language contact might have an influence on the patterns witnessed in ValPa. The variety investigated in this dissertation is spoken in Morgex, a village relatively close to the French border and, therefore, more in contact with French than the varieties spoken in the southern part of the region, which are more in contact with Italian and Piedmontese varieties. For instance, the variety spoken in Fénis, in the southern part of the region, does not allow CIwh-phrases outside of echo questions (Laure Ermacora, pers. comm.). A thorough investigation of the variation in Francorpovençal varieties is needed to explore this further.

### 9.1.2 Interim summary

In this section, I have discussed the pragmatic properties of CIwh-phrases in ValPa. ValPa CIwh-phrases are pragmatically restricted. At first sight, it appears that CIwh-phrases pattern like strong presupposition triggers, in a manner similar to the particle *too* (Abusch, 2010; Abrusán, 2016): presupposition alone is not enough to license CIwh-phrases, which need context to back up the presupposition. On the other hand, fronted wh-phrases would introduce little to no existential presupposition. Later in the section, I have proposed a different and more fine-grained approach to the pragmatics of non-fronted wh-phrases, following work by Larrivée (2019) and Garassino (2022), which takes into consideration discourse activation and inferability (from linguistic and non-linguistic contexts). I have shown that, from a typological standpoint, ValPa finds itself in between French, in which there is true optionality, and the quite restrictive Italian. Before moving to

[6]Since this dissertation is not concerned with diachronic change, I will not dwell on this particular hypothesis, but it is indeed a pursuable one.

the next section, I want to briefly underline the importance of the observations and generalizations presented thus far. Descriptively, we see that in ValPa there is a very tight connection between the choice in copy pronunciation and the presupposition of the questions: namely between where we pronounce something and how we interpret it. These two decisions are intrinsically linked, despite traditionally pertaining to two separate components of the grammar: PF and LF (broadly speaking). This observation raises fundamental questions on the architecture of the grammar.

## 9.2 Analysis and implications for the architecture of the grammar

In the first half of this chapter, I have proposed an analysis of the copy pronunciation mechanism in ValPa wh-chains: the optionality between pronouncing the head of the chain or the copy in the most embedded LLP can be accounted for by a specific ordering of Merge and Agree operations. However, this account predicts that either copy can be pronounced freely, hence ValPa should display true optionality, contrary to facts. As the previous section has shown, CIwh-phrases act like strong presupposition triggers and need to be contextually licensed, either through activation in the preceding linguistic context or inferability. In this section, I will discuss how to account for the pragmatic facts, albeit in an exploratory manner.

The pragmatic restriction on the occurrence of CIwh-phrases can be accounted for in two ways: the restriction is encoded in the grammar or it is context-driven. I will first discuss the possibility that the restriction is encoded in the grammar, briefly highlighting the potential issues that arise with this approach, to then move to the possibility that the restriction is context-driven. To anticipate my conclusion, I will argue that questions with low wh-phrases are anaphoric to the question under discussion.

As it was proposed for LA-marked wh-questions in Martinican Creole by Térosier (2025). In Martinican Creole, LA-marked wh-questions must be licensed by what the author defines contextual entailments, in a manner very similar to what we have seen for ValPa above.

(33) Context: Speaker A said they watched a movie the previous night:

B: Ki koté ou alé?
WH place 2SG go
'Where did you go?'

B: *Ki koté ou alé a?
WH place 2SG go LA
'Where did you go?' (given our shared knowledge that you went somewhere)?'

(Térosier, 2025, p. 10)

(34) Context: Speaker A said they went out the previous night:

B: Ki koté ou alé?
WH place 2SG go
'Where did you go?'

B: Ki koté ou alé a?
WH place 2SG go LA
'Where did you go?' (given our shared knowledge that you went somewhere)?'

(Térosier, 2025, p. 10)

Térosier (2025) argues that the difference between (33) and (34) lies in the contexts' entailments. The context in (34) entails that there exists at least a place where A went the previous night, whereas the one in (33) does not. Given the entailment, the author argues that (34) acts as a strong presupposition trigger. Therefore, in Térosier's (2025) analysis, it is the entailment that licenses the question. Crucially, in Martinican Creole, the presupposition trigger is grammaticalized and surfaces in the form of this LA particle. Following Wiltschko (2021), Térosier (2025) argues that LA is the overt realization of a [+FAMILIAR] feature,[7] hosted in GroundP, a projection which defines the common ground and takes the entire utterance as its complement. In Térosier (2025), it is not clear whether this projection is present in narrow syntax. However, if we adopt the traditional Y- or T-model of grammar, then anything that is phonologically overt must have been present in narrow syntax. Then languages would differ in whether this operator is overt (Martinican Creole) or covert (ValPa). Postulating an operator might solve the issue of pragmatic interpretation and allow us to account for the typology outlined in Table 9.1, for instance by proposing different strengths or subtypes of the operator (e.g., ACTIVATED, INFERABLE, NON-ACTIVATED). However, the decision on which copy to pronounce pertains to PF, whereas the decision on which copy to interpret for semantic/pragmatic reasons pertains to LF. Therefore, for this approach to work, we would need to postulate some degree of communication between LF and PF, pace Amaechi and Georgi (2020), who use this communication to explain some empirical facts of Igbo, as the two components need to choose together the best copy for realization given the pronounceable copies and the pragmatics of the situation at hand. However, postulating a communication channel between LF and PF is a significant adjustment.

As discussed in Chapter 2, in the traditional models of grammar, Y-model (Figure 9.1) and T-model (Figure 9.2), PF and LF are independent from each other and do not directly communicate: everything they get, they get from narrow syntax. In other words, PF is agnostic about interpretation and LF is agnostic about linearization and, without a communication channel with LF, PF would be unable to select a certain copy *only* in specific contexts. In other words, if we do not postulate a channel of communication between LF and PF, as in Figure 9.3, then PF will

[7] The use of a [+FAMILIAR] feature stems from the fact that the same particle is also found in definite DPs.

carry on on its own accord, ignoring the pragmatic factors, and pronounce the copy in the LLP as an alternative to the head of the chain point blank, hence overgenerating.

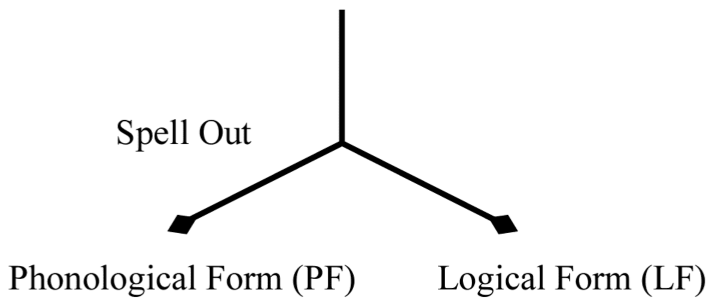


Figure 9.1: The inverted Y-model of grammar (Chomsky, 1977)

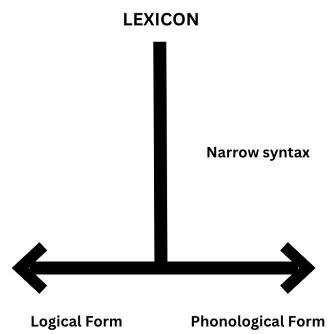


Figure 9.2: The T-model of grammar (Bobaljik, 2002)

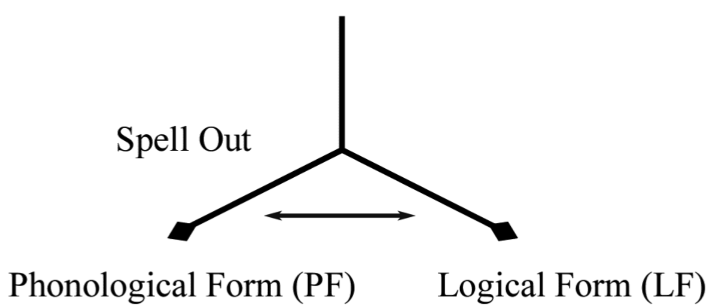


Figure 9.3: The inverted Y-model of grammar with a communication channel

The model of grammar that allows for communication between LF and PF also raises empirical concerns. If we postulate the existence of a prompt from LF 'telling' PF to pronounce the copy in the LLP in activated and inferable contexts, then we would expect the grammar to always choose CIwh-phrases in these contexts, contrary to facts. As we have seen, fronted wh-phrases are always felicitous and can be uttered in activated contexts as well. In short, this might lead to undergeneration.

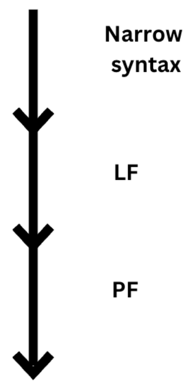


Figure 9.4: The linear model, designed following Bobaljik and Wurmbrand (2012)

We could circumvent the postulation of a communication channel between LF and PF by adopting Bobaljik and Wurmbrand's (2012) linear model presented in Figure 9.4. Having investigated various correlations between word order variation and scope possibilities the authors argue in favor of soft economy constraints that prefer a correspondence between LF and PF representations. However, these constraints are unidirectional: syntax feeds LF, which in turn feeds PF, where the surface word order is established. Bobaljik and Wurmbrand argue for a tight connection between LF and PF representations, based on evidence that scope relations at LF are often matched by PF precedence relations. The claim is that there is a "possibly universal constraint favoring transparent reflection of LF properties and PF precedence" (Bobaljik and Wurmbrand, 2012, p. 416), (35), (see the discussion in Chapter 2 for more details).

(35) Minimize Mismatch (Bobaljik, 2002, p. 251)

(To the extent possible) privilege the same copy at PF and LF.

The authors state that, in case there is a conflict between LF and PF constraints, then the grammar allows satisfying either one of them, e.g., choosing to interpret a given copy for scopal reason, regardless of whether that copy is also realized at PF. In this model, we would overcome the problem of postulating a communication channel between LF and PF. However, its adoption is not without concerns. Firstly, it requires us to rethink the architecture of the grammar (almost) entirely. One of the characteristics of the model is that it strongly prefers the interpretation of the same copy at both LF and PF (where interpretation means pronunciation).[8] This is, however, not at all what we find in the ValPa data. In fact, I have shown throughout this dissertation that the head of the chain is always interpreted at LF for scopal purposes, even is a low copy is pronounced (see Chapter 7.1.3 for various possible scopal relations in ValPa wh-questions).[9] While Bobaljik and Wurmbrand's (2012) analysis allows for occasional mismatches between LF interpretation and PF precedence, in ValPa such mismatches are the norm with CIwh-phrases, not the exception. Even more importantly, we are not discussing scopal relations, but rather pragmatic restrictions. If we were to adopt this model, we would need to disentangle interpretation for scopal reasons from pragmatic restrictions. It is unclear what would be considered important information to convey to PF: scope or pragmatics? All in all, this possibility raises a lot of questions. Finally, it is not even obvious that pragmatic properties such as the ones under discussion here are encoded at LF. All in all, it seems that revisiting the existing grammatical models to include a communication channel brings forth more concerns than solutions for the ValPa wh-chain realization patterns.

The alternative possibility is that the pragmatic restrictions are not grammaticalized, but

[8]Note that interpreting the same copy at both LF and PF is not a prerogative of Bobaljik and Wurmbrand's model and was already mentioned in Bobaljik (2002), as reported in (35). Amaechi and Georgi (2020), in their analysis of focus-chain realization in Igbo, also argue for a similar system: if the grammar chooses to pronounce a lower copy in the chain, then that copy is also interpreted at LF for semantic and pragmatic purposes.

[9]Moreover, we must also consider the reconstruction effects discussed at length in Chapter 7.2.

are context-driven. Let us consider once again the example pairs repeated below in (36) and (37). Following Larrivée (2019), Garassino (2022), and Térosier (2025), we could argue that the use of a CIwh-phrase in (36-b) is restricted by the context. How exactly?

(36) **Context**: It's January and you are in the library studying for the finals with your friend. At one point, you ask him:

a.

| | | | | | | |
|---|---|---|---|---|---|---|
| **Yeui** | v-a | Tcheunne | en | vacanse | ci | tsatèn? |
| Where | go-PRS.3SG | Tcheunne | in | holiday | DEM.M.SG | summer |

'Where is Tcheunne going on holiday this summer?'

b. #Va **yeui** Tcheunne en vacanse ci tsatèn?

(37) **Context**: It's January and you are in the library studying for the finals with your friend. At 11.30, you ask him:

a.

| | | | | |
|---|---|---|---|---|
| **Yeui** | n' | all-en | medj-éi | vouì? |
| Where | CL.NOM.1PL | go-PRS.1PL | eat-INF | today |

'Where are we going for lunch today?'

b. N'allen medjéi **yeui** vouì?

At first sight, relevance appears to be what is responsible for the restriction witnessed in (36), as opposed to (37). Relevance is one of Grice's (1975) maxims (the others being quantity, quality, and manner). A typical example of relevance, originally from Grice (1975) but largely discussed by Sperber and Wilson (1986) is (38), in which Speaker B's reply is relevant to the current situation in that Speaker B is hopefully making a valuable suggestion on where Speaker A is trying to get gas. In this context, an answer like (39) is not relevant.

(38) A: I am out of petrol.

B: There is a garage round the corner.

(Grice, 1975, p. 51)

(39) A: I am out of petrol.

B: I want to eat pizza tonight.

Yet, ascribing the use of a CIwh-phrase in (37) but not in (36) to relevance is untenable. Relevance is a maxim that operates on content, whereas in this chapter, we are dealing with form (in the sense of different linear structures). Therefore, if we wanted to ascribe the regulation of copy pronunciation to pragmatics alone, it seems that Grice's (1975) maxim of manner would be more suitable. The maxim of manner states that the speaker should form the utterance in the most perspicuous way to convey the message, avoiding ambiguity. Looking at the ValPa data, one way to frame this is to state that the use of a CIwh-phrase, as in (40-b) is motivated by the desire to unambiguously convey to the interlocutor(s) that there is existential presupposition, thus being very straightforward and efficient. The use of a fronted wh-phrase, on the other hand, would not convey that and the question would be a mere inquiry on what, if anything, might have been bought at the market.

(40) a.

| | | | | | |
|---|---|---|---|---|---|
| **Dequé** | l' | à | atsit-ò | ì | martsà? |
| what | CL.NOM.3SG | have.PRS.3SG | buy-PST.PTCP | at.the | market |

'What did (s)he buy at the market?'

b. L'à atsitò **dequé** ì martsà?

In this approach, the decision on which structure is the most efficient in conveying a given meaning is a purely pragmatic one, and not in any way regulated by the grammar e.g., through the presence of a feature in the syntax. However, this is also a problematic claim. First, it would be hard to explain *how* manner (or relevance for that matter) mediates the choice of copy pronunciation. Of course, we could appeal to a form of filters that operate on the well-formedness of sentences, loosely following Chomsky and Lasnik (1977) and take into account Grice's (1975) maxims, among other things. This filter could come into play at the interface of LF to the Conceptual-Intentional system, in the form of a soft constraint. This possibility seems like an easy way out, relegating the issue to another component. Moreover, as we have seen in this section, there is a quite complex typology (see Table 9.1) which makes it plausible to think that the difference between the word orders and their pragmatic restrictions is grammaticalized. If context alone were responsible for the different restrictions, then we would not expect the variation we see between French, Italian, and ValPa (as well as other languages) summarized in Table 9.1. Finally, as I have shown throughout Chapter 7, there are no structural differences between (40-a) and (40-b). This means that the LFs are exactly the same: the wh-phrase takes scope over the entire question. It thus follows that the Hamblin sets, namely the sets of alternatives denoting (40-a) and (40-b), should be identical. If this is the case, then how can one single LF feed different pragmatic interpretations? In order for this to be possible, we would need to postulate the encoding of the pragmatic differences in the grammar, but then we would be back to square one and face the issues discussed earlier in this section. To avoid this dead-end scenario, in the next section, I will discuss another possible approach and propose that questions containing a CIwh-phrase are anaphoric to the Question Under Discussion.

### 9.2.1 Anaphoricity to the Question Under Discussion

Before moving forward, a quick recap of the essential points is in order. Earlier in this chapter, I have shown that wh-questions with CIwh-phrases in ValPa are restricted to activated and inferable contexts. They essentially act as strong existential presupposition triggers (Abusch, 2010; Abrusán, 2016): presupposition alone is not enough to license CIwh-phrases and the question needs to be contextually salient (hence the activation/inferability).

There are two ways to account for the pragmatics of ValPa strongly presuppositional (or utterable in activated/inferable contexts) questions. The first approach is to state that the wh-phrase itself is the presupposition trigger, because the presupposition is lexically encoded in the wh-phrase, the same way it is encoded in *too* (Kripke, 2009). This approach is, nonetheless, problematic. Stating that the presupposition is lexically encoded in the wh-phrase is undesirable, as not all bare wh-phrases are strong presupposition triggers.[10] Another option is that the pragmatics is associated with the question as a whole.

(41) a. **Dequé** l' à atsit-ò ì martsà? **weak pres.**
what CL.NOM.3SG have.PRS.3SG buy-PST.PTCP at.the market
'What did (s)he buy at the market?'

b. L'à atsitò **dequé** ì martsà? **strong pres.**

The idea that information structure is mirrored in the sentence structure is widespread (see, for instance, foundational work by Halliday 1967 and Vallduví 1990; 1993; 1998, among many

[10]One might hypothesize that D-linked wh-phrases are in fact presupposition triggers like *too* (Abrusán, 2016). D-linked wh-phrases, like bare ones, can freely occur fronted or clause-internally in ValPa, therefore if they were lexically strong presupposition triggers that would not contradict the account developed here. Recall that in Chapter 6.4 I have argued that D-linked wh-phrases target a Topic projection rather than the canonical WhP and thus *might* be topic-like. If this is on the right track, the presupposition trigger might be associated with the topichood. More research is needed to investigate this possibility.

others). As these researchers pointed out, variation in word order is often informative of specific information. This is particularly evident in focalization and topicaliztion, as discussed in Chapter 3 of this dissertation, as well as wh-questions. Yet, as Kadmon and Roberts (1986) and Roberts (1996) pointed out, a large part of the earlier research on information structure, especially focalization, centered primarily on the felicity and the structure of the utterance itself, ignoring the kinds of contexts in which a given utterance is actually felicitous, which they call *information structure of contexts* (Roberts, 1996, p.2).

Following Stalnaker's (1978) idea that the goal of conversation–and hence discourse–is to share information, Roberts (1996, 2012) proposed a new way to analyse information structure: the concept of Question Under Discussion (QUD). QUD refers to the explicit or implicit question that is being addressed by a given utterance. In short, coherence and relevance are of utmost importance in conversations, so much that the discourse is organized around strategies and goals to achieve them. More specifically, the goals of discourse can be reinterpreted as questions that the speakers are committed to answering. The accepted question becomes the topic of discussion, or QUD, for the current conversation. QUD can be explicit, as in (42), or implicit. Even when no question is explicitly asked, listeners can infer the QUD from the linguistic or extra-linguistic context, as in (43). For instance, (43) might address the QUD introduced by (42) or the one introduced by the interlocutor showing their black tongue. Both (42) and (43) introduce a new QUD into the discourse.

(42) What did she eat?

(43) She ate spaghetti with squid ink.

Roberts (1996, 2012) argues that every discourse is organized around a dynamic structure and a set of all unanswered, but acceptable, questions at that time (Carlson, 1983; Beaver and Clark, 2008; Ginzburg, 2012). So basically, the QUD defines the space of possible answers to a given statement.

(44) a. Where should we go for dinner tonight?

b. Who did you go to the movies with?

(45) A: What did you do last night? $\rightarrow$ Introduces a new (explicit) QUD

B: I went to the Opera. $\rightarrow$ Addresses the QUD

A: What opera did you see? $\rightarrow$ Introduces a new subQUD

B: Der Rosenkavalier. $\rightarrow$ Addresses the subQUD

....

Wh-questions explicitly introduce a new QUD, as in (42) and (44). Answers to these questions are said to resolve the QUD. QUDs can be stacked or nested, as in (45). The question that arises at this point is the following: if wh-questions explicitly introduce a new QUD, then how can we account for the pragmatic difference we witness in ValPa?

If you recall, the difference in ValPa wh-questions with a fronted wh-phrase like (41-a) and those with a CIwh-phrase like (41-b) is that the latter can only be uttered if the propositional content of the question was previously activated in the linguistic or extra-linguistic context. In other words, wh-questions with a fronted wh-phrase like (41-a) explicitly introduce a new QUD. On the other hand, questions with a CIwh-phrase like (41-b) do not explicitly introduce a new QUD. Rather, they are anaphoric to the current QUD, which might have been explicitly mentioned, that is activated in the preceding linguistic context, or inferable (Larrivée, 2019; Garassino, 2022; Seguin, 2025b). Thus, they address the current QUD, in a manner similar to how answers to a wh-question address the current QUD, as in (45).

(46) a. Fronted wh-phrase → (explicitly) introduces a new QUD

b. CIwh-phrase → anaphoric to the current QUD

Crucially, what is anaphoric is not the wh-phrase itself, as the pragmatics is not encoded in the lexical item (unlike *too*, as discussed above), but the entire question.

Anaphoricity to the QUD allows us to explain the pragmatic restrictions we witness in ValPa questions more accurately than the other approaches discussed in this section. However, it is still exploratory, and the analysis will need further exploration. First, it is unclear how different surface orders of wh-questions relate to the QUD, given one single structure and LF, and whether this is encoded in the grammar. We could very well be back to square one, asking once again how the relation between linearization and pragmatics is established. More likely, some other component of representation plays a role, but it is unclear how to formalize it to avoid overgeneration. The next question that arises at this point is why it is that we witness the crosslinguistic variation presented in Section 9.1.1 and summarized in Table 9.1. The fact that there is variation in the pragmatic restrictions on certain structures should not come as a surprise. As Roberts (2012) states, information structure is a universal trait of human languages, but the way in which information structure is overtly realized is language-specific. We see this with focalization and prosody, among other things, and pragmatic restrictions on wh-questions should not be any different. Languages use “very different means to achieve some of the same ends or would use similar means to encode other kinds of information" (Roberts, 2012, p. 3). In short, this QUD-based analysis has potential, but will require further refinement in the future.

## 9.3 Chapter summary

In this chapter, I discussed the pragmatics of the different wh-questions in ValPa. As mentioned in Chapter 4, there is no true optionality in ValPa: the default choice is to pronounce the head of the chain, whereas CIwh-phrases are pragmatically marked. After a thorough investigation, I concluded that CIwh-phrases are strong presupposition triggers, using Abrusán's (2016) terminology. To be felicitously licensed, the propositional content of the question needs to be either mentioned in the preceding linguistic context or be inferable from the context and the hearer's knowledge of the world (Larrivée, 2019; Garassino, 2022). Typologically, ValPa finds itself between the very permissive modern-day French, where there is indeed true optionality in wh-fronting, and the very restrictive Italian, where non-fronted wh-phrases are only allowed when the propositional content of the question has been explicitly mentioned in the preceding linguistic context. I have sketched the beginnings of an analysis that accounts for the pragmatic restrictions by stating that questions containing CIwh-phrases are anaphoric to the QUD. The main motivation for sending the explanation for optionality to the pragmatics of ValPa questions has to do with the lack of syntactic and LF differences that we have observed throughout. However, the pragmatic account remains purely exploratory and will need further research.

# Chapter 10: Wh-phrases inside islands

The evidence from PGs and binding discussed in Chapter 7 supports the claim that ValPa CIwh-phrases move to their scope position in narrow syntax, with subsequent deletion of higher copies in the chain. The analysis proposed in Chapter 8 therefore predicts that CIwh-phrases should display island sensitivity.

Islands are constructions from which extraction is banned (Ross, 1967; Huang, 1982; Merchant, 1999). In this chapter, islands will be shown in bold red brackets, and the gap as an underscore. In English, for instance, the known types of islands include the following: complex noun phrases (1), relative clauses (2), adjunct clauses (3), subjects (4) and sentential subjects (5), wh-islands (6), *whether*-islands (7), coordinate structures (8), and left-branch island (9). Then there are negative islands, as in (10), and factive islands, as in (11). I will not discuss negative islands further here, since I have already shown that ValPa wh-movement is insensitive to intervention effects from negation. On the other hand, factive islands will be discussed at the end of the chapter.

(1) *What$_k$ did you hear **[**the rumor that Mary broke $\_{}_k$**]**? CNP island

(2) *What$_k$ did you get mad with **[**the girl who broke $\_{}_k$**]**? RC island

(3) *What$_k$ did you get mad **[**because Mary broke $\_{}_k$**]**? adjunct island

(4) *Who$_k$ do you think **[**the speech about _$_k$**]** interrupted it? subject island

(5) *What$_k$ did **[**that Susi said _$_k$**]** hurt him? sentential subject island

(6) *What$_k$ did he say **[**how he'll do _$_k$**]**? wh-island

(7) *What$_k$ did he say **[**whether he'll do _$_k$**]**? whether-island

(8) *What$_k$ did he eat **[**hummus and _$_k$**]**? coordinate island

(9) *How expensive$_k$ did Mary buy **[** _$_k$ car**]**? left branch island

(10) *How did**n't** John behave at the party?

(11) *How did he **know** that John left?

Islands are not uniform crosslinguistically and there is some variation both in the type of constructions that disallow extraction (e.g., relative clauses vs subject islands) and in the type of extractee (argument vs adjunct) that gives rise to island violations (Huang, 1982; Rizzi, 1982; Sprouse et al., 2012, 2016). For example, Rizzi (1982) notes that Italian does not exhibit wh-islands, (12), nor (sentential) subject islands, (13). Rizzi (1982) attributes the lack of wh- and subject islands in Italian to different bounding nodes. While Chomsky (1973) argues that the bounding nodes for English are NP and IP, for Italian they are NP and CP.

(12) Tuo fratello, [a cui]$_k$ mi domand-o [ [che **Italian**
POSS.2SG.M.SG brother to whom CL.REFL.1SG wonder-PRS.1SG what
stori-e]$_j$ abbia-no racconta-to _$_j$ _$_k$ ] era molto
story-PL have.SUBJ-3PL tell-PST.PTCP be.PST.3SG very
preoccupa-t-o.
worryPST.PTCP-M.SG
'Your brother, who I wonder what stories they told, was really worried.'

(Rizzi, 1982, p. 50)

(13) Questo autore, [di cui]$_j$ so che [ il **Italian**
DEM.M.SG author of whom know.PRS.1SG COMP DET.DEF.M.SG
primo libro $\_{j}$ ] è stat-o pubblica-t-o
first book be.PRS.3-MSG be.PST.PTCP publish-PST.PTCP-M.SG
recentemente...
recently
'This author, who I know that the first book was published recently...'

(Rizzi, 1982, p. 61)

As I have argued in Chapter 6.3.1, there are other potential explanations for the lack of wh-island violations in certain configurations, which can be reduced to featural relativized minimality. Sprouse et al. (2016) also question the validity of the claim, both from a theoretical and an experimental standpoint. Moreover, they experimentally show the lack of subject islands in Italian relative clauses. Sprouse et al. (2016) do not give an explanation of why Italian, unlike English, does not display subject islands. They review several accounts on the asymmetries between subjects (and adjuncts) and arguments (Uriagereka, 1999; Nunes and Uriagereka, 2000; Johnson, 2003; Stepanov, 2007), without drawing a definitive conclusion, although they suggest that the difference might come from the fact that, in Italian, subjects normally occur post-verbally.

Another important asymmetry witnessed in some languages is between argument and adjunct extraction. In Mandarin, a wh-in-situ language, arguments are felicitous inside islands, despite undergoing covert movement at LF out of the island, as in (14) (Huang, 1982; Tsai, 1994, 1999; Jin and Yan, 2024).[1] As Huang (1982) and several researchers following him argue, certain adjuncts, like *weishenme* 'why', display island sensitivity, (15). In this case, LF movement of *weishenme* out of the relative clause gives rise to an island violation.

[1]But see Lu et al. (2020b) for a different claim.

(14) Ni xihuan [shei xie] de shu? **Mandarin**
you like who write REL book?
'Who$_i$ do you like the book that [t$_i$] wrote]?'

(Jin and Yan, 2024, p. 3)

(15) *Ni xihuan [ Zhangsan weishenme xie ] de shu? **Mandarin**
you like Zhangsan why write REL book?
'Why$_i$ do you like the book that [Zhangsan wrote t$_i$]?'

(Jin and Yan, 2024, p. 3)

In this chapter, I will analyze island constructions in ValPa (Section 10.1) and then use the placement of interveners to diagnose the movement path of wh-phrases (Section 10.3).

## 10.1 Islands and CIwh-phrases in ValPa

The analysis sketched in the previous chapters suggests that CIwh-phrases in ValPa should display island sensitivity. However, as I will show in this section, ValPa CIwh-phrases never show island sensitivity, as opposed to their fronted counterparts. I will discuss each island type in a dedicated subsection, with a summary table at the end of the section (Section 10.1.8).

### 10.1.1 Relative clauses

CIwh-phrases are felicitous inside relative clauses, yet they have matrix scope. This is shown in (16-a) and (17), for two different types of arguments. Note, moreover, that extraction from the relative clause is banned, as shown in (16-b) and (17-b).

(16) **Context**: A friend of yours is a vintage Vespa collector, and every year he goes to a

Vespa fair in Tuscany and buys an old Vespa model that he then fixes to add to his collection. A week after the fair, you meet him at the bar and ask:

a. Adon, ci coup t' à atsit-ò [ an Vespa que cout-e **veu** ] ?
so, DEM.M.SG hit CL.NOM.2SG have.PRS.2SG buy-PST.PTCP DET.INDEF.F.SG Vespa COMP cost-PRS.3SG how.much
'So, for which x such that x is an amount, this time you bought a Vespa that costs x?'

b. *Adon, ci coup **veu**$_k$ t'à atsitò [ an Vespa que coute $_{-k}$]?

(17) **Context**: Your colleague has asked the students to bring from home an object for a classroom activity, but you have heard in the teachers' lounge that he has sent a student away for bringing a an inappropriate object. Later that day, you see him and ask:

a. T' à mand-ò ya [ eun garçon que l' àye port-ò **dequé** ] ?
CL.NOM.2SG have.PRS.2SG send-PST.PTCP away DET.INDEF.M.SG kid COMP CL.NOM.3SG have.PST.3SG bring-PST.PTCP what
'For which x, you sent away a kid who had brought x?'

b. ***Dequé**$_k$ t'à mandò ya [ eun garçon que l'àye portò $_{-k}$ ] ?

The same pattern is witnessed with a D-linked wh-phrase:

(18) **Context**: Your colleague has asked the students to bring a book of their choosing, but you have heard in the teachers' lounge that he has sent a student away for bringing a book that he disapproves of. Later that day, you see him and ask:

a. T' à mand-ò ya [ eun garçon
CL.NOM.2SG have.PRS.2SG send-PST.PTCP away DET.INDEF.M.SG kid

que l' àye port-ò **quin livro** ] ?
COMP CL.NOM.3SG have.PST.3SG bring-PST.PTCP which book
'For which x such that x is a book, you sent away a kid who had brought x?'

b. ***Quin livro**$_k$ t'à mandò ya [ eun garçon que l'àye portò _$_k$ ] ?

Adjunct wh-phrases are also felicitous inside RC, (19-a), while their extraction is ruled out. Therefore, unlike Mandarin (Huang, 1982), there is no difference between argument and adjunct extraction in ValPa.

(19) **Context**: A friend of yours is a vintage Vespa collector. Every year he goes to a Vespa fair in Tuscany and buys an old Vespa model to fix and add to his collection, but it always takes weeks to receive the Vespa, which annoys him immensely. A week later, you meet him and ask:

a. Adon, ci coup t' à atsit-ò [
so, DEM.M.SG hit CL.NOM.2SG have.PRS.2SG buy-PST.PTCP
an Vespa que t' aru-e **quan** ] ?
DET.INDEF.F.SG Vespa COMP CL.DAT.2SG arrive-PRS.3SG when
'So, for which x such as x is a time this time you bought a Vespa that you will receive at time x?'

b. *Adon, ci coup **quan**$_k$ t'à atsitò [ an Vespa que t'arue _$_k$ ]?

(20) **Context**: A friend of yours is a vintage Vespa collector. Every year he goes to a Vespa fair in Tuscany and buys an old Vespa model to fix and add to his collection. He normally asks you to be there with him when the Vespa arrives. The day after the fair, you see him at the bar and ask:

a. Adon, ci coup t' à atsit-ò [
so, DEM.M.SG hit CL.NOM.2SG have.PRS.2SG buy-PST.PTCP

an Vespa que t' aru-e **quin dzoo** ]] ?
DET.INDEF.F.SG Vespa COMP CL.DAT.2SG arrive-PRS.3SG which day

'So, for which x such that x is a day, this time you bought a Vespa that you will receive on x?'

b. *Adon, ci coup **quin dzoo**$_k$ t'à atsitò [ an Vespa que t'arue _$_k$ ]?

These patterns suggest that relative clauses are strong islands in ValPa: nothing can be overtly extracted from them.

### 10.1.2 Complex noun phrases

Complex noun phrases can also freely contain CIwh-phrases, which however take matrix scope. This is shown in (21) for a bare argument wh-phrase and in (22) for a D-linked argument wh-phrase. Extraction is, as for relative clauses, illicit.

(21) a. T' à sent-ù [ la conta que
CL.NOM.2SG have.PRS.2SG hear-PST.PTCP DET.DEF.F.SG story COMP
l' an baill-à la meizon **à qui** ]?
CL.NOM.3PL have.PRS.3PL give-PST.PTCP DET.DEF.F.SG house to who

'For which x such that x is a person you heard the story that they gave the house to x?'

b. ***À qui**$_k$ t'à sentù [ la conta que l'an baillà la meizon _$_k$ ]?

(22) a. T' à sent-ù [ la conta que
CL.NOM.2SG have.PRS.2SG hear-PST.PTCP DET.DEF.F.SG story COMP
l' an baill-à la meizon **à quin**
CL.NOM.3PL have.PRS.3PL give-PST.PTCP DET.DEF.F.SG house to which
**garçon** ]?
kid

'For which x such that x is a kid you heard the story that they gave the house to x?'

b. ***À quin garçon**$_k$ t'à sentù [ la conta que l'an baillà la meizon _$_k$ ]?

Adjunct wh-phrases behave the same. Complex noun phrases are strong islands in ValPa, but CIwh-phrases are felicitous inside them:

(23) a. T' à sent-ù [ la conta que
CL.NOM.2SG have.PRS.2SG hear-PST.PTCP DET.DEF.F.SG story COMP
son part-i en vacanse **avouë qui** ]?
be.PRS.3PL leave-PST.PTCP.PL on holiday with who
'For which x such that x is a person you heard the story that they went on holiday?'

b. ***Avouë qui**$_k$ t'à sentù [ la conta que son parti en vacanse _$_k$ ]?

(24) a. T' à sent-ù [ la conta que
CL.NOM.2SG have.PRS.2SG hear-PST.PTCP DET.DEF.F.SG story COMP
son part-i en vacanse **avouë quin-ta machina** ]?
be.PRS.3PL leave-PST.PTCP.PL on holiday with which-F.SG car
'For which x such that x is a car you heard the story that they went on holiday with x?'

b. ***Avouë quinta machina**$_k$ t'à sentù [ la conta que son parti en vacanse _$_k$ ]?

### 10.1.3 Adjunct clauses

There are different kinds of adjunct clauses. Here, I will discuss *perqué* adjunct clauses, temporal adjunct clauses, and *se* adjunct clauses.

#### 10.1.3.1 *Perqué* adjunct clauses

CIwh-phrases do not display island sensitivity when they surface in *perqué* adjunct clauses, regardless of whether the wh-phrase is bare or D-linked:

(25) a. Papa s' è enmaleuch-à [ perqué t'
dad CL.REFL.3 be.PRS.3SG get.angry-PST.PTCP because CL.NOM.2SG
à medj-à **dequé** ]?
have.PRS.2SG eat-PST.PTCP what
'For which x dad got mad because you ate x?'

b. ***Dequé**$_k$ papa s'è enmaleuchà [ perqué t'à medjà $\_{k}$ ]?

(26) a. Papa s' è enmaleuch-à [ perqué t'
dad CL.REFL.3 be.PRS.3SG get.angry-PST.PTCP because CL.NOM.2SG
à medj-à **quin pan** ]?
have.PRS.2SG eat-PST.PTCP which bread
'For which x such that x is a bread dad got mad because you ate x?'

b. ***Quin pan**$_k$ papa s'è enmaleuchà [ perqué t'à medjà $\_{k}$ ]?

Adjunct wh-phrases behave the same way:

(27) a. Papa s' è enmaleuch-à [ perqué t'
dad CL.REFL.3 be.PRS.3SG get.angry-PST.PTCP because CL.NOM.2SG
à copp-ò lo pan **avuoë dequé**]?
have.PRS.2SG cut-PST.PTCP DET.DEF.M.SG bread with what
'For which x dad got mad because you cut the bread with x?'

b. ***Avouë dequé**$_k$ papa s'è enmaleuchà [ perqué t'à coppò lo pan $\_{k}$]?

(28) a. Papa s' è enmaleuch-à [ perqué t'
dad CL.REFL.3 be.PRS.3SG get.angry-PST.PTCP because CL.NOM.2SG
à copp-ò lo pan **avuoë quin cutéi**]?
have.PRS.2SG cut-PST.PTCP DET.DEF.M.SG bread with which knife
'For which x such that x is a knife dad got mad because you cut the bread with x?'

b. ***Avouë quin cutéi**$_k$ papa s'è enmaleuchà [ perqué t'à coppò lo pan $\_{k}$]?

### 10.1.3.2 Temporal adjunct clauses

Temporal adjunct clauses, like those introduced by *quan*, can felicitously contain CIwh-phrases, be they arguments or adjuncts, whereby extraction is banned:

(29) a.

| Te | queri-e | [ quan | port-e | **dequé** ]? |
|---|---|---|---|---|
| CL.ACC.2SG | call-PRS.3SG | when | bring-PRS.3SG | what |

‘For which x is (s)he will call you when (s)he brings x?’

b. ***Dequé**$_k$ te querie [ quan porte $\_{k}$]?

(30) a.

| Te | queri-e | [ quan | port-e | **quin** | **livro** ]? |
|---|---|---|---|---|---|
| CL.ACC.2SG | call-PRS.3SG | when | bring-PRS.3SG | which | book |

‘For which x such that x is a book, (s)he will call you when (s)he brings x?’

b. ***Quin livro**$_k$ te querie [ quan porte $\_{k}$]?

(31) a.

| Te | baill-e | eun | bollion | [ quan | te |
|---|---|---|---|---|---|
| CL.ACC.2SG | give-PRS.3SG | DET.INDEF.M.SG | scold | when | CL.NOM.2SG |

| copp-e | lo | pan | **avouë** | **dequé** ]? |
|---|---|---|---|---|
| cut-PRS.3SG | DET.DEF.M.SG | bread | with | what |

‘For which x, (s)he will scold you when you cut the bread with x?’

b. ***Dequé**$_k$ e baille eun bollion [quan te coppe lo pan **avouë** $\_{k}$ ]??

(32) a.

| Te | baill-e | eun | bollion | [ quan | te |
|---|---|---|---|---|---|
| CL.ACC.2SG | give-PRS.3SG | DET.INDEF.M.SG | scold | when | CL.NOM.2SG |

| copp-e | lo | pan | **avouë** | **quin** | **cutéi** ]? |
|---|---|---|---|---|---|
| cut-PRS.3SG | DET.DEF.M.SG | bread | with | which | knife |

‘For which x such that x is a knife, (s)he will scold you when you cut the bread with x?’

b. ***Dequé**$_k$ e baille eun bollion [quan te coppe lo pan **avouë quin cutéi** $\_{k}$ ]??

### 10.1.4 *Se* adjunct clauses

There are two types of adjunct *se* clauses in ValPa: embedded interrogative and conditional clauses. I will discuss them in separate subsections.

#### 10.1.4.1 Interrogative *se* adjunct clauses

CIwh-phrases are felicitous inside interrogative *se* clauses, as in (33)-(34). As can be seen in the following examples, extraction out of these clauses is slightly less degraded than extraction out of *perqué* adjunct clauses. Nevertheless, the (b) examples are still much more degraded than their counterparts with the CIwh-phrases.

(33) a. Te te demand-e [ se no dei-en
CL.NOM.2SG CL.REFL.2SG ask-PRS.2SG if CL.NOM.1PL must-PRS.1PL
atist-éi **dequé** ]?
buy-INF what
'For which x, you are wondering whether we should buy x?'

b. ??**Dequé**$_k$ te te demande [ se no deien atistéi $\__k$ ]?

(34) a. Te te demand-e [ se no dei-en
CL.NOM.2SG CL.REFL.2SG ask-PRS.2SG if CL.NOM.1PL must-PRS.1PL
atist-éi **quin livro** ]?
buy-INF which book
'For which x, you are wondering whether we should buy x?'

b. ??**Quin livro**$_k$ te te demande [ se no deien atistéi $\__k$ ]?

(35) a. T' à demand-ò [ se te port-e
CL.DAT.2SG have-PRS.3SG ask-PST.PTCP if CL.NOM.2SG bring-PRS.2SG
**quin livro** ]?
which book
'For which x such that x is a book (s)he asked you whether you will bring x?'

b. ??**Quin livro**$_k$ t'à demandò [ se te porte $\_{k}$ ]?

(36) a. Te te demand-e [ se no dei-en
CL.NOM.2SG CL.REFL.2SG ask-PRS.2SG if CL.NOM.1PL must-PRS.1PL
l' atist-éi **yeui**]?
CL.ACC buy-INF where
'For which x such that x is a location you are wondering whether we must buy it at x?'

b. ??**Yeui** te te demand-e [ se no deien l'atistéi $\_{k}$ ]?

(37) a. T' à demand-ò [ se te lo
CL.DAT.2SG have-PRS.3SG ask-PST.PTCP if CL.NOM.2SG CL.ACC
port-e **yeui**]?
bring-PRS.2SG where
'For which x such that x is a location (s)he asked you if you will bring it to x?'

b. ??**Yeui** t'à demand-ò [ se se te lo porte $\_{k}$ ]?

(38) a. Te te demand-e [ se no dei-en
CL.NOM.2SG CL.REFL.2SG ask-PRS.2SG if CL.NOM.1PL must-PRS.1PL
l' atist-éi **eun quin-ta boteucca**]?
CL.ACC buy-INF in which-F.SG shop
'For which x such that x is a shop you are wondering whether we must buy it in x?'

b. ??**Eun quinta boteucca** te te demande [ se no deien l'atistéi $\_{k}$ ]?

#### 10.1.4.2 Conditional *se* clauses

The pattern with conditional *se* adjunct clauses is slightly different. CIwh-phrases are always felicitous inside these islands and take matrix scope. The surprising fact is that wh-fronting is in general less degraded than in other types of islands. For instance, extracting a bare argument wh-phrase is somewhat degraded in (39), while extraction of all other types of wh-phrases is slightly less degraded but not fine, as can be seen in (40), (41), and (42).

(39) a. S' emmaleuchi-e [ se te port-e **dequé** à
CL.REFL.3 get.mad-PRS.3SG if CL.NOM.2SG bring-PRS.2SG what at
l' écoula ]?
DET.DEF.SG school
'For which x (s)he gets mad if you bring x?

b. ??**Dequé**$_k$ s'emmaleuchie [ se te porte $\_{k}$ à l'écoula ]?

(40) a. S' emmaleuchi-e [ se te port-e **quin livro** à
CL.REFL.3 get.mad-PRS.3SG if CL.NOM.2SG bring-PRS.2SG which book at
l' écoula ]?
DET.DEF.SG school
'For which x such that x is a book (s)he gets mad if you bring x?

b. ?**Quin livro**$_k$ s'emmaleuchie [ se te porte $\_{k}$ à l'écoula ]?

(41) a. S' emmaleuchi-e [ se te lo copp-e
CL.REFL.3 get.mad-PRS.3SG if CL.NOM.2SG CL.ACC.M.SG cut-PRS.2SG
**avouë dequé** ]?
with what
'For which x (s)he gets mad if you cut it with x?

b. ?**Avouë dequé**$_k$ s'emmaleuchie [ se te lo coppe $\_{k}$ ]?

(42) a. S' emmaleuchi-e [ se te lo copp-e
CL.REFL.3 get.mad-PRS.3SG if CL.NOM.2SG CL.ACC.M.SG cut-PRS.2SG
**avouë quin cutéi** ]?
with which knife
'For which x such that x is a knife (s)he gets mad if you cut it with x?

b. ?**Avouë quin cutéi**$_k$ s'emmaleuchie [ se te lo coppe $\_{k}$ ]?

I should therefore conclude that conditional *se* clauses are islands for extraction as the other constructions discussed so far.

### 10.1.5 Subjects

Subjects are an interesting category, as researchers have reported crosslinguistic variation in their island status. As already mentioned, in English they are islands, whereas in Italian they are not (Rizzi, 1982; Sprouse et al., 2016). These constructions are not particularly relevant for the present puzzle (on a par with coordinate and left-branching structures discussed in Section 10.1.7), since the wh-phrase is the complement of a DP and therefore cannot occur in a clause-internal position in the LLP as the other wh-phrases discussed in this thesis. Nevertheless, they are presented here for completeness, as this study presents the first description of islands in ValPa.

(43) a. T' à sent-ù que [ lo garçon **de**
CL.NOM.2SG have.PRS.2SG hear-PST.PTCP COMP DET.DEF.M.SG boy of
**qui** ] l' à publi-à eun livro?
who CL.NOM.3SG have.PRS.3SG publish-PST.PTCP DET.INDEF.M.SG book
'For which x, you heard that the son of x has published a book?'

b. ?**De qui**$_k$ t'à sentù que lo garçon $\_\_k$ l' à publià eun livro?

(44) a. T' à sent-ù que [ lo garçon **de**
CL.NOM.2SG have.PRS.2SG hear-PST.PTCP COMP DET.DEF.M.SG boy of
**quin-ta metra** ] l' à publi-à
which-F.SG teacher CL.NOM.3SG have.PRS.3SG publish-PST.PTCP
eun livro?
DET.INDEF.M.SG book
'For which x such that x is a teacher you heard that the son of x has published a book?'

b. **De quinta metra**$_k$ t'à sentù que lo garçon $\_\_k$ l' à publià eun livro?

Fronting a bare (argument) wh-phrase is only slightly degraded (one ?), as in (43-b). However, there is a notable contrast with the previous cases, where extraction is extremely degraded (marked with a *). Extraction of a D-linked wh-phrase is perfectly fine. The present data is interesting as it shows that ValPa patterns like Italian and unlike English: subjects are not islands for extraction.

### 10.1.6 Sentential subjects

Similarly to subjects, sentential subjects are also not islands in ValPa: they allow extraction of both argument (bare and D-linked) and adjunct (bare and D-linked) wh-phrases.

(45) a.

| | | | | |
|---|---|---|---|---|
| T' | à | stup-ì | [ que | l' |
| CL.ACC.2SG | have.PRS.3SG | surprise-PST.PTCP | COMP | CL.NOM.3SG |

| | | | | |
|---|---|---|---|---|
| euche | pò | invit-ò | **qui** | ]? |
| have.SUBJ.PRS.3SG | NEG | invite-PST.PTCP | who | |

'For which x, it surprised you that (s)he did not invite x?'

b. **Qui**$_k$ t'à stupì [ que l'euche pò invitò $\_k$ ]?

(46) a.

| | | | | |
|---|---|---|---|---|
| T' | à | stup-ì | [ que | l' |
| CL.ACC.2SG | have.PRS.3SG | surprise-PST.PTCP | COMP | CL.NOM.3SG |

| | | | | |
|---|---|---|---|---|
| euche | pò | invit-ò | **quin-ta** | **feullie** ]? |
| have.SUBJ.PRS.3SG | NEG | invite-PST.PTCP | which-F.SF | girl |

'For which x such that x is a girl, it surprised you that (s)he did not invite x?'

b. **Quinta feullie**$_k$ t'à stupì [ que l'euche pò invitò $\_k$ ]?

(47) a.

| | | | | |
|---|---|---|---|---|
| T' | à | stup-ì | [ que | l' |
| CL.ACC.2SG | have.PRS.3SG | surprise-PST.PTCP | COMP | CL.NOM.3SG |

| | | | | |
|---|---|---|---|---|
| euche | pò | dans-à | **avouë** | **qui** ]? |
| have.SUBJ.PRS.3SG | NEG | dance-PST.PTCP | with | who |

'For which x, it surprised you that (s)he did not dance with x?'

b. **Avouë qui**$_k$ t'à stupì [ que l'euche pò dansà $\_k$ ]?

(48) a.

| | | | | |
|---|---|---|---|---|
| T' | à | stup-ì | [ que | l' |
| CL.ACC.2SG | have.PRS.3SG | surprise-PST.PTCP | COMP | CL.NOM.3SG |

euche pò dans-à **avouë quin-ta feuille** ]?
have.SUBJ.PRS.3SG NEG dance-PST.PTCP with whuch-F.SG girl
'For which x such that x is a girl, it surprised you that (s)he did not dance with x?'

b. **Avouë quinta feuille**$_k$ t'à stupì [ que l'euche pò dansà _$_k$ ]?

### 10.1.7 Coordinate structures and left-branching structures

Similarly to subjects in Section 10.1.5, coordinate structures are not particularly relevant for the present chapter, however I am discussing them here for the sake of completeness. As the following examples show, coordinate structures are islands in ValPa: nothing can be extracted from them. It is possible to have a wh-phrase as one of the conjuncts, as in (49-a)-(50-a)-(51-a)-(52-a). However, as in the English translation, these constructions are not genuine questions like the rest of the examples discussed here, but rather echo questions. In fact, their prosody closely resembles that of a declarative rather than that of the wh-questions discussed in Chapter 8.2.2. This might be due to the fact that the wh-phrases in the following examples are in fact in situ and have not undergone movement.

(49) a. T' à atsit-ò [ du mique e **dequé** (d'autro) ]?
CL.NOM.2SG have.PRS.2SG buy-PST.PTCP PART honey and what else
'You bought honey and what?'

b. ***Dequé**$_k$ t'à atsitò [ du mique e _$_k$]?

(50) a. T' ì all-ò vè-re [ l' écoula e
CL.NOM.2SG have.PRS.2SG go-PST.PTCP see-INF DET.DEF.F.SG school and
**quinta éilléize** ]?
which-F.SG church
'You went to see the school and which church?'

b. ***Quinta éilléize**$_k$ t'ì allò vere [l'écoula e _$_k$]?

(51) a. T' ì all-ò vè-re l' écoula avouë [
CL.NOM.2SG be.PRS.2SG go-PST.PTCP see-INF DET.DEF.F.SG school with
Irma e **qui** ]?
Irma and who
'You went to see the school with Irma and who?'

b. ***Qui**$_k$ t'ì allò vere l'écoula avouë [Irma e $_{-k}$]?

(52) a. T' ì all-ò vè-re l' écoula avouë [
CL.NOM.2SG be.PRS.2SG go-PST.PTCP see-INF DET.DEF.F.SG school with
Irma e **quin-ta** **feullie** ]?
Irma and which-F.SG girl
'You went to see the school with Irma and which girl?'

b. ***Quinta feullie**$_k$ t'ì allò vere l'écoula avouë [Irma e $_{-k}$]?

It is also possible to coordinate two TPs[2] in ValPa, in which case it is possible to have a CIwh-phrase, as in (53). However, in this case, the prosody is different from that of DP coordination and the question can be interpreted as a genuine question. Extraction is, as expected, very degraded.

(53) a. T' à deut de [ lav-éi vitto le
CL.NOM.2SG have.PRS.2SG say.PST.PTCP COMP wash-INF quickly DET.DEF.PL
platte e aprist-éi **dequé/quin-ta** **salada** ]?
dishes and prepare-INF what/which-F.SG salad
'Fow which x such that x is food/salad, (s)he told you to quickly wash the dishes and prepare x?'

b. ***Dequé/quinta salada**$_k$ t' à deut de [ lavéi le platte e apristéi $_{-k}$ ]?

The exact replication of the English left-branching constructions is not feasible, because the baselines of such constructions are bad in ValPa, as it is shown in (54). In any case, we see that

[2]We know that (53) is a case of TP coordination rather than vP/VP coordination from the presence of the adverb *vitto* 'quickly', which is situated very low in the adverbial spine, but nevertheless outside of vP (Cinque, 1999; Schifano, 2018), as discussed in Chapter 3 for ValPa.

wh-phrases like *quin livro* 'which book' also disallow extraction, as shown in (55) and (56). I will not discuss left-branching constructions any further.

(54) a. *T' à atsit-ò **eun** **livro veu**
CL.NOM.2SG have.PRS.2SG buy-PST.PTPC DET.INDEF.M.SG book how
**tchèa**?
expensive
'You bough a book how expensive?'

b. ***Veu tchèa eun livro**$_k$ t'à atsitò $\_\_k$ ?

c. ***Veu tchèa**$_k$ t'à atsitò $\_k$ **eun livro**?

(55) a. L' à atsit-ò **quin** **livro**?
CL.NOM.3SG have.PRS.3SG buy-PST.PTCP which book?
'Which book did he buy?'

b. ***Quin**$_k$ l'à atsitò $\_k$ **livro**?

c. **Quin livro**$_k$ l'à atsitò $\_k$ ?

(56) a. L' à copp-ò lo pan **avouë quin**
CL.NOM.3SG have.PRS.3SG cut-PST.PTCP DET.DEF.M.SG bread with which
**cutéi**?
knife?
'With which knife did he cut the bread?'

b. ***Avouë quin**$_k$ l'à coppò lo pan **cutéi**?

c. **Avouë quin cutéi**$_k$ l'à coppò lo pan $\_k$ ?

### 10.1.8 Summary of island patterns in ValPa

In this section, I have presented the first set of data on islands in ValPa. The finding are summarized in Table 10.1. First and foremost, subjects and sentential subjects are not islands in

ValPa, like in Italian by Rizzi (1982) and Sprouse et al. (2016). Next, some of these constructions, e.g., left-branching and coordinate structures, are not relevant for the current discussion, as they cannot contain CIwh-phrases. Nevertheless, I include coordinate structures in Table 10.1 for completeness.

Table 10.1: Islands in ValPa

| | **Fronted** | | | | Not fronted | | | |
|---|---|---|---|---|---|---|---|---|
| | **Argument** | | **Adjunct** | | **Argument** | | **Adjunct** | |
| | Bare | D-linked | Bare | D-linked | Bare | D-linked | Bare | D-linked |
| Relative clauses | * | * | * | * | ok | ok | ok | ok |
| CNP | * | * | * | * | ok | ok | ok | ok |
| *perqué* clauses | * | * | * | * | ok | ok | ok | ok |
| Temporal clauses | * | * | * | * | ok | ok | ok | ok |
| Interrogative *se* clauses | ?? | ?? | ?? | ?? | ok | ok | ok | ok |
| Conditional *se* clauses | ?? | ? | ? | ? | ok | ok | ok | ok |
| Subjects | ? | ok | N/A | N/A | ok | ok | N/A | N/A |
| Sentential subjects | ok | ok | ok | ok | ok | ok | ok | ok |
| Coordinate structures | * | * | * | * | ok | ok | ok | ok |
| Left branch structures | N/A | * | N/A | * | N/A | N/A | N/A | N/A |

Finally, in Section 10.1.4.2 I have shown that *se* conditional clauses are not (strong) islands like other constructions, among which embedded interrogative *se* clauses (Section 10.1.4.1). Therefore, for the remainder of this section, I will only discuss the following islands: relative clauses, complex noun phrases, *perqué* and temporal adjunct clauses, and interrogative *se* clauses.

## 10.2 Island insensitivity of CIwh-phrases and overt-covert movement

In the previous section, I have shown that relative clauses, complex noun phrases, *perqué* and temporal adjunct clauses, and interrogative *se* clauses are strong islands in ValPa: extracting an XP out of these constructions is illicit. Yet, CIwh-phrases are felicitous inside these islands, from where they take matrix scope. This evidence is potentially problematic for the analysis put forth in Chapters 7 and 8, whereby wh-phrases always move to their scope position in narrow syntax, with subsequent deletion of higher copies in the chain leading to the pronunciation of a lower copy in the chain.

In this section, I will consider four hypotheses, (57), to explain the matrix scope and lack of island sensitivity of ValPa CIwh-phrases. By Hypotheses 1 and 2, the wh-phrase remains inside the island, thus never triggering an island violation. The scope of the wh-phrase is then calculated via Focus Alternatives (Hamblin, 1973; Rooth, 1985; Kotek, 2016), whose mechanisms have been explained in Chapter 7. By Hypothesis 1, (57-a), the CIwh-phrase moves to the island LLP and remains there, whereas by Hypothesis 2, (57-b), it moves from the island LLP the wh-phrase to the island's CP. Following Kotek (2014, 2016), whose work I will discuss in more detail below, I will assume that this movement is not operator-driven but an instance of scrambling: the wh-phrase moves to the island HLP for interpretive and scopal purposes only. By Hypothesis 3, (57-c), on the other hand, the wh-phrase moves out of the island to its scope-taking position, namely matrix HLP, then all higher copies in the chain are deleted, which voids the island effect, as was claimed by Bošković (2002) for Serbo-Croatian, Bulgarian, and Romanian (see Chapter 5.2).

(57) a. **Hypothesis 1**: the CIwh-phrase moves to the edge of the island vP and remains 'frozen' there. Scope is calculated via Focus Alternatives

$[_{HLPmatrix}\ Q\ [_{TP} \ldots [_{vP} \ldots [_{HLPisland}\ [_{TP}\ [_{whP}\ wh\ [_{vP}\ [_{VP}\ \cancel{wh}\ ]]]]]]]]$

b. **Hypothesis 2**: the CIwh-phrase moves to the island's CP. Scope is calculated via Focus Alternatives

$[_{HLPmatrix}\ Q\ [_{TP} \ldots [_{vP} \ldots [_{HLPisland}\ \cancel{wh}\ [_{TP}\ [_{whP}\ wh\ [_{vP}\ [_{VP}\ \cancel{wh}\ ]]]]]]]]$

c. **Hypothesis 3**: the CIwh-phrase overtly moves to the matrix CP, with deletion of higher copies in the chain

$[_{HLPmatrix}\ \cancel{wh}\ [_{TP} \ldots [_{whP}\ \cancel{wh}\ [_{vP}\ [_{HLPisland}\ [_{TP}\ [_{whP}\ wh\ [_{vP}\ [_{VP}\ \cancel{wh}\ ]]]]]]]]]$

d. **Hypothesis 4**:

i) the CIwh-phrase moves to the edge of the matrix vP and pied-pipes the island

$[_{HLPmatrix}\ Q\ [_{TP} \ldots [_{whP}\ [_{HLPisland} \ldots wh\ ]\ [_{VP} \ldots \cancel{[_{HLPisland} \ldots wh\ ]}\ ]]]$

ii) the CIwh-phrase moves to the edge of the matrix vP and then to the HLP and pied-pipes the island

$[_{HLPmatrix}\ \cancel{[_{HLPisland} \ldots wh\ ]}\ ]\ [_{TP} \ldots [_{whP}\ [_{HLPisland} \ldots wh\ ]\ [_{VP} \ldots \cancel{[_{HLPisland} \ldots wh\ ]}\ ]]]$

By Hypothesis 4, the wh-phrase moves, pied-piping the entire island. This movement can be partial (only to the matrix LLP), in which case then scope of the wh-phrase is calculated via Focus Alternatives, or movement of the entire island to the matrix HLP, as showcased by the two derivations in (57-d). The sketches proposed are for a CNP or relative clause island generated inside VP. The most relevant analyses of island pied-piping are Hagstrom's (1998) and Kishimoto's (2005) analyses of Sinhala (Indo-Aryan) questions. In Sinhala, wh-phrases must obligatorily be accompanied by the Q-particle *də*, as in (58). Wh-phrases are felicitous inside islands, but only as long as the Q-particle *də*, underlined in the following examples, is *outside* the island and not contained within it, (59).[3]

(58) Chitra **monəwa** də gatte? **Sinhala**
Chitra what Q buy-E
'What did Chitra buy?'

(Kishimoto, 2005, p. 3)

(59) a. Oyaa [[ Chitra **kaa**-ʈə dunnə $_{HLP}$] potə $_{NP}$] də kieuwe? **Sinhala**
you Chitra who-DAT give book Q read
'Who did you read the book that Chitra gave?'

b. *Oyaa [[ Chitra **kaa**-ʈə də dunnə $_{HLP}$] potə $_{NP}$] də kieuwe?

(Kishimoto, 2005, p. 29)

The same pattern is witnessed in Tlingit (Na-Dene) (Cable, 2010), where crucially the whole island gets pied-piped and surfaces in the HLP, as outlined in (60). Both Tlingit and Sinhala are Q-projecting languages in Cable's typology of wh/Q-movement, therefore wh-fronting is a consequence of Q-movement.

(60) a. [[ **Wáa** kwligeyi $_{CP}$] xáat NP] sá i tuwáa sigóo? **Tlingit**
how it.is.big.REL fish Q your spirit it.is.happy
'How big a fish do you want? (literally = fish that is how big do you want?)

b. *[[**Wáa** sá kwligeyi $_{CP}$] xáat NP] i tuwáa sigóo?

[3]The observation that in wh-in-situ languages with an overt Q-particle, there are no island violations when the Q-particle is at the edge of the island dates back to Gair (1983, 1998).

c. *[[ **Wáa** kwligeyi $_{CP}$] <u>sá</u> xáat $_{NP}$] i tuwáa sigóo?

(Cable, 2010, p. 33)

Yet, Hagstrom (1998) argues that in Sinhala, the Q-particle *də* does not necessarily need to be merged together with its host wh-phrase, which in (59) would be problematic as it would cause an island violation by moving out of it. Rather, in island constructions, *də* directly adjoins to the island. Subsequent LF movement of *də* to matrix CP therefore does not give rise to an island violation. Unfortunately, Cable (2010) does not explain *how* exactly the *sá* particle occurs at the edge of the island, but since Tlingit is a Q-projecting language, then it must project also in island constructions.[4] Otherwise, we need to state that Q projects in some cases, while in islands it adjoins.

Another possible way to explain the island pied-piping we see in Sinhala and Tlingit is feature percolation (Chomsky, 1973; Grimshaw, 2000). In these analyses, the features of a given head (or phrase) is passed onto nodes outside that phrase. In this analysis, the [WH] feature on the wh-phrase in (59) percolates up to the maximal projection of the island (where it gets overtly realized as də). Then, once the head of the whP in the LLP probes for a goal with a [WH] feature,

[4]This part of Cable's (2010) analysis is, however, problematic, as it raises questions about selection. If a wh-phrase, e.g., a DP like *who*, is actually the sister of QP, then it follows that in the question *Who did you see?* the head of V must select a QP and not a DP. Moreover, since wh-phrases in the language can also be adjuncts and adverbs, the selection requirements of the language must be relatively loose. Cable actually resorts to a distinction between lexical and functional heads and S- and C-selection (Pesetsky, 1982). When a given head S-selects its complement, it selects for a particular semantic type for its sister, while C-selection is selection of a particular syntactic category. If we assume that functional heads C-select their arguments, while lexical heads S-select their arguments (Pesetsky, 1982), then only functional heads require their arguments to be of a specific syntactic category, e.g., DP. Cable argues that QP inherits the sematic type of its complement, therefore lexical heads will be able to select for a QP as long as QP's complement is of the desired semantic type. This means that lexical heads can see 'past' QP and look at its complement's semantic type. On the other hand, functional heads require a specific syntactic category as complement and hence if they require e.g., a DP, a QP will not satisfy their selectional requirements. This is a problematic account, as it rests on a distinction between lexical and functional categories that can be stipulative (see Taylor 2022). Moreover, if one does follow Cinque (1999) in arguing that adverbs are not adjuncts but full functional projections hierarchically ordered and tightly packed together, then it would be impossible for any of these adverbs to be wh-phrases as a functional AdvP would never be able to C-select a QP (which takes another AdvP as its sister).

it will Agree and then attract the entire island, which will then move to the LLP.

Circling back to ValPa Hypothesis 4 above, (57-d), we could adopt Hagstrom's (1998) or Cable's (2010) Q-account, with the QP being silent in this case. Hagstrom (1998) claims that QP adjoins to the island, while Cable (2010) is more vague about the construction in Tlingit. The Q-projection/adjunction to the island edge is slightly problematic, because it would require us to postulate the presence of a QP in all wh-phrases in ValPa. However, as largely argued for in Chapter 7, ValPa is a wh-fronting language. Therefore, we would need to rebrand ValPa as a Q-projecting language, where wh-phrases get pied-piped by Q-movement. This would either require us to state that QP also projects in island constructions (which is problematic for selectional reasons at the very least, as stated above) or to have structural ambiguity, whereby in non-island constructions QP projects, and in island constructions QP adjoins to the island. In sum, Q-adjunction to the island edge is potentially problematic for ValPa.

On the other hand, if we adopt a feature percolation analysis (Chomsky, 1973; Grimshaw, 2000), the analysis is less problematic, but still raises some concerns, among which the extent to which features can percolate: do all features percolate? How does the grammar regulate percolation so that it only happens in these constructions and not others? If the [WH] feature on the wh-phrase percolates, then do other features like person and number percolate as well? Here, I will resort to the feature percolation analysis because it is the less problematic one. In this case, the wh-phrase inside the island actually might not even need to move to the LLP, since the [WH] feature percolates all the way to the island edge. This way, the island becomes the target of movement and moves to the matrix LLP, pied-piping the wh-phrase. Then, either it remains there and scope is calculated via Focus Alternatives, as in (57-d), or is pied-piped the island to the matrix HLP, as in (57-d).

In the following section, I will rely on the placement of interveners inside and above the island to diagnose the movement path of wh-phrases.

## 10.3 Intervention Effects and Islands

In this section, I will use the placement of interveners, e.g., negation, above (in the matrix clause) and inside the island to diagnose the movement path of CIwh-phrases, following Kotek (2014, 2016). Before moving to the ValPa data, a brief introduction to intervention effects (IEs) in and above island constructions in English is in order.

### 10.3.1 Kotek (2014; 2016)

English allows multiple wh-questions, (61)-(62), yet in these constructions only one wh-phrase gets fronted, while the remaining wh-phrase(s) remain in situ (Pesetsky, 2000; Kotek, 2014). Bare wh-phrases display superiority effects, as in (61), while D-linked wh-phrases do not (Chomsky, 1973; Rizzi, 1990; Pesetsky, 2000), as discussed in Chapter 6. In short, English allows both superiority-obeying questions and superiority-violating questions with D-linked wh-phrases.

(61) a. Who did you introduce to whom? **Superiority-obeying**

b. *To whom did you introduce who? **Superiority-violating**

(62) a. Which writer did you introduce to which journalist? **Superiority-obeying**

b. To which journalist did you introduce which writer? **Superiority-violating**

Note, furthermore, that for all these questions, there are three possible readings: echo, single-pair, and pair-list (Wachowicz, 1974; Comorovski, 1989; Dayal, 1996; Pesetsky, 2000). Here, I will disregard the first reading and focus on the single-pair, (63), and pair-list readings, (64).

(63) **Single-pair answer to a multiple question:**

a. Who ate what?

b. Fred ate the beans.

(Kotek, 2014, p. 25)

(64) **Pair-list answer to a multiple question:**

a. Who ate what?

b. Fred ate the beans, Mary ate the eggplant, and John ate the broccoli.

(Kotek, 2014, p. 26)

If we introduce an intervener in the question, we notice some interesting patterns. As Kiss (1986) and Pesetsky (2000) pointed out for English, and Rizzi (1990) for German, superiority-obeying questions containing an intervener (in **orange**) still allow both the single-pair and pair-list readings, as in (65).

(65) Which student did**n't** read which book? **Superiority-obeying**

a. $^{ok}$Single-pair: Susan didn't read The Hobbit.

b. $^{ok}$Pair-list: Susan didn't read The Hobbit, Joshua didn't read The Lord of The Rings, Maša didn't read The Silmarillion.

The availability of both readings results from the fact that the object wh-phrase *which book* in (65) undergoes movement to the HLP at LF, as in (66). This way, both wh-phrases can take wide scope over the negation and both readings are available.

(66) [Which student]$_k$ did**n't** $\_\_{}_k$ read which book ? **Superiority-obeying**

On the other hand, superiority-violating questions are subject to intervention effects: the presence of the negation in (67) makes the pair-list reading unavailable. As Pesetsky (2000) and Kotek (2016) argue, this happens because the subject wh-phrase stays in situ at LF, as sketched in (68), hence remaining in the scope of the negation, which gives rise to the IE.

(67) Which book did**n't** <u>which student</u> read? **Superiority-violating**

a. $^{ok}$Single-pair: Susan didn't read The Hobbit.

b. $^{*}$Pair-list: Susan didn't read The Hobbit, Joshua didn't read The Lord of The Rings, Maša didn't read The Silmarillion.

(68) [Which book]$_k$ did**n't** <u>which student</u> read $\_\_{}_k$ ? **Superiority-violating**

Since the wh-phrase remains in situ throughout the whole derivation, Kotek (2016) concludes that the scope of *which student* must be calculated via Focus Alternatives (Hamblin, 1973; Rooth, 1985), discussed in Chapter 7. Crucially, Focus Alternatives is sensitive to IEs, hence the lack of the pair-list reading in (67).

Given these observations on superiority effects and IEs in matrix questions, Kotek (2016) resorts to the placement of interveners to diagnose the movement path of wh-in-situ in English inside islands, like *which philosopher* in (69). The wh-phrase to observe is underlined.

(69) Which linguist believed the rumor [that we invited which philosopher]?

Kotek shows that in situ wh-phrases are not sensitive to IEs when an intervener is placed inside the island. In (70), the pair-list reading is available (the single-pair reading is always available). Rather, the wh-phrase *which philosopher* covertly moves to the edge of the island,[5] moving out of the scope of the negation, (71). From there, the wh-phrase is then interpreted via Focus Alternatives.

(70) **Context**: The linguists at the conference are very suspicious of rumors. However, each of them believed the rumor that we failed to invite one philosopher to the conference party. What I want to know is:

A: Which linguist believed the rumor [that we did**n't** invite which philosopher]?

B: Chomsky believed the rumor that we didn't invite Quine; Kayne believed the rumor that we didn't invite Lewis; Labov believed the rumor that we didn't invite Russell, ...

(Kotek, 2016, p. 7)

(71) **Intervener inside island → no intervention**

$^{ok}[_{HLPmatrix}$ [Which linguist]$_k$ $[_{TP}$ _$_k$ ... $[_{HLPisland}$ $[_{TP}$ ... **NEG** ... ... which philosopher ]]]

On the other hand, when the intervener is above the island, in the matrix clause, the pair-list reading is impossible, (72). This is because, despite covertly moving to the edge of the island,

[5]As discussed at the beginning of this chapter, the standard assumption regarding island constructions is that they lack the escape hatch for extractees to move successive-cyclically, through the island edge (either because it is absent or because it is already occupied), which causes the derivation to crash. Kotek (2014, 2016) argues that the position targeted by *which philosopher* in (71) is in fact a non-interrogative position constituting an instance of covert scrambling. Therefore, Kotek's analysis does not postulate the existence of an interrogative projection in the HLP of islands, and is compatible with the mainstream account of islands lacking an escape hatch.

*which philosopher* remains in the scope of the negation in the matrix clause and is thus subject to IEs (73). The only possible reading is thus the single-pair reading. The same pattern is reported for Japanese (Morita, 2018).

(72) **Context**: The linguists at the conference are very gullible and believe lots of rumors. However, each of them is suspicious of one rumor about a philosopher that we supposedly invited to the conference party. What I want to know is:

A: Which linguist did**n't** believe the rumor [that we invited which philosopher]?

B: *PL Chomsky didn't believe the rumor that we invited Quine; Kayne didn't believe the rumor that we invited Lewis; Labov didn't believe the rumor that we invited Russell, ...

(Kotek, 2016, p. 7)

(73) **Intervener outside island → intervention effects**

*PL $[_{\text{HLPmatrix}}$ Which linguist $[_{\text{TP}}$ t ... **NEG** ... $[_{\text{HLPisland}}$ $[_{\text{TP}}$ ... ... which philosopher ]]]

## 10.3.2 Applying Kotek's (2014; 2016) approach to ValPa

Recall that ValPa does not allow multiple wh-questions. Therefore, we cannot replicate Kotek's exact paradigm. However, unlike English, ValPa allows CIwh-phrases to occur inside islands. Therefore, we can still resort to IEs inside and above islands to diagnose the movement path of ValPa CIwh-phrases. As largely discussed in Chapter 7.1, ValPa CIwh-phrases are not subject to IEs in non-island structures, (74). This is the case with all four types of interveners discussed in

Beck (2006): negation, habitual adverbs, quantifiers, and focus particles (see Chapter 7.1).

(74) a. Dequé l' à **pò** deut [que l'
what CL.NOM.3SG have.PRS.2SG NEG say-PST.PTCP COMP CL.NOM.3PL
ari-on atsit-ò]?
have.COND-3PL buy-PST.PTCP
'What didn't he tell that they would buy?'

b. L'à **pò** deut [que l'arion atsitò dequé]?

At the beginning of this chapter, I have discussed four hypotheses to explain the lack of island sensitivity and the matrix scope of ValPa CIwh-phrases. The hypotheses are repeated below, with the corresponding predictions, which I will now discuss one by one. For each prediction, I am sketching the derivation considering a relative clause island, enclosed in bold red brackets **[...]**, and a negation as intervener, in **orange**. The choice of negation as the intervener is due to its position. Recall that the negation *pò* is situated below T (cf. Chapter 3 and Zanuttini 1997) and does not move. Therefore, wh-phrases must move higher than the LLP to escape the scope of the negation. For this reason, it is an ideal intervener to diagnose the movement path of wh-phrases.

Hypothesis 1, where CIwh-phrases only move to the island LLP, predicts that CIwh-phrases are subject to IEs both when the intervener is inside and when it is above the island, as sketched in (75).

(75) **Hypothesis 1**: the CIwh-phrase moves to the island's LLP and remains 'frozen' there. Scope is calculated via Focus Alternatives

[$_{HLPmatrix}$ Q [$_{TP}$ … [$_{vP}$ … **[**$_{HLPisland}$ [$_{LLP}$ wh [$_{vP}$ [$_{VP}$ ~~wh~~ ]]]]**]**]]

**Predictions:**

a. **Intervener inside the island → intervention effects**:

$[_{\text{HLPmatrix}}\ \text{Q} \ldots [_{\text{vP}} \ldots [_{\text{HLPisland}}\ [_{\text{NegP}}\ \textbf{NEG}\ [_{\text{LLP}}\ \text{wh}\ [_{\text{vP}}\ [_{\text{VP}}\ \cancel{\text{wh}}\ ]]]]]]]$

b. **Intervener above the island → intervention effects**:

$[_{\text{HLPmatrix}}\ \text{Q}\ [_{\text{NegP}}\ \textbf{NEG} \ldots [_{\text{vP}} \ldots [_{\text{HLPisland}}\ [_{\text{LLP}}\ \text{wh}\ [_{\text{vP}}\ [_{\text{VP}}\ \cancel{\text{wh}}\ ]]]]]]]$

Under Hypothesis 2 (CIwh-phrase moves to island's CP), on the other hand, CIwh-phrases should be subject to IEs *only* when the intervener is above the island. When the intervener is inside the island, no IEs should arise, (76), just like in English (Kotek, 2016).

(76) **Hypothesis 2**: the CIwh-phrase moves to the island's HLP. Scope is calculated via Focus Alternatives

$[_{\text{HLPmatrix}}\ \text{Q} \ldots [_{\text{vP}} \ldots [_{\text{HLPisland}}\ \cancel{\text{wh}}\ [_{\text{LLP}}\ \text{wh}\ [_{\text{vP}}\ [_{\text{VP}}\ \cancel{\text{wh}}\ ]]]]]]$

**Predictions:**

a. **Intervener inside the island → no intervention effects**:

$[_{\text{HLPmatrix}}\ \text{Q} \ldots [_{\text{vP}} \ldots [_{\text{HLPisland}}\ \cancel{\text{wh}}\ [_{\text{NegP}}\ \textbf{NEG}\ [_{\text{LLP}}\ \text{wh}\ [_{\text{vP}}\ [_{\text{VP}}\ \cancel{\text{wh}}\ ]]]]]]]$

b. **Intervener above the island → intervention effects**:

$[_{\text{HLPmatrix}}\ \text{Q}\ [_{\text{NegP}}\ \textbf{NEG} \ldots [_{\text{vP}} \ldots [_{\text{HLPisland}}\ \cancel{\text{wh}}\ [_{\text{LLP}}\ \text{wh}\ [_{\text{vP}}\ [_{\text{VP}}\ \cancel{\text{wh}}\ ]]]]]]]$

Hypothesis 3 (movement to matrix HLP) makes the prediction that CIwh-phrases should never be subject to IEs, regardless of whether the intervener is inside or above the island, because the wh-phrase moves to a position where it takes wide scope over the negation, as sketched in (77).

(77) **Hypothesis 3**: the CIwh-phrase overtly moves to the matrix HLP, with deletion of higher

copies[6] in the chain

$[_{HLPmatrix}\ \cancel{wh}\ \dots\ [_{LLP}\ \cancel{wh}\ [_{vP}\ [_{HLPisland}\ [_{LLP}\ wh\ [_{vP}\ [_{VP}\ \cancel{wh}\ ]]]]]]]$

**Predictions:**

a. **Intervener inside the island → no intervention effects**:

$[_{HLPmatrix}\ \cancel{wh}\ \dots\ [_{LLP}\ \cancel{wh}\ [_{vP}\ [_{HLPisland}\ [_{NegP}\ \textbf{NEG}\ [_{LLP}\ wh\ [_{vP}\ [_{VP}\ \cancel{wh}\ ]]]]]]]]$

b. **Intervener above the island → no intervention effects**:

$[_{HLPmatrix}\ \cancel{wh}\ [_{NegP}\ \textbf{NEG}\ \dots\ [_{LLP}\ \cancel{wh}\ [_{vP}\ [_{HLPisland}\ [_{LLP}\ wh\ [_{vP}\ [_{VP}\ \cancel{wh}\ ]]]]]]]]$

Finally, Hypothesis 4 states that the wh-phrase remains in situ inside the island. However, the [WH] feature percolates to the island HLP. Therefore, the whole island moves to the matrix LLP, (78), or to the matrix HLP, (79). Hypothesis 4a predicts that the wh-phrase, which most likely remains in situ inside the island, should be subject to IEs from interveners both inside and above the island, as in (78). Note that even if the wh-phrase did move to the island LLP, then the predictions would be the same, as the latter remains in the scope of the negation. If the wh-phrase were to move further, scrambling to the edge of the island, it would be able to escape the scope of the intervener. Nevertheless, if the wh-phrase scrambled to the island edge, it should be able to escape the scope of the intervener inside the island. I cannot see a reason why in this case the wh-phrase would need to move to the edge of the island, since the wh-scope is established through Focus Alternatives anyway after the island is pied-piped to the matrix LLP. Another prediction that this hypothesis makes is that other features present on the wh-phrase beyond the

[6] As well as the one in situ.

[WH] one, e.g., number, can also percolate up to the island's edge.

(78) **Hypothesis 4a**: the CIwh-phrase moves to the matrix LLP and pied-pipes the island

[$_{\text{HLPmatrix}}$ Q … [$_{\text{LLP}}$ [$_{\text{HLPisland}}$ … wh ] [$_{\text{VP}}$ … ~~[$_{\text{HLPisland}}$ … wh ]~~ ]]]

**Predictions:**

a. **Intervener inside the island → intervention effects**:

[$_{\text{HLPmatrix}}$ Q [$_{\text{LLP}}$ [$_{\text{HLPisland}}$ [$_{\text{NegP}}$ **NEG** … wh ] ] [$_{\text{VP}}$ … ~~[$_{\text{HLPisland}}$ [$_{\text{NegP}}$ **NEG** wh ]]~~ ]]]

b. **Intervener above the island → intervention effects**:

[$_{\text{HLPmatrix}}$ Q [$_{\text{NegP}}$ **NEG** [$_{\text{LLP}}$ [$_{\text{HLPisland}}$ … wh ] [$_{\text{VP}}$ … ~~[$_{\text{HLPisland}}$ wh ]~~ ]]]]

Hypothesis 4b, as in (79), predicts that the wh-phrase, which remains in situ throughout the whole derivation, is sensitive to the scope of the negation inside the island, but not to the scope of the matrix negation.

(79) **Hypothesis 4b**: the CIwh-phrase moves to the matrix LLP and then to the HLP and pied-pipes the island

[$_{\text{HLPmatrix}}$ ~~[$_{\text{HLPisland}}$ … wh ]~~ ] … [$_{\text{LLP}}$ [$_{\text{HLPisland}}$ … wh ] [$_{\text{VP}}$ … ~~[$_{\text{HLPisland}}$ … wh ]~~ ]]

**Predictions:**

a. **Intervener inside the island → intervention effects**:

[$_{\text{HLPmatrix}}$ ~~[$_{\text{HLPisland}}$ [$_{\text{NegP}}$ **NEG** … wh ]]~~ [$_{\text{LLP}}$ [$_{\text{HLPisland}}$ [$_{\text{NegP}}$ **NEG** … wh ] ] [$_{\text{VP}}$ … ~~[$_{\text{HLPisland}}$ [$_{\text{NegP}}$ **NEG** … wh ]]~~ ]]]

b. **Intervener above the island** $\rightarrow$ **no intervention effects**:

[$_{\text{HLPmatrix}}$ ~~[$_{\text{HLPisland}}$ ... wh ]~~ [$_{\text{NegP}}$ **NEG** [$_{\text{LLP}}$ [$_{\text{HLPisland}}$ ... wh ] [$_{\text{VP}}$ ... ~~[$_{\text{HLPisland}}$ ... wh ]~~ ]]]]

Since the interveners discussed in Chapter 7.1–negation, habitual adverbs, quantifiers, and focus particles–all pattern alike, in the remainder of this section I will report examples with only one kind of intervener, namely negation. As far as island types are concerned, I will discuss all strong islands identified in Chapter 10.2 (see Table 10.1 for a summary), namely relative clauses, complex noun phrases, *perqué* and temporal adjunct clauses, and interrogative *se* clauses.

### 10.3.2.1 Intervener inside the island

Let's first look at cases where the intervener is inside the relevant strong islands, namely relative clauses, complex noun phrases, *perqué* and temporal adjunct clauses, and interrogative *se* clauses.

As we can see in (80), the presence of the negation inside the relative clause does not cause any IEs: the sentence is grammatical and the wh-phrase has matrix scope. The same pattern is witnessed in the CNP island in (81).

(80) **Context**: The math teacher, Mr. J., recently started making kids fix broken items around the school. If they fail to do so, he gives them detention. But everyday some children refuse to fix broken items. One afternoon, you walk by the detention classroom and see a few students in there, so you approach Mr. J. and ask:

a. Ci coup t' à pun-ì le rago [ que l' on **pò** sistem-ò deq̲u̲é̲ ] ?
DEM.M.SG hit CL.NOM.2 have.PRS.2SG punish-PST.PTCP DET.DEF.PL kid.PL COMP CL.NOM.3PL have.PRS.3PL NEG fix-PST.PTCP what
'What x is such that this time you punished the kids who did not fix x?'

(81) **Context**: Some of the students have been put in detention for not fixing the assigned items from around the school, but nobody seems to know exactly what items had to be fixed. Over drinks on Friday night, you ask the only colleague whom you still haven't heard from:

a. E te t' à sent-ù [ la conta
and NOM.2SG CL.NOM.2SG have.PRS.2SG hear-PST.PTCP DET.DEF.M.SG story
que l' ayen **pò** sistem-ò <u>dequé</u> ] ?
COMP CL.NOM.3PL have.PST.3PL NEG fix-PST.PTCP what
'What x is such that you heard the story that they did not fix x?'

In *perqué* adjunct clauses (82), temporal adjunct clauses (83), and embedded *se* interrogative clauses (84), we see that the presence of negation inside the island does not cause any IEs.

(82) **Context**: The math teacher, Mr. J., recently started making kids fix broken items around the school. If they fail to do so he gives them detention. One afternoon you walk by the detention classroom and see a few students in there, so you approach Mr. J. and ask:

a. Ci coup t' à pun-ì le rago [
DEM.M.SG hit CL.NOM.2 have.PRS.2SG punish-PST.PTCP DET.DEF.PL kid.PL
perqué l' an **pò** sistem-ò <u>dequé</u> ] ?
because CL.NOM.3PL have.PRS.3PL NEG fix-PST.PTCP what
'What x is such that this time you punished the kids because they did not fix x?'

(83) **Context**: You just joined a new school and heard that the math teacher, Mr. J., gives students lots of tasks. If they fail to do some specific things he really cares about, he gives them detention. Curious about that might be, you ask your colleagues:

a. Le pun-ei [ quan fe-yon **pò** <u>dequé</u> ] ?
CL.ACC.3PL punish-PRS.3SG when do-PRS.3PL NEG what
'What x is such that he punishes them when they don't do x?'

(84) **Context**: Your friend Sandrine is organizing a dinner and asking all the picky eaters among the attendees what they don't eat. You thought your best friend ate everything, so after you spot Sandrine talking to him, you ask:

a. T' à demand-ò [ se te medja-v-e **pò** dequé ] ?
CL.DAT.2SG have.PRS.3SG ask-PST.PTCP if CL.NOM.2SG eat-PST-3SG NEG what
'What x is, such that (s)he asked you if you don't eat x?'

In all the islands discussed here (relative clauses, complex noun phrases, *perqué* and temporal adjunct clauses, and interrogative *se* clauses), we do not witness IEs when the intervener is inside the island. It thus follows that the wh-phrase does not reamin in situ, nor in the island LLP, but must have moved *at least* to the island HLP, as outlined in (85). This finding is in line with what Kotek (2016) argues for English wh-in-situ inside islands.

(85) **ValPa: Intervener inside island → no intervention**

$^{ok}[_{HLPmatrix}$ $[_{TP}$ ...$[_{HLPisland}$ wh-phrase $[_{TP}$ ... **NEG** $[_{LLPisland}$ _ $[_{VP}$ _ ]]]]]]

These findings rule out Hypothesis 1 (wh-phrase moves to the island LLP) and Hypothesis 4 (pied-piping of the island to the matrix LLP). Moreover, in all the examples discussed here, the wh-phrase has matrix scope. So far, I have only discussed examples where the intervener is inside the island and it is thus impossible to tell whether the scope of the wh-phrase is established through Focus Alternatives (Hypothesis 2) or with movement of the wh-phrase to the matrix HLP (Hypothesis 3). The following section will discuss examples where the intervener is placed in the matrix clause to diagnose how the scope is established.

#### 10.3.2.2 Intervener above the island

In this section, I will discuss cases in which the intervener is placed above the island boundary, in the matrix clause, for all four kinds of strong islands.

As far as relative clauses (86) and (87), an intervener in the matrix clause does not trigger IEs.

(86) **Context**: Your colleague Mr. J., the math teacher, is very strict and is always punishing students for misbehaving. But recently started giving them a choice between fixing broken items around the school to avoid spending an afternoon in detention. At 1 pm, you see a group of notoriously mischievous students, who you know have just annoyed Mr. J. that morning, leave the school. So you turn to Mr. J. and ask:

a.

| | | | | | | |
|---|---|---|---|---|---|---|
| Ci | coup | t' | à | **pò** | pun-ì | le |
| DEM.M.SG | hit | CL.NOM.2 | have.PRS.2SG | NEG | punish-PST.PTCP | DET.DEF.PL |

| | | | | | | |
|---|---|---|---|---|---|---|
| rago | [ que | l' | an | sistem-ò | dequé ] | ? |
| kid.PL | COMP | CL.NOM.3PL | have.PRS.3PL | fix-PST.PTCP | what | |

'What x is such that this time you did not punish the kids who fixed x?'

(87) **Context**: Some of the students in your school have been put in detention for stealing items around the school, but nobody seems to know exactly how many items were stolen. More precisely, it appears that each of the teachers has not heard about one item being stolen. Over drinks on Friday night, you ask your colleague:

a.

| | | | | | | |
|---|---|---|---|---|---|---|
| E | te | t' | à | **pò** | sent-ù | [ la |
| and | NOM.2SG | CL.NOM.2SG | have.PRS.2SG | NEG | hear-PST.PTCP | DET.DEF.M.SG |

| | | | | | | |
|---|---|---|---|---|---|---|
| conta | que | l' | ayen | floqu-ò | dequé | ] ? |
| story | COMP | CL.NOM.3PL | have.PST.3PL | steal-PST.PTCP | what | |

'What x is such that you didn't hear the story that they stole x?'

The same pattern in witnessed in *perqué* adjunct clauses, (88), temporal adjunct clauses (89), and interrogative *se* clauses (90).

(88) **Context**: Your colleague Mr. J., the math teacher, is very strict and is always punishing students for misbehaving, but recently started giving them a choice between fixing broken items around the school or spending an afternoon in detention. At 1 pm, you see a group of notoriously mischievous students, whom you know have just annoyed Mr. J. that morning, leave the school. So you turn to Mr. J. and ask:

a.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Ci | coup | te | les | à | **pò** | pun-ì | [ |
| DEM.M.SG | hit | CL.NOM.2 | CL.ACC.3PL | have.PRS.2SG | NEG | punish-PST.PTCP | |

| | | | | | |
|---|---|---|---|---|---|
| perqué | l' | an | sistem-ò | dequé | ] ? |
| because | CL.NOM.3PL | have.PRS.3PL | fix-PST.PTCP | what | |

'What x is such that this time you didn't punish them because they fixed x?'

(89) **Context**: You just joined a new school and heard that the math teacher, Mr. J., gives students lots of detentions. However, sometimes he offers the students the opportunity to choose between detention and some other activity. Curious about those activities, you ask your colleagues:

a.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Le | pun-ei | **pò** | [ | quan | feyon | dequé | ] ? |
| CL.ACC.3PL | punish-PRS.3SG | NEG | | when | do.PRS.3PL | what | |

'What x is such that he does not punish them when they do x?'

(90) **Context**: Your neighbor Sandrine is organizing a dinner. Your friend thinks, however, that she is not being thorough enough, putting unusual foods on the menu, that people

might not eat. So you ask your friend:

a. T' à **pò** demand-ò **[** se no medj-en
CL.DAT.2SG have.PRS.3SG NEG ask-PST.PTCP if CL.NOM.1PL eat-PRS.1PL
dequé **]** ?
what
'What x is such that she did not ask you if we eat x?'

Therefore, we can conclude that CIwh-phrases inside islands are not sensitive to an intervener in the matrix clause. Hypothesis 2 (wh-phrase moves to edge of island, then is interpreted via Focus Alternatives) is not borne out, nor is Hypothesis 4a (wh-phrase pied-pipes the island to the matrix LLP). Focus Alternatives are sensitive to IEs (Pesetsky, 2000; Kotek, 2014, 2016), which are absent in the examples discussed here. The lack of IEs means that the wh-phrase has moved out of the island and to the matrix HLP, from where it can take scope over the matrix negation *pò*, thus speaking in favor of Hypothesis 3, as sketched in (91).

(91) **Intervener above island → no intervention**

$^{ok}[_{\text{HLPmatrix}}$ wh-phrase $[_{\text{TP}}$ ... **NEG** ... **[**$_{\text{HLPisland}}$ $[_{\text{TP}}$ ... $[_{\text{LLPisland}}$ _ $[_{\text{VP}}$ _ ]]**]**]]]

The data discussed in this subsection also matches the predictions of Hypothesis 4b. According to Hypothesis 4b, the wh-phrase pied-pipes the island all the way to the matrix HLP, from where it takes wide scope, hence scoping over the negation in the matrix clause. However, Hypothesis 4b does not explain the lack of IEs when the intervener is inside the island. Recall that according to Hypothesis 4b, the wh-phrase does not move from its base position or–at most–it moves to the island's LLP, where it remains in the scope of the intervener.

Before moving to the conclusion of the section, I would like to briefly go back to a possibile variant of Hypothesis 4b, discussed earlier in this chapter, where the wh-phrase covertly scrambles to the edge of the island, and then the island is pied-piped to the matrix HLP. In this case, the CIwh-phrase should be insensitive to IEs both when the intervener is inside and outside the island, just like by Hypothesis 3. As mentioned above, in Tlingit the island shows up in the HLP (Cable, 2010), hence pied-piping to the scope position of the wh-phrase *is* in fact attested crosslinguistically. Such an account would require an explanation of why the wh-phrase needs to scramble to the edge of the island in the first place, if then the [WH] feature percolates all the way to the island's edge. This seems redundant. Moreover, the scrambling must happen post Spell-out as it is impossible for the wh-phrase to be overt in the island's HLP, as I show in (92) for an adjunct island.

(92) a. *Ci coup te les à **pò** pun-ì **[**
DEM.M.SG hit CL.NOM.2 CL.ACC.3PL have.PRS.2SG NEG punish-PST.PTCP
dequé perqué l' an sistem-ò ~~dequé~~ **]** ?
what because CL.NOM.3PL have.PRS.3PL fix-PST.PTCP
'What x is such that this time you didn't punish them because they fixed x?'

b. *Ci coup te les à **pò** punì **[** perqué dequé l' an sistemò ~~dequé~~ **]** ?

One could argue that the wh-phrase undergoes scrambling at LF to avoid the scope of the intervener, as Kotek (2014, 2019) argues for English multiple wh-questions. This would explain why indeed (92) is impossible. At this point, it becomes harder to dismiss a variant of Hypothesis 4b where the wh-phrase covertly scrambles to the island's edge.

However, under the analysis put forth in Chapter 8, it follows that if the island is pied-piped in a successive cyclic manner first to the matrix LLP and then to the matrix HLP, it should be possible to pronounce both the head of the chain, namely the entire island in the matrix HLP, and the clause-internal copy, the entire island in the matrix LLP. Let us first consider cases where the wh-containing island occurs sentence initially. As can be seen in (93-a), in declarative sentences *perqué* adjunct clauses are not allowed to be fronted. In cases where the causal adjunct clause is preposed then *perqué* cannot be used, but *vu que* must be used instead, as in (93-b).[7]

(93) a. <table><tr><td>??[ Perqué</td><td>l’</td><td>an</td><td>sistemò</td><td>la</td><td>porta ]</td></tr><tr><td>because</td><td>CL.NOM.3PL</td><td>have.PRS.3PL</td><td>fix-PST.PTCP</td><td>DET.DEF.F.SG</td><td>door</td></tr></table>
<table><tr><td>ci</td><td>coup</td><td>te</td><td>les</td><td>à</td><td>pò</td><td>pun-ì.</td></tr><tr><td>DEM.M.SG</td><td>hit</td><td>CL.NOM.2</td><td>CL.ACC.3PL</td><td>have.PRS.2SG</td><td>NEG</td><td>punish-PST.PTCP</td></tr></table>

‘Because they fixed the door, this time you did not punish them.’

b. <table><tr><td>[ Vu que</td><td>l’</td><td>an</td><td>sistemò</td><td>la</td><td>porta ]</td></tr><tr><td>because</td><td>CL.NOM.3PL</td><td>have.PRS.3PL</td><td>fix-PST.PTCP</td><td>DET.DEF.F.SG</td><td>door</td></tr></table>
<table><tr><td>ci</td><td>coup</td><td>te</td><td>les</td><td>à</td><td>pò</td><td>pun-ì.</td></tr><tr><td>DEM.M.SG</td><td>hit</td><td>CL.NOM.2</td><td>CL.ACC.3PL</td><td>have.PRS.2SG</td><td>NEG</td><td>punish-PST.PTCP</td></tr></table>

‘Because they fixed the door, this time you did not punish them.’

Nevertheless, if indeed the island was overtly pied-piped to the matrix HLP, then it should be possible to have a preposed *perqué* adjunct clause. This is not what we find, as can be seen in (94-a). It is also impossible to have a preposed *vu que* adjunct clause if it contains a wh-phrase, as can be seen in (94-b).

(94) a. <table><tr><td>??[ Perqué</td><td>l’</td><td>an</td><td>sistemò</td><td>dequé ]</td><td>ci</td><td>coup</td></tr><tr><td>because</td><td>CL.NOM.3PL</td><td>have.PRS.3PL</td><td>fix-PST.PTCP</td><td>what</td><td>DEM.M.SG</td><td>hit</td></tr></table>
<table><tr><td>te</td><td>les</td><td>à</td><td>pò</td><td>pun-ì</td><td>?</td></tr><tr><td>CL.NOM.2</td><td>CL.ACC.3PL</td><td>have.PRS.2SG</td><td>NEG</td><td>punish-PST.PTCP</td><td></td></tr></table>

‘What x is such that this time you didn’t punish them because they fixed x?’

b. <table><tr><td>??[ Vu que</td><td>l’</td><td>an</td><td>sistemò</td><td>dequé ]</td><td>ci</td><td>coup</td></tr><tr><td>because</td><td>CL.NOM.3PL</td><td>have.PRS.3PL</td><td>fix-PST.PTCP</td><td>what</td><td>DEM.M.SG</td><td>hit</td></tr></table>
<table><tr><td>te</td><td>les</td><td>à</td><td>pò</td><td>pun-ì</td><td>?</td></tr><tr><td>CL.NOM.2</td><td>CL.ACC.3PL</td><td>have.PRS.2SG</td><td>NEG</td><td>punish-PST.PTCP</td><td></td></tr></table>

[7] The same pattern is witnessed in Italian with *perché*, which must be substituted with *siccome/dato che/visto che*.

'What x is such that this time you didn't punish them because they fixed x?'

While surprising at first sight, the infelicity of (94-b) might be due to other things, including prosodic constraints. As we have seen in Chapter 8.2.2, the material following the CIwh-phrase must be deaccented, which in (94-b) would result in a prosodically ill-formed sentence. If we look at RC islands, we see the same pattern: preposing the island with a wh-phrase is degraded, (95), whereas preposing a RC not containing a wh-phrases is fine, as in the Y/N question in (96).

(95) **Context**: same as (86)

??[ Le rago que l' on **pò** sistem-ò dequé ]
DET.DEF.PL kid.PL COMP CL.NOM.3PL have.PRS.3PL NEG fix-PST.PTCP what
ci coup t' à pun-ì ?
DEM.M.SG hit CL.NOM.2 have.PRS.2SG punish-PST.PTCP

'What x is such that, this time you punished the kids who did not fix x?'

(96) [ Le rago que l' on **pò** sistem-ò
DET.DEF.PL kid.PL COMP CL.NOM.3PL have.PRS.3PL NEG fix-PST.PTCP
la porta ] ci coup t' à pun-ì ?
DET.DEF.F.SG door DEM.M.SG hit CL.NOM.2 have.PRS.2SG punish-PST.PTCP
'This time you punished the kids who did not fix the door?'

Moreover, there are word order facts that suggest that the island in cases like (88) above does not surface in the LLP. Let us look back at the word order facts for questions containing CIwh-phrases. For instance, in (97), the unmarked work order is $PP_{avouë} > PP_{de}$, as in (97-a), whereas the word order in (97-b) is only felicitous in marked context, e.g., if the PP *de tsahe* is focalized. However, in the question in (98) we see that the word order is different from the unmarked order in (97-a). In Chapter 4, I have shown various word order patterns that are evidence that the wh-phrase is not in situ but has moved to the LLP.

(97) a. L' à **pò** predj-à avouë **PP$_{\text{avouë}}$>PP$_{\text{de}}$**
CL.NOM.3SG have.PRS.3SG NEG speak-PST.PTCP with
Tcheunne de tsahe.
Tcheunne of hunt
'He did not speak with Tcheunne about hunting.'

b. L'à **pò** predjà DE TSAHE avouë Tcheunne.

(98) L' à **pò** predj-à de dequé **whPP$_{\text{de}}$>PP$_{\text{avouë}}$**
CL.NOM.3SG have.PRS.3SG NEG speak-PST.PTCP of what
avouë Tcheunne?
with Tcheunne
'What did he not speak about with Tcheunne?'

If in (97-a) we inserted a wh-containing *perqué* adjunct clause, we would expect the island to surface in the LLP, hence ordered before the other complements, where a 'declarative' *perqué* adjunct clause should be able to freely occur sentence finally. This is not what we find. Let us first look at *perqué* adjunct clauses not containing wh-phrases, as in (99), where we see that the adjunct clause cannot precede the other complements, but must occur sentence finally.

(99) a. *L' à **pò** predj-à [ perqué l'
CL.NOM.3SG have.PRS.3SG NEG speak-PST.PTCP because CL.NOM.3SG
è part-ì ] avouë Tcheunne de tsahe.
be.PRS.3SG leave-PST.PTCP with Tcheunne of hunt
'He did not speak with Tcheunne about hunting because he left.'

b. L'à **pò** predjà avouë Tcheunne de tsahe [ perqué l'è partì ].

Crucially, if we have a wh-phrase inside the *perqué* adjunct clause, we see that the latter cannot precede the other arguments, as in (100), but must occur sentence finally, like in 'declarative' sentences. This suggest that, unlike bare and D-linked wh-phrases, the island does not surface in the LLP, which in turn speaks against a pied-piping analysis. Therefore, I reject Hypothesis 4.

(100) a. *L' à **pò** predj-à [ perqué l'
CL.NOM.3SG have.PRS.3SG NEG speak-PST.PTCP because CL.NOM.3SG
è part-ì quan ] avouë Tcheunne de tsahe?
be.PRS.3SG leave-PST.PTCP when with Tcheunne of hunt
'For which x such as x is a time, he did not speak with Tcheunne about hunting because he left at x?'

b. L'à **pò** predjà avouë Tcheunne de tsahe [ perqué l'è partì quan ]?

We can thus conclude that Hypothesis 3 is the only viable one to explain the island (in)sensitivity of ValPa wh-phrases. Since the PG and binding data discussed in Chapter 7 strongly support an overt wh-movement analysis, Hypothesis 3 argued that the movement out of the island happens *in narrow syntax*. However, the placement of interveners does not allow us to determine whether movement happens in narrow syntax or at LF. In fact, the wh-phrase would gain scope over the intervener in the matrix clause, regardless of whether the movement happened in narrow syntax or at LF. LF movement of wh-phrases out of the island is undesirable for two reasons. First, as already discussed in Section 10.1, it would be problematic, from a theoretical and a learnability standpoint, to have two different movement strategies for wh-questions: an overt one for non-island constructions and a covert (at least in part, from the island boundary to the matrix CP) one for islands. Second, LF movement can also trigger island effects (Huang, 1982; Richards, 1997; Sulemana, 2019). The next section will delve deeper into this latter issue.

### 10.3.3 Timing of movement: narrow syntax or LF?

The evidence put forth so far shows that CIwh-phrases move out of the island and into the matrix HLP, where they take scope over the whole structure. In this section, I will resort to PG licensing to diagnose whether movement happens in narrow syntax or at LF.

I will start by investigating the movement path inside the island, by placing a PG-containing adjunct clause inside the island. As can be seen in (101), the CIwh-phrase in the relative clause *dequé* licenses the PG inside the adjunct clause *aprì ai rontù pg*. The baseline in (102) shows that in the absence of an A'-chain, the PG is not licensed and the presence of a clitic pronoun becomes obligatory. The same pattern is witnessed with *perqué* adjunct clauses, as in (103) (baseline in (104)).

(101) **Context**: The math teacher, Mr. J., recently started making kids fix the items they break around the school. If they refuse to do so, he puts them in detention. One afternoon you walk by the detention classroom and see a few students in there, so you approach Mr. J. and ask:

Ci coup t' à pun-ì le rago [
DEM.M.SG hit CL.NOM.2 have.PRS.2SG punish-PST.PTCP DET.DEF.PL kid.PL
que l'$_j$ an pò sistem-ò <u>dequé</u> [ aprì PRO$_j$ ai
COMP CL.NOM.3PL have.PRS.3PL NEG fix-PST.PTCP what after have.INF
ront-ù *pg*] ] ?
break-PST.PTCP

'What x is such that, this time you punished the kids who did not fix x after breaking x?'

(102) Ci coup t' à pun-ì le rago [
DEM.M.SG hit CL.NOM.2 have.PRS.2SG punish-PST.PTCP DET.DEF.PL kid.PL
que l'$_j$ an pò sistem-ò la porta [ aprì
COMP CL.NOM.3PL have.PRS.3PL NEG fix-PST.PTCP DET.DEF.F.SG door after
PRO$_j$ ai ront-ù-*(la) ] ].
have.INF break-PST.PTCP-CL.ACC.F.SG
'This time you punished the kids who did not fix the door after breaking it.'

(103) **Context**: same as (101)

Ci coup t' à pun-ì le rago [
DEM.M.SG hit CL.NOM.2 have.PRS.2SG punish-PST.PTCP DET.DEF.PL kid.PL
perqué l'$_j$ an pò sistem-ò dequé [ aprì PRO$_j$ ai
because CL.NOM.3PL have.PRS.3PL NEG fix-PST.PTCP what after have.INF
ront-ù *pg*] ] ?
break-PST.PTCP

'What x is such that, this time you punished the kids because they did not fix x after breaking x?'

(104) Ci coup t' à pun-ì le rago [
DEM.M.SG hit CL.NOM.2 have.PRS.2SG punish-PST.PTCP DET.DEF.PL kid.PL
perqué l'$_j$ an pò sistem-ò la porta [ aprì
because CL.NOM.3PL have.PRS.3PL NEG fix-PST.PTCP DET.DEF.F.SG door after
PRO$_j$ ai ront-ù-*(la) ] ] ?
have.INF break-PST.PTCP-CL.ACC.F.SG
'This time you punished the kids because they did not fix the door after breaking it.'

If we assume, following Hewett (2023b,a) that the types of adjunct clauses discussed here adjoin to vP, then their position would be lower than that targeted by CIwh-phrases. Therefore, overt movement of the wh-phrase from the base position to the LLP, as exemplified in (105), is enough to license the PG in the adjunct clause.

(105) $[_{\text{HLPmatrix}}\ [_{\text{TP}}\ [_{\text{whP}}\ [_{\text{vP}}\ [_{\text{HLPisland}}\ [_{\text{TP}}\ [_{\text{whP}}$ wh-phrase $[_{\text{HLPadj}}$ .... *pg* ] $[_{\text{vP}}$ ~~wh-phrase~~ ]]]]]]]]

However, we know from the discussion in Section 10.3.2.1 and the examples just discussed, that in (105) the wh-phrase must move further up than the island LLP, as otherwise it would remain in the scope of the potential interveners, such as the negation *pò*. As stated above, having a mixed (overt and then covert) movement chain is undesirable, therefore it is theoretically preferred for the wh-phrase to undergo further movement past the island LLP in overt (narrow) syntax. Yet, simply arguing that something is theoretically desirable is not sufficient; it is essential to empirically show it. In order to test this, we need to have a PG-containing adjunct clause which is structurally higher than the island LLP.

In the following examples, the PG-containing adjunct clause modifies the main predicate and hence adjoins to the matrix vP. Therefore, in order for the CIwh-phrase to license the PG, it must transit through the matrix LLP (and ultimately land in the matrix HLP, where it can take scope over the entire structure and hence potential interveners). As we can see, the PG in the adjunct clause adjoined to the matrix vP is licensed, both in (106) and in (108),[8] which means that the CIwh-phrase moves out of the island in *narrow syntax*, not at LF. The baselines in (107) and (109) show once again that, in the absence of an A'-chain, the PG is not licensed.

(106) **Context**: The math teacher, Mr. J., puts in detention students who break things around the school, which he then fixes later that same day. One afternoon you walk by the detention classroom and see a few students in there and then hear hammering noises

[8] These examples are quite complex. Therefore, I decided to not include the negation, which was present in (101) and (103). However, the negation itself is not relevant, as I have already shown in Section 10.3.2.2 that the presence of negation in the matrix clause does not cause IEs.

coming from upstairs, so you find Mr. J. and ask:

Ci coup t'$_j$ à pun-ì le rago [
DEM.M.SG hit CL.NOM.2 have.PRS.2SG punish-PST.PTCP DET.DEF.PL kid.PL
que l'$_k$ an ront-ù dequé ] [ doanque PRO$_j$
COMP CL.NOM.3PL have.PRS.3PL break-PST.PTCP what before
arrendj-éi *pg*] ?
fix-INF

'What x is such that this time you punished the kids who broke x, before you fixed x?'

(107) Ci coup t'$_j$ à pun-ì le rago [
DEM.M.SG hit CL.NOM.2 have.PRS.2SG punish-PST.PTCP DET.DEF.PL kid.PL
que l'$_k$ an ront-ù la porta ] [ doanque
COMP CL.NOM.3PL have.PRS.3PL break-PST.PTCP DET.DEF.F.SG door before
PRO$_j$ arrendj-éi-*(la) ].
fix-INF-CL.ACC.F.SG

'This time you punished the kids who broke the door, before fixing it.'

(108) **Context**: same as (106)

Ci coup t'$_j$ à pun-ì le rago [
DEM.M.SG hit CL.NOM.2 have.PRS.2SG punish-PST.PTCP DET.DEF.PL kid.PL
perqué l'$_k$ an ront-ù dequé ] [ doanque PRO$_j$
because CL.NOM.3PL have.PRS.3PL break-PST.PTCP what before
arrendj-éi *pg*]?
fix-INF

'What x is such that this time you punished the kids because they broke x, before fixing x?'

(109) Ci coup t'$_j$ à pun-ì le rago [
DEM.M.SG hit CL.NOM.2 have.PRS.2SG punish-PST.PTCP DET.DEF.PL kid.PL
perqué l'$_k$ an ront-ù la porta ] [ doanque
because CL.NOM.3PL have.PRS.3PL break-PST.PTCP DET.DEF.F.SG door before
PRO$_j$ arrendj-éi-*(la) ] ?
fix-INF-CL.ACC.F.SG

'This time you punished the kids because they broke the door, before fixing it.'

(110) $[_{\text{HLPmatrix}}\ [_{\text{TP}}\ [_{\text{whP}}$ wh-phrase $[_{\text{HLPadj}}$ .... *pg* $]$$[_{\text{vP}}\ [_{\text{HLPisland}}\ [_{\text{TP}}\ [_{\text{whP}}$ ~~wh-phrase~~ $[_{\text{vP}}$ ~~wh-phrase~~ $]]]]]]]]$

In this section, I have presented and discussed data showing that CIwh-phrases inside islands license PGs in adjunct clauses contained within the island as well as adjunct clauses adjoined to matrix vP. This confirms that wh-phrases move out of islands in narrow syntax and not at LF, which converges with the overt-covert movement analysis sketched in Chapters 7 and 8.

#### 10.3.3.1 Interim summary

To diagnose the movement path of wh-phrases inside islands in ValPa, I had originally considered four hypotheses, repeated below in (111).

(111)

a. **Hypothesis 1**: the CIwh-phrase moves to the edge of the island vP and remains 'frozen' there. Scope is calculated via Focus Alternatives

$[_{\text{HLPmatrix}}$ Q $[_{\text{TP}}$ ... $[_{\text{vP}}$ ... $[_{\text{HLPisland}}\ [_{\text{TP}}\ [_{\text{whP}}$ wh $[_{\text{vP}}\ [_{\text{VP}}$ ~~wh~~ $]]]]]]]]$

b. **Hypothesis 2**: the CIwh-phrase moves to the island's CP. Scope is calculated via Focus Alternatives

$[_{\text{HLPmatrix}}$ Q $[_{\text{TP}}$ ... $[_{\text{vP}}$ ... $[_{\text{HLPisland}}$ ~~wh~~ $[_{\text{TP}}\ [_{\text{whP}}$ wh $[_{\text{vP}}\ [_{\text{VP}}$ ~~wh~~ $]]]]]]]]$

c. **Hypothesis 3**: the CIwh-phrase overtly moves to the matrix CP, with deletion of higher copies in the chain

$[_{\text{HLPmatrix}}$ ~~wh~~ $[_{\text{TP}}$ ... $[_{\text{whP}}$ ~~wh~~ $[_{\text{vP}}\ [_{\text{HLPisland}}$ ~~wh~~ $[_{\text{TP}}\ [_{\text{whP}}$ wh $[_{\text{vP}}\ [_{\text{VP}}$ ~~wh~~ $]]]]]]]]]$

d. **Hypothesis 4**: the CIwh-phrase moves to the edge of the matrix vP and pied-pipes the island

$[_{\text{HLPmatrix}}$ Q $[_{\text{TP}}$ … $[_{\text{whP}}$ $[_{\text{HLPisland}}$ … wh ] $[_{\text{VP}}$ … $\cancel{[_{\text{HLPisland}} \dots \text{wh}\ ]}$ ]]]

In this section, I used the placement of interveners, inside and above the island boundary, to pinpoint the length of the movement chain. ValPa wh-phrases are not subject to IEs when the intervener is placed inside the island, nor when it is placed above the island, in the matrix clause (see Table 10.2).

Table 10.2: IEs in islands in ValPa

| | Intervener inside island | Intervener above island |
|---|---|---|
| Relative clause | ok | ok |
| CNP | ok | ok |
| *Perqué* adjunct clause | ok | ok |
| Temporal adjunct clause | ok | ok |
| Interrogative *se* clauses | ok | ok |

The lack of IEs is evidence that ValPa wh-phrases move out of the island and into the matrix HLP, where they can take scope over the intervener in the matrix clause, as sketched in (112). Moreover, by resorting once again to PG licensing, I have shown that CIwh-phrases move out of the island and into the matrix HLP in narrow syntax. This means that, of the hypotheses considered here, the correct one is Hypothesis 3.

(112) $[_{\text{HLPmatrix}}$ ~~wh-phrase~~ $[_{\text{TP}}$ $[_{\text{LLPmatrix}}$ ~~wh-phrase~~ $[_{\text{vP}}$ $[_{\text{HLPisland}}$ $[_{\text{TP}}$ $[_{\text{LLPisland}}$ **wh-phrase** $[_{\text{vP}}$ ~~wh-phrase~~ ]]]]]]]

### 10.3.4 The way out of the island

Island constructions have been claimed by and large to lack the escape hatch to allow proper successive-cyclic movement out of their HLP (Kanno, 2008; Haegeman, 2012; Bošković, 2016). In this chapter, I have adopted this view and sketched my derivations accordingly, as in (116). Now that I have established that CIwh-phrases move to the matrix HLP both in island and non-island constructions, we can resort to binding configurations to establish whether, from the island LLP, the wh-phrase stops at the island edge or whether it skips it altogether and moves directly to the matrix LLP, as in (116). In order to do so, I will construct examples with a wh-phrase containing an anaphor, as I did in Chapter 7.2, and place the possible binder in different positions in the matrix clause.

In order to establish whether the wh-phrase stops in the matrix LLP, I will place the potential binder in a position where it c-commands elements in the LLP, e.g., subject position in Spec,TP. This is the case in (113), where *Gianni* is the subject of the matrix clause. As we can see in (113-a), the anaphor contained in the wh-phrase is properly licensed, which means that it is bound by a suitable local antecedent. Within the island, there are no suitable binders, as *Maria* is feminine and *sè memo* is masculine. Gianni is the only possible binder in (113-a) and it can bind *sè memo* as the wh-phrase transits through the matrix LLP, as in (114). The baseline without A'-movement, which is infelicitous, is reported in (113-b).

(113) a. Gianni$_k$ pleur-e [ perqué Maria$_j$ l' à
Gianni cry-PRS.3SG because Maria CL.NOM.3SG have.PRS.3SG
tapp-ò ya **quin-ta fotografia de sè$_k$ memo** ]?
throw-PST.PTCP away which-F.SG picture of himself
'Gianni cries because Maria threw away which pictures of himself?'

b. *Gianni$_k$ pleur-e [ perqué Maria$_j$ l' à
Gianni cry-PRS.3SG because Maria CL.NOM.3SG have.PRS.3SG
tapp-ò ya an fotografia de sè$_k$ memo ].
throw-PST.PTCP away DET.DEF.F.SG picture of himself
'Gianni cries because Maria threw away a picture of himself.'

(114) [$_{\text{HLPmatrix}}$ ~~wh~~ [$_{\text{TP}}$ Gianni [$_{\text{LLPmatrix}}$ ~~wh~~ [$_{\text{vP}}$ [$_{\text{HLPisland}}$ [$_{\text{TP}}$ [$_{\text{LLPisland}}$ **wh** [$_{\text{vP}}$ ~~wh~~ ]]]]]]]]

Now, let us look at another example, where the potential binder *Gianni* is structurally lower than the matrix LLP, e.g., because it is inside VP, as in (115). In this case, we see that the anaphor is not properly bound. This is evidence that the wh-phrase does not transit through the island HLP. Rather, from the island LLP, it moves directly to the matrix LLP, as in (116).

(115) a. *Maria$_j$ predj-e avouë Gianni$_k$ [ perqué l'$_j$ à
Maria talk-PRS.3SG with Gianni because CL.NOM.3SG have.PRS.3SG
tapp-ò ya **quin-ta fotografia de sè$_k$ memo** ]?
throw-PST.PTCP away which-F.SG picture of himself
'Maria talks to Gianni because she threw away which pictures of himself?'

(116) *[$_{\text{HLPmatrix}}$ ~~wh~~ [$_{\text{TP}}$ [$_{\text{LLPmatrix}}$ ~~wh~~ [$_{\text{vP}}$ Gianni [$_{\text{HLPisland}}$ [$_{\text{TP}}$ [$_{\text{LLPisland}}$ **wh** [$_{\text{vP}}$ ~~wh~~ ]]]]]]]]

The evidence put forth in this section is particularly relevant in showing that wh-phrases do not stop at the island's edge, thus confirming previous accounts of islands in fact missing an escape hatch for extraction (Chomsky 1973, Fox and Pesetsky 2005a; 2005b, Merchant 2008, a.o.). The following section will address *how* the island effect is voided.

## 10.4 Salvation by (copy) deletion

The conclusion drawn at the end of the previous section, that wh-phrases move out of the island and into the matrix HLP (in narrow syntax) to take wide scope over the whole clause, appears problematic for mainstream theories of islands, according to which islands violations occur anytime an element is overtly extracted out of them (Ross, 1967; Chomsky, 1973, 1986; Merchant, 2008). In this section, I will argue that what we witness in ValPa islands is a lesser-known case of salvation by deletion, in some ways similar to what we witness in sluicing constructions.

The strategy of ameliorating an island violation by deleting a piece of the structure, also known as 'salvation by deletion', is a widely discussed topic in the literature on ellipsis, more specifically sluicing, which is the deletion of the sentential complement, generically considered a TP,[9] of the projection in the HLP that hosts the wh-phrase (Ross, 1969; Lobeck, 1995; Merchant, 2001, 2008; Ranero, 2021). As originally pointed out by Ross (1969), sluicing has important effects on island violations, as deletion of a TP[10] that contains an island can actually void the island effect for that structure (Merchant, 2008; Saab, 2010; Van Craenenbroeck and Lipták, 2013; Mendes and Kandybowicz, 2023). For instance, in example (117), the wh-phrase *which (Romance language)* is extracted out of the relative clause *someone who speaks _*, which in English is a–strong–island for extraction, signalled by red brackets (117-c). Nevertheless, deletion of the

[9]Normally in the literature, TP is argued to be the deleted projection. However, some researchers have shown that the projection being elided might be structurally higher. For instance, Baltin (2010) and Mendes and Kandybowicz (2023) adopt Rizzi's (1997) split CP and make an argument that the position being elided is in fact FinP, the lowest functional projection of the HLP. This approach has possible benefits, among which the fact that FinP is situated *just* below QembP, the position targeted by wh-phrases (allegedly only in embedded clauses, but see Chapter 6 for evidence that it is always present). In the literature, it is often proposed that ellipsis is triggered by an ellipsis feature, [E] on Qemb, which instructs "the PF system to skip its complement for purposes of parsing and production" (Merchant, 2001, p.60) (Merchant, 2001; Citko and Gračanin-Yuksek, 2020; Ranero, 2021). See Merchant (2001) for an overview of the details.

[10]Note that, crucially, the amelioration is only present in cases of TP ellipsis, but not in cases of VP ellipsis (Merchant, 2008).

structure which contains the island in (117-b) also ‘deletes’ the island violation. The same pattern is witnessed with adjunct clauses (118).[11]

(117) a. They want to hire someone who speaks a Romance language, but I don’t know **which (Romance language)**.

b. They want to hire someone who speaks a Romance language, but I don’t know **which (Romance language)**$_k$ ~~they want to hire [ someone who speaks $\_{k}$ ]~~.

c. ***Which (Romance language)**$_k$ do they want to hire [ someone who speaks $\_{k}$ ] ?

(118) a. He got mad because Linda spoke with one of the students but I don’t know **which one**.

b. He got mad because Linda spoke with one of the students but I don’t know **which one**$_k$ ~~he got mad [ because Linda spoke with $\_{k}$ ]~~.

c. ***Which one**$_k$ did he get mad [ because Linda spoke with $\_{k}$ ] ?

Merchant (2008) proposes a neat explanation of how the amelioration occurs. Inspired by the notion of proper government introduced by Lasnik and Saito (1984), he argues that all copies (in the original, Merchant used *traces*) in a wh-chain must be properly licensed, either by a local antecedent[12] or by being in a spec-head relation with a licensing head, namely an interrogative head with a [WH] (or [FOC]) feature, like C.[13] The copies that are not properly licensed are assigned a * feature and if * features reach PF, then the derivation crashes. Let me illustrate this

[11]Merchant (1999, 2001, 2008) discusses various types of islands. I refer the reader to Merchant (2008) for an overview of the full pattern in English.

[12]At the time, locality was defined in terms of subjacency, therefore a local antecedent was an antecedent not farther than one binding node away (Lasnik and Saito, 1984).

[13]Merchant (2008) also mentions that another potential way to license a copy is to pronounce it. However, he does not elaborate on how pronunciation of a copy would ensure proper government.

with an example. In (119), the wh-phrase *which one* is moved across an island boundary (here a *because* adjunct clause). This movement is illicit and the sentence infelicitous, because some copies (marked as _) are not properly licensed.

(119) $[_{\text{HLP}}$ **Which one**$_{j}$ [WH] did $[_{\text{TP}}$ he $[_{\text{LLP}}$ $*\_{j}$ get mad [ because Linda $[_{\text{LLP}}$ $*\_{j}$ spoke with $\_{j}$ ] ]]]]?

In example (119), these copies are assigned a *. The copy that gives rise to the problem is the one in the adjunct LLP, because it is not properly licensed: it is not in a spec-head relation with an interrogative head, nor licensed by a local antecedent. Since islands lack an escape hatch (Kanno, 2008; Haegeman, 2012; Bošković, 2016), the wh-phrase cannot transit through the island HLP, and must move in one fell swoop from the island LLP to the matrix LLP. The next copy up in the matrix LLP is, thus, too far and cannot serve as a licenser. As a result, the copy in the island LLP is assigned a star, as are all subsequent copies in the derivation, except the head of the chain (in virtue of being in a spec-head relation with a licensing head). The *-copies in (119) will cause the derivation to crash at PF.

(120) He got mad because Linda spoke with one of the students but I don't know $[_{\text{HLP}}$ **which one**$_{j}$ [WH] ~~$[_{\text{TP}}$ he $[_{\text{LLP}}$ $*\_{j}$ got mad [ because Linda $[_{\text{LLP}}$ $*\_{j}$ spoke with _ ] ]]]]~~?

However, this violation can sometimes be ameliorated through deletion of part of the structure. In sluicing cases, like (118-b), ellipsis of the TP also automatically causes the deletion of all *-marked copies, as outlined in (120). As Merchant (2008) argues, this prevents the *-copies from reaching PF and, therefore, the derivation from crashing. Amelioration by deletion in sluicing is also witnessed in ValPa, as exemplified by example (121).[14]

(121) S' è emmaleuich-à [ perqué Clara l'
CL.REFL.3 be.PRS.3SG get.mad-PST.PTCP because Clara CL.NOM.3SG
à predj-à avouë eun rago de La Sala ] ma dze
have.PRS.3SG speak-PST.PTCP with a boy of La Salle but CL.NOM.1SG
si pò avouë **quin** **(rago)**.
know.PRS.1SG NEG with which boy
'He got mad because Clara spoke with a boy from La Salle but I don't know which one.'

Besides ellipsis, there is another much less explored type of deletion that can ameliorate island violations. In fact, Bošković (2002) argues that deletion of higher copies in a wh-chain can also void island effects. As discussed in Chapter 5.2, in multiple wh-fronting languages like Serbo-Croatian, Bulgarian, and Romanian, wh-fronting is obligatory: all wh-phrases are fronted in narrow syntax. Yet, in order to avoid sequences of homophonous wh-phrases, it is possible to pronounce a lower copy in the chain, as shown in (122) for Romanian. Romanian is actually an excellent example, as it requires fronting of all wh-phrases, even in echo questions (123). Bošković (2002) argues that the ban on sequences of homophonous wh-phrases is not the only constraint that will prompt PF to choose a lower copy of the chain. As shown in the Romanian example in (124), it is licit to spell out the lower copy in a wh-chain in order to avoid an island violation, which would arise if we pronounced the head of the chain (Bošković 2002, Franks 2017, Schoenmakers and Stoica 2024).

(122) a. **Ce** precede **ce**? **Romanian**
what precedes what

[14] See the end of this chapter for a discussion on the potentially non-existent connection between repair by ellipsis and the ValPa data above.

‘What precedes what?’

b. *__Ce ce__ precede? (Bošković, 2002, p. 365)

(123) a. *Ion a adus CE? **Romanian**
Ion has brought what
‘Ion has bought WHAT??’ (Bošković, 2002, p. 370)

b. CE Ion a adus? (Elena Soare, pers. comm.)

(124) a. Ion a ausit [ zvonul că Petru a cumpărat **ce** ] ? **Romanian**
Ion has heard the-rumor tha Petru has bought what
‘Ion has heard the rumor that Petru has bought what?’

b. *__Ce__$_k$ Ion a ausit [ zvonul că Petru a cumpărat $_{-k}$ ] ? (Bošković, 2002, p. 374)

What is causing the island effect here is the pronunciation of a higher copy of the chain. I assume, even though Bošković (2002) does not state it openly, that in (124) there is a wh-chain which starts in the embedded VP and whose head is in SpecFocP (Romanian displays wh-as-focus movement, cf. Chapter 5.2) in the matrix HLP. Recall that Lasnik and Saito (1984) and Merchant (2008) argue that the copy at the edge of the embedded vP and all subsequent copies are not properly licensed and therefore starred, which causes the derivation to crash at PF. One could argue that intermediate copies in (124) are properly licensed, unlike what happens in the English examples discussed above (Lasnik and Saito, 1984; Merchant, 2008). However, this is unlikely, as the concept of proper licensing is not language-specific, nor are the inner structure and the nature of islands, which are argued to follow from innate domain-specific constraints (Chomsky, 1986; Lasnik and Saito, 1992; Manzini, 2001). Moreover, wh-fronting in these constructions gives rise to an island violation in both languages (117)-(124). It is, therefore, more likely that pronouncing a lower copy in the chain allows for the salvation of an otherwise illicit structure, by somehow deleting the *-marked copies in the chain above the island boundary, in a manner similar to what we witness in sluicing constructions, whereby by eliding an entire chunk of the structure the *-marked copies are also deleted.

As I have shown with evidence from PG licensing, the island insensitivity of ValPa CIwh-phrases is a consequence of movement in narrow syntax with deletion of higher copies in the chain. It is this deletion that voids the island effect:

(125) $[_{\text{HLPmatrix}}\ \cancel{\text{wh}}\ [_{\text{TP}} \ldots [_{\text{whP}}\ \cancel{\text{wh}}\ [_{\text{vP}} \ldots [_{\text{HLPisland}}\ [_{\text{TP}}\ [_{\text{whP}}\ \text{wh}\ [_{\text{vP}}\ [_{\text{VP}}\ \cancel{\text{wh}}\ ]]]]]]]]]$

The ValPa patterns, therefore, offer new empirical support for Bošković's (2002) claim that deletion of higher copies in the chain *can* void island effects in some languages, and the parallel between Romanian and ValPa supports the role of overt-covert movement in circumventing certain constraints. However, there is a key difference between Romanian (as well as Bulgarian and Serbo-Croatian) and ValPa. In the former, spelling out a lower copy is only available as a rescue mechanism, employed to avoid PF violations (either sequences of homophonous wh-phrases or island violations). In contrast, as discussed in Chapter 8, in ValPa even though the head of the chain remains the default copy to pronounce, a lower copy *can* be pronounced instead in certain pragmatic contexts. This means that ValPa has the option to choose which copy to pronounce in the wh-chain, regardless of the structural peculiarities of the derivation and possible post-syntactic constraints in effect. This mechanism is therefore always available, both in island structures and in 'regular' long-distance movement. Consequently, the island-amelioration effects observed in ValPa and discussed in this chapter follow from the independent property of the language to pronounce a lower copy in the chain. Bošković's (2002) analysis is, however, scarce in details on *how* the violation is voided. In the next section, I will use the ValPa data to dissect the mechanisms behind the severely underexplored amelioration by copy deletion and shed light on the nature of island violations.

### 10.4.1 One-fits-all salvation by deletion?

We have seen that sluicing and copy deletion can both ameliorate island constructions in ValPa and Romanian. The question that arises at this point is whether there is *one* generic deletion mechanism that ameliorates island violations and which operates both in sluicing and copy deletion, or whether there are two different mechanisms which attain the same goal, namely saving an otherwise illicit derivation. In order to answer this question, it is necessary to go back to the discussion on *how* exactly the island violation is voided, which itself depends on the theory of islands adopted.

#### 10.4.1.1 Approaches to island violations

There are primarily three approaches to island violations: (narrow) syntactic, post-syntactic, and processing. The processing approach, which I will not expand on here, argues that island violations occur due to the heavy processing load of these complex constructions. I refer the reader to Kluender (1997) and Hofmeister and Sag (2010) a.o. for an overview of the literature and the rationale behind this claim. The syntactic approach, which is the mainstream approach to island violations in the literature, claims that the violation arises as a result of constraints on movement and therefore occurring in narrow syntax, before Spell-out. In this approach, moving out of an island is illicit, period. However, post-syntactic operations, like ellipsis and copy deletion, can ameliorate the violation (Bošković, 2002; Merchant, 2008). Note that proponents of this account show that not all types of island violations are amenable to post-syntactic amelioration, see for instance the cases of gapping and stripping discussed by Mendes and Nevins (2023). Finally, the proponents of post-syntactic approaches to islands argue that the violation does not arise in narrow syntax, but rather post-syntactically, primarily at PF.[15] According to this line of inquiry, there are no constraints on movement *per sé* and nothing is being violated by extracting an element out of an island from a syntactic standpoint. Islands (or at least some types of islands) are a PF phenomenon and, therefore, sensitive to PF operations, including ellipsis (Merchant, 2001; Fox and Pesetsky, 2005a,b; Mendes and Kandybowicz, 2023) and copy deletion. Now, in the literature, researchers have proposed two main ways in which the PF-violation can occur. In the remainder of this section, I shall discuss how these two accounts, the syntactic account + PF-amelioration (Merchant, 2008) and a purely PF account (Fox and Pesetsky, 2005a,b) could explain the ValPa copy-deletion pattern.

The first possibility (violation in syntax + PF-amelioration), already discussed earlier in this section, was proposed by Merchant (2001, 2008), who claims that the derivation crashes because *some* copies (traces) are not properly governed. If we consider the example in (126) and the sketch in (127), we notice that the problematic one is (potentially) copy 2. The copy in base position is antecedent-licensed by the next copy, which is local enough. Copy 3 is also properly licensed, by virtue of being in a spec-head relation with an interrogative operator head, i.e. whP. If you recall, in Chapter 6, I have shown that wh-phrases target a dedicated position that carries a

[15] We have seen that covert/LF movement can also give rise to island violations (Huang, 1982; Sulemana, 2019) and Merchant (1999, 2008) argues, based on English data, that island violations can also arise due to incongruities at LF. See also Abrusán (2011, 2014) for a purely semantic account of (weak) islands.

wh-feature, which should thus license the copy in the LLP.

(126) a. T' à sent-ù [ la conta que l' an medj-à **dequé** ]?
CL.NOM.2SG have.PRS.2SG hear-PST.PTCP the story COMP CL.NOM.3PL have.PRS.3PL eat-PST.PTCP what
'For which x you heard the story that they ate x?'

b. ***Dequé**$_k$ t'à sentù [ la conta que l'an medjà $\_\_{k}$ ]?

(127) $[_{HLPmatrix}\ \cancel{wh}_1\ [_{TP} \dots [_{whP}\ \cancel{wh}_2\ [_{vP} \dots [_{HLPisland}\ [_{TP}\ [_{whP}\ wh_3\ [_{vP}\ [_{VP}\ \cancel{wh}_4\ ]]]]]]]]]$

However, even if copy 3 were not in a spec-head relation with the operator head whP and were only surfacing in the phase escape hatch (as discussed in Chapter 8), the derivation could still be saved. Merchant (2008) mentions that copies can be saved from *-marking also simply by being pronounced. Copy 3 in (126-a) can get pronounced in ValPa, and it *does* get pronounced in (126-a). This should rescue this copy from getting *-marked and hence the derivation form crashing at PF.

Now on to copy 2, which is not in a spec-head relation with an interrogative head, but can be licensed by a local antecedent, namely copy 1. The latter is then properly licensed by being in a spec-head relation with the whP head in the HLP. Therefore, following Merchant's (2008) story, example (126-a) is felicitous in virtue of all the copies being properly licensed. There is no need here to even propose that deletion of higher copies of the chain voids the island effect, because technically there are no violations in (126-a).

Now, let's consider a parallel example to (126-a) but with a fronted wh-phrase, namely (126-b), which is infelicitous. As discussed above for (127), copy 3 is in a spec-head relation with an interrogative head, as argued in Chapter 6, provided that all copies should technically be correctly licensed. So what makes the derivation crash in (126-b)?

(128) $[_{\text{HLPmatrix}}\ \cancel{\text{wh}}_1\ [_{\text{TP}} \ldots [_{\text{whP}}\ \cancel{\text{wh}}_2\ [_{vP} \ldots [_{\text{HLPisland}}\ [_{\text{TP}}\ [_{\text{whP}}\ {*}\text{wh}_3\ [_{vP}\ [_{\text{VP}}\ \cancel{\text{wh}}_4\ ]]]]]]]]]$

One possible approach here is to argue that this is evidence that in fact copy 3 in the island LLP is not in a spec-head relation with an interrogative head, whP, but it is simply in the phase escape hatch position. In this case, it would not be properly licensed, because the next copy, copy 2, is too far. Copy 3 would thus get a star, which would cause the derivation to crash at PF, (128). This would explain the asymmetry between (126-a) and (126-b): in (126-a) the derivation is saved by the pronunciation of copy 3, whereby in (126-b) it crashes because copy 3 is not properly licensed by virtue of getting pronounced. However, in either scenario, the felicity of the derivation rests on multiple assumptions. As mentioned in Chapter 6 and then again in Chapter 8, it is not *vital* for the analysis put forth in this thesis that CIwh-phrases target an operator-driven position in the LLP (even though that is not ruled out) and it is indeed possible that they are simply surfacing in the phase escape hatch. In this case, the only thing that can save the derivation is pronunciation of the copy in the LLP. The possibility of saving a *-marked copy by pronouncing it is merely suggested by Merchant (2008), in a footnote nonetheless, and he does not explain how pronouncing *dequé* in (126-a) would remove the *. On the other hand, if copy 3 in (126-a) and (126-b) is in a spec-head relation with an interrogative head, whP, then Merchant's (2008) analysis becomes problematic, as we would not have a way to explain the bad status of (126-b). This issue did not arise in Merchant (2008), who did not consider the possibility of pronouncing a lower copy in the chain, since in English it is impossible.

Furthermore, if we add one level of embedding inside the island, as in (129), the situation becomes more complex.

(129) a. L' à predj-à avouë [ lo garçon
CL.NOM.3SG have.PRS.3SG speak-PST.PTCP with DET.DEF.M.SG boy
que t' à deut [ que Maria porta-v-e
COMP CL.DAT.2SG have.PRS.3SG say.PST.PTCP COMP Maria bring-PST-3SG
**dequé** ] ]?
what
'(S)he spoke with the boy who said that Maria has brought what?'

b. *L'à predjà avouë [ lo garçon que t'à deut **dequé** [ que Maria portave ] ]?

(130) $[_{\text{HLP}}\ \cancel{\text{wh}_1}\ [_{\text{LLP}}\ \cancel{\text{wh}_2}\ [_{\text{vP}}\ [_{\text{HLP}}\ [_{\text{LLP}}\ {*}\cancel{\text{wh}_3}\ [_{\text{vP}}\ [_{\text{HLP}}\ \cancel{\text{wh}_4}\ [_{\text{LLP}}\ \textbf{wh}_5\ [_{\text{vP}}\ \cancel{\text{wh}_6}\ ]]]]]]]$

Following the rationale in Merchant (2008), in (129), all copies should be properly licensed, except copy 3 in the island's LLP, as sketched in (130). Copies 4, 5, and 6 are all properly licensed by a local antecedent, as is copy 2. Copy 1 is licensed in virtue of being in a spec-head relation with an interrogative head. But copy 3 is not licensed and, hence, gets *-marked. Yet, unlike in (126) and the sketch in (127), here it is impossible to remove the * from copy 3. In fact, copy 3 is not in a spec-head relation with an interrogative head (a prerogative of the most local LLP position to the extraction site if anything, cf. Chapters 6 and 8) and cannot be pronounced (see (129-b)). Therefore, there is no way to get rid of the * associated with copy 3, which should cause the derivation to crash at PF. In other words, (129-a) should be infelicitous, contrary to facts. All in all, Merchant's (2008) account of island violations is unsuitable to explain the ValPa patterns observed here.

Recall the second approach to island violations, which claims that islands arise post-syntactically, at PF, due to violations of linearization requirements. Fox and Pesetsky (2005a), Fox and Pesetsky (2005b), Ko (2005, 2007, 2014), and Davis (2020, 2021) argue that successive-cyclicity is not a syntactic requirement, but rather a requirement of linearization and hence enforced post Spell-out. Before discussing the 'salvation' in island constructions in ValPa, a short digression on linearization and cyclicity is in order. As discussed in Chapter 2, while different models of grammar (Y-model, T-model, multiple spell-out) differ in the details of the architecture, they all agree that there is a point in the derivation, Spell-out, where part of the structure is sent to the interfaces: LF for interpretation and PF for linearization (Kayne, 1994). Starting with Uriagereka's (1999) pioneering work, linguists have begun to consider Spell-out not as one single event, but rather as something that happens as many times as possible (while maintaining economy). Crucially, Uriagereka (1999) adopts Kayne's (1994) Linear Corresponding Axiom (LCA) (131) and argues that multiple Spell-outs are necessary to obtain a legitimate syntactic object, to be then interpreted at PF. In order for a given structure to be interpreted at PF, however, it must be collapsed and linearized into an ordered object. Linearization of the syntactic structure does not happen all at once, but rather in smaller units, or cycles. Spell-out is, therefore, cyclic, in the sense that the syntax can linearize all (and crucially only) the information available in that cycle. Once that information has been linearized and sent to the interfaces, it cannot be accessed or altered.

(131) **Linear Correspondence Axiom (LCA)** (Adapted from Kayne 1994)

a. Base step: If $\alpha$ c-commands $\beta$, then $\alpha$ precedes $\beta$.

b. Induction step: If $\gamma$ precedes $\beta$ and $\gamma$ dominates $\alpha$, then $\alpha$ precedes $\beta$.

Linearization thus follows the relations established in syntactic structure, like the LCA in (131) describes. In this thesis, I will focus on the linearization of wh-chains, in particular in island constructions, and refer the reader to Kayne (1994) and Uriagereka (1999) a.o. for all the details.

One of the crucial aspects of the cyclic approach to linearization is that derivations are order-preserving, in that the order of elements established in a given phase is never deleted. It is passed on to the following cycles, or phases. The order of element is established at the completion of each phase, and that information is "stored" so that it can be available to the next phase. vP, CP, and DP are generally assumed to be phases (Chomsky, 2008; Gallego, 2010; Müller, 2011).[16,17] If the order in a given cycle/phase is $\alpha > \beta$, then the order in the following phase cannot be $\beta > \alpha$; it must be $\alpha > \beta$. This is exemplified in (132) for a case of noncyclic derivation. In (132-a), the order in PhaseP1 is $\beta > \alpha$. When PhaseP1 is spelled out, the order $\beta > \alpha$ is stored. Therefore, once $\alpha$ is moved over $\beta$ and $\gamma$ in (132-b), the resulting ordering information of both PhaseP1 and PhaseP2 is $\alpha > \gamma > \beta > \alpha$. The latter does not preserve the order established in PhaseP1, in (132-a), as $\alpha$ is required to both precede and follow $\beta$.

(132) **Noncyclic movement**

a. $[_{\text{PhaseP1}}\ \beta\ [_{\text{XP}}\ \alpha\ ]] \rightsquigarrow \beta > \alpha$

b. $[_{\text{PhaseP2}}\ \alpha\ \ \gamma\ [_{\text{PhaseP1}}\ \beta\ [_{\text{XP}}\ \__{\alpha}\ ]]] \rightsquigarrow \alpha > \gamma > \beta$

(133), on the other hand, exemplifies a case of cyclic movement. Since $\alpha$ moves to the edge of PhaseP1, the order once the phase is complete is $\alpha > \beta$, (133-a). Therefore, when in (133-b) $\alpha$

[16] As we have seen in Chapters 4 and 6, the edge of vP is more elaborate than previously thought. If one were to adopt the cartographic approach, then the highest position in the periphery serves as the escape hatch: SpecForceP for the HLP and allegedly SpecwhP for the LLP.

[17] As discussed earlier in this thesis, the status of vP as a phase is not resolved. Several linguists have argued in favor of this, especially van Urk and Richards (2015), others have shown that some instances of vPs, like unaccusative and passive ones, are in fact not phases (Chomsky, 2001; Bešlin, 2023, 2024).

moves to the edge of the phase, the order is preserved, as $\alpha$ is still preceding $\beta$. Precedence is a transitive relation, therefore $\alpha > \gamma > \beta$ implies $\alpha > \beta$.

(133) **Cyclic movement**

a. $[_{\text{PhaseP1}}\ \alpha\ \ \beta\ [_{\text{XP}}\ {}_{-\alpha}\ ]] \rightsquigarrow \alpha > \beta$

b. $[_{\text{PhaseP2}}\ \alpha\ \ \gamma\ [_{\text{PhaseP1}}\ {}_{-\alpha}\ \ \beta\ [_{\text{XP}}\ {}_{-\alpha}\ ]]] \rightsquigarrow \alpha > \gamma > \beta$

When it comes to wh-movement, for instance, the correct ordering can be preserved by moving wh-phrases successive-cyclically through each phase edge to ensure that a given order respects the order of the lower phase. In vP2 in the English example (134), once the wh-phrase moves to the phase edge, the order stored is *which book* > *read*. By further moving *which book* to CP2 and beyond, the order *which book* > *read* is therefore preserved. The same kind of order-preservation happens at every phase edge, until the wh-phrase reaches CP1.

(134) I wonder [$_{\text{CP1}}$ **which book**$_{\text{k}}$ he [$_{\text{vP1}}$ $_{-\text{k}}$ thinks [$_{\text{CP2}}$ $_{-\text{k}}$ Mary [$_{\text{vP2}}$ $_{-\text{k}}$ read $_{-\text{k}}$]]]].

Natural languages are rich with evidence of this, as we see with Holmberg's Generalization and quantifier movement in Scandinavian languages (Holmberg, 1986; Rögnvaldsson, 1987; Jónsson, 1996; Svenonius, 2000), constraints on scrambling in Korean (Ko, 2005, 2007, 2014), and extraction from perfect clauses in Nupe (Mendes and Kandybowicz, 2023).

Now, let us apply Fox and Pesetsky's (2005a; 2005b) approach to island violations to the ValPa salvation by copy deletion patterns witnessed in (126-a), repeated below as (135-a).

(135) a. T' à sent-ù [ la conta que l' 
CL.NOM.2SG have.PRS.2SG hear-PST.PTCP the story COMP CL.NOM.3PL
an medj-à **dequé** ]?
have.PRS.3PL eat-PST.PTCP what
'For which x such that you heard the story that they ate x?'

b. ***Dequé**$_k$ t'à sentù [ la conta que l'an medjà $_{-k}$ ]?

Unlike in (135-a), in (135-b) it is not the head of the chain but the copy in the island LLP that is pronounced. Since syntactic derivations are built bottom up and the mapping from syntax to the interfaces does not happen in one fell swoop, but rather in cycles (or phases), the decision on whether to pronounce the copy in the island LLP happens relatively early in the derivation. The actual time when a given phase is sent to the interfaces depends on the theory of spell-out domains that one adopts. Under the PIC$_1$ (136-a), given a phase HP and its complement YP (the domain, in **[]**), the domain YP is sent to Spell-out as soon as HP merges with its sister, (136-b). YP is therefore the Spell-out domain. In short, a given phase's domain is sent to spell out as soon as the phase is completed.

(136) **Phase Impenetrability Condition** (PIC) (Chomsky, 2000)

a. If $\psi$ is a phase with head **H**, then its complement (the phase domain) is not accessible for operations outside of $\psi$. Only the head **H** and its specifiers (namely the phase edge) are accessible for such operations.

b. $[_{ZP}$ Z $[_{HPphase}$ **H** $[_{YP}$ ... ]]]

There is another, softer version of the PIC, PIC$_2$, which I discuss briefly in Chapter 8. For the discussion here, it is irrelevant which version of the PIC we adopt. What is relevant is that the derivation is sent to the interfaces in cycles and that linearization must happen one cycle at a time. However, for ease of exposition, I will resort here to the traditional PIC, $PIC_1$. I will first go through the derivation for a simple matrix interrogative with wh-fronting, as in (137), to explain the mechanism before looking at an island example. In (137), both the wh-phrase *dequé* and the main verb *medjà* move out of vP. Therefore, they must get to the edge of the phase to escape, (138-a). Once the phase is completed, the established order is *dequé* > *medjà*.

(137) Dequé l' an medj-à?
what CL.3PL have.PRS.3PL eat-PST.PTCP
'What did they eat?'

(138) a. [$_{XP}$ X [$_{whP}$ dequé [$_{whP}$ medjà [$_{vP}$ medjà dequé ]]]

b. [$_{whP}$ dequé [$_{TP}$ [$_{XP}$ medjà [$_{whP}$ dequé [$_{whP}$ medjà [$_{vP}$ medjà dequé ]]]]]

As the derivation proceeds, *medjà* moves to the head of XP and *dequé* to whP in the HLP, (138-b). Hence, the final order, once the rest of the derivation is sent to the interfaces, is order-preserving and the derivation does not crash.

Now, let us look at the derivation for the infelicitous (135-b), where the head of the chain has been pronounced. Assuming the traditional PIC (for ease of exposition) and whP as a phase, the wh-phrase must move to the edge of the phase in order to then move out of the phase, and so does *medjà*, which moves to the head of whP. The order *dequé* > *medjà* is therefore established for this phase, (139-a). Once whP merges with the next head up, here X, its complement (vP) is sent to the interfaces.

(139) a. [$_{XP}$ X [$_{whP}$ dequé [$_{whP}$ medjà [ $_{vP}$ medjà dequé ]]]]

b. [$_{island}$ la conta que [$_{TP}$ l'an [$_{XP}$ X medjà [$_{whP}$ dequé [$_{whP}$ medjà [ $_{vP}$ medjà dequé ]]]]]

c. [$_{VP}$ sentù [$_{island}$ la conta que [$_{TP}$ l'an [$_{XP}$ X medjà [$_{whP}$ dequé [$_{whP}$ medjà [ $_{vP}$ medjà dequé ]]]]]]]

The derivation proceeds up until the island boundary, (139-c). *Medgà* moves to the head of XP, while *dequé* remains in whP in the LLP, due to the lack of an escape hatch at the island boundary. By the time the island's highest projection merges with the head of the matrix VP, the order *l'an* > *medjà* > *dequé* is established and we face a contradiction with the previous ordering *dequé* > *medjà*. The linearization requirements are not respected and the derivation crashes.

So why is (135-a), with a CIwh-phrase, good? What is different in the derivation of (135-a) compared to (135-b) that does not make the derivation crash? In the previous chapters, I have brought forth substantial evidence that the only difference between (135-a) and (135-b) is the copy in the chain being pronounced. Therefore, the decision to pronounce a lower copy must be making the difference. Linearization requirements (and mechanisms) are in place to ensure a proper mapping between syntax and phonology, that is between a hierarchical structure and a linear one (Kayne, 1994; Fox and Pesetsky, 2005a,b; Nunes, 2004). If we consider a wh-chain, linearization also consists of realizing that chain, namely *choosing* which copy (or copies in some languages) to pronounce out of the available ones. Once a copy is chosen and the part of the structure containing that copy is sent to the interfaces, the chain can be considered realized. Therefore, it is no longer necessary for that specific chain to be subject to linearization requirements.

Before looking at the island derivation, let us examine a simple case of long-distance movement. In (137), the decision to linearize the chain is made at the very end of the derivation, as the copy that gets pronounced is the head of the chain (recall that in ValPa you cannot pronounce two copies in the chain). However, in an example with a CIwh-phrase, (140), the decision is taken (a little bit) earlier. The wh-phrase moves to the LLP and *medjà* moves to the head of whP; the established order is therefore *dequé* > *medjà*. Since the grammar allows the copy in the embedded LLP to be pronounced, as soon as the next Spell-out domain (TP in (141-b)) is sent to the interfaces and the decision to pronounce that copy is made, that chain is considered realized. As Nunes (2004) argues, the phonological features of the copies that are not phonologically realized are deleted.

(140)

| | | | | | | |
|---|---|---|---|---|---|---|
| L' | an | deut | [ que | l' | an | medj-à |
| CL.3PL | have.PRS.3PL | say.PST.PTCP | COMP | CL.3PL | have.PRS.3PL | eat-PST.PTCP |
| **dequé** ]? | | | | | | |
| what | | | | | | |

'What did they say they ate?'

(141) a. $[_{XP}$ X $[_{whP}$ dequé $[_{whP}$ medjà $[_{vP}$ medjà dequé $]]]]$

b. $[_{ForceP}$ dequé $[_{ForceP}$ que $[_{TP}$ l'an $[_{XP}$ medjà $[_{whP}$ dequé $[_{whP}$ medjà $[_{vP}$ medjà dequé $]]]]]]]$

Therefore, the phonological features of the copy in the base position are deleted. Moreover, as the derivation proceeds, higher copies (in the embedded HLP, and matrix LLP and HLP) are also deleted, which means that the ordering of *dequé* relative to other elements in this and subsequent phases becomes irrelevant. In other words, copies of this chain do not partake in ordering activities for linearization purposes anymore. Of course, (140) is not a problematic derivation, as wh-movement would have proceeded in cycles as required anyway and hence the new order would have been established for each phase. But this is not the case for (135-a). Let us walk through the derivation in (142) below.

In (142), the wh-phrase must move to the edge of the phase in order to then move out of the phase. Since verbs also move out of the vP, *medjà* moves to the head of whP to escape. The order *dequé* > *medjà* is therefore established for this phase, (142-a).

(142) a. [$_{\text{XP}}$ X [$_{\text{whP}}$ dequé [$_{\text{whP}}$ medjà [ $_{\text{vP}}$ medjà dequé ]]]]

b. [$_{\text{island}}$ la conta que [$_{\text{TP}}$ l'an [$_{\text{XP}}$ X medjà [$_{\text{whP}}$ dequé [$_{\text{whP}}$ medjà [ $_{\text{vP}}$ medjà dequé ]]]]]

c. [$_{\text{VP}}$ sentù [$_{\text{island}}$ la conta que [$_{\text{TP}}$ l'an [$_{\text{XP}}$ X medjà [$_{\text{whP}}$ dequé [$_{\text{whP}}$ medjà [ $_{\text{vP}}$ medjà dequé ]]]]]]

The derivation proceeds up until the island boundary, (142-c). *Medgà* moves to the head of XP, while *dequé* remains in whP, due to the lack of an escape hatch at the island boundary. As the island's highest projection merges with the head of the matrix VP, its Spell-out domain is sent to the interfaces. The copy in the LLP is pronounced, the chain realized, and the phonological features of the other wh-copies deleted, which become 'invisible' for ordering activities. No contradiction arises with the previous established order *dequé* > *medjà*: the linearization requirements are respected, and the derivation does not crash. Finally, contrary to Merchant's (2008) account, this approach correctly derives cases with one level of embedding inside the island, as in (129), repeated below in (143).

(143)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| L' | à | predj-à | avouë [ | lo | garçon | que | |
| CL.NOM.3SG | have.PRS.3SG | speak-PST.PTCP | with | DET.DEF.M.SG | boy | COMP | |
| t' | à | deut | [ que | Maria | porta-v-e | **dequé** ] ]? | |
| CL.DAT.2SG | have.PRS.3SG | say.PST.PTCP | COMP | Maria | bring-PST-3SG | what | |

'(S)he spoke with the boy who said that Maria has brought what?'

To sum up, I have argued that in ValPa, once the copy in the LLP is pronounced, the chain is realized. As a consequence, the phonological features of the other wh-copies are deleted, which are invisible to ordering mechanisms and the linearization algorithm does not take them into consideration. This means that the fact that the wh-phrase does not move successive-cyclically through the island edge is not an issue and the island violation does not occur. The present argument can also be extended to Romanian, where the same pattern is observed. Importantly, this analysis makes the following prediction: any language that, like ValPa and Romanian, *independently* allows pronunciation of a lower copy of a (wh-)chain, should display the same salvation by (copy) deletion patterns observed here. This analysis also explains why we don't witness salvation by (copy) deletion in languages like English: it is because English (unlike ValPa and Romanian) does not allow pronunciation of a lower copy in the chain.

## 10.5 What about weak islands?

There is one category of islands that I have not yet discussed in this chapter: weak factive islands. As Rooryck (1992), Oshima (2007), Abrusán (2011, 2014), and Schwarz and Simonenko (2018) a.o. point out, some islands arise due to interpretive issues. This is the case for the complement of factive verbs, such as *know*, which presuppose the truth of their complement, as in (144). On the other hand, non-factive verbs, like *think,* do not presuppose the truth of their complement, (145).

(144) She knows Clara has goats.

*presupposes*

Clara has goats.

(145) She thinks Clara has goats.

*does not presuppose*

Clara has goats.

Factive verbs sometimes prevent the extraction of a wh-phrase from its complement, especially with adjunct wh-phrases like *how* and *why*.[18] This is illustrated in (146), where extraction of *how* and *why* from the embedded clause is not possible. On the contrary, extraction is fine from the complement of non-factive verbs like *think*, as can be seen in (147).

(146) a. *$^?$How$_j$ does Clara know [that Nelly went to Vers le Bois _$_j$]?

b. *Why$_j$ does Clara know [that _$_j$ Susy stole the goat]?

(147) a. How$_j$ does Clara think [that Nelly went to Vers le Bois _$_j$]?

b. Why$_j$ does Clara think [that _$_j$ Susy stole the goat]?

Complement wh-phrases, like *to whom* in (148-a), do not give rise to island effects. In (148-a), the factive verb *regret* allows extraction of the wh-phrase *to whom* from its complement, like the non-factive *suspect* in (148-b). Given the asymmetry in the extraction of argument and adjunct wh-phrases, factive islands are labelled as weak, following the terminology in Huang (1982) and Lasnik and Saito (1984) a.o.[19]

(148) a. To whom$_j$ do you regret [having shown this letter _$_j$]?

[18] In the following examples, the base-position of the adjunct *why* is shown structurally higher than that of the adjunct *how* because *why*-like interrogative phrases externally merge in a position in the HLP of the clause, which is nonetheless lower than that of finite complementizers like *that*. See Chapter 6.2 and Rizzi (2001, 2004) and Rizzi and Bocci (2017) for further discussion of the topic.

[19] For more data and detailed analyses of weak factive islands, see Cattell (1978) and Djärv and Romero (2021), as well as the recent work by Baunaz, Bocci, and Shlonksy (in prep) on factive and negative islands in French.

b. To whom$_j$ do you suspect [having shown this letter $_{-j}$]?

(Schwarz and Simonenko, 2018, p. 256)

However, as Schwarz and Simonenko (2018) have shown, the picture is more complex and wh-extraction is also sensitive to the semantic content of the embedded clause. Compare (148-a) and (149). If the embedded verb is *show* there is no island effect, whereas if the embedded verb is *get* the island effect is present.

(149) *From whom$_j$ do you regret [having gotten this letter $_{-j}$]?

(Schwarz and Simonenko, 2018, p. 257)

(150) From whom$_j$ do you suspect [having gotten this letter$_{-j}$]?

In the literature, different explanations have been put forth to explain the island effect witnessed in (149). For instance, Szabolcsi and Zwarts (1993) argue it arises due to the non-iterability of the event described by the embedded predicate *get* (as opposed to *show*), which leads to a failure in semantic composition. On the other hand, Oshima (2007) and Abrusán (2011, 2014) argue that the issue arises when the property given by the factive predicate's complement clause applies uniquely, e.g., with a letter sender. I will not delve much deeper into the semantic analysis and refer the reader to Oshima (2007) and Abrusán (2011, 2014) for the details.

In the remainder of this section, I will make use primarily of examples with adjunct *how* and *why* extraction. Argument extraction will only be discussed as a means of comparison to establish whether in ValPa factive islands are weak, like in English, or strong. I will use example pairs where the embedded verb is iterable as well as non-unique, e.g., *send*, like in (148), or *buy*.

Nevertheless, what is crucial for the present discussion is that the island violation is the result of some issue in the semantic composition and not a (post-)syntactic violation. Thus, factive islands are different from the rest of the islands outlined in this chapter, whereby the island effect occurs following the violation of linearization requirements (Fox and Pesetsky, 2005a,b). Therefore, the prediction for ValPa is that (weak) factive islands should not be ameliorated by pronouncing a lower copy in the chain. Now, let us turn to the ValPa data.

(151) a. *?**Comèn**$_j$ Clara so [ que Nelly l' é<br>how Clara know.PRS.3SG COMP Nelly CL.NOM.3SG be.PRS.3SG<br>all-éye à Vers le Bois $\_{j}$]?<br>go-PST.PTCP.F.SG to Vers le Bois<br>'How does Clara know that Nelly went to Vers le Bois?'

b. ***Perqué**$_j$ Clara so [ que $\_{j}$ Susy l' à<br>why Clara know.PRS.3SG COMP Susy CL.NOM.3SG have.PRS.3SG<br>floqu-ò la tchevra]?<br>steal-PST.PTCP DET.DEF.F.SG goat<br>'Why does Clara know that Susy stole the goat?'

(152) a. **Comèn**$_j$ Clara pens-e [ que Nelly l' é<br>how Clara think-PRS.3SG COMP Nelly CL.NOM.3SG be.PRS.3SG<br>all-éye à Vers le Bois $\_{j}$]?<br>go-PST.PTCP.F.SG to Vers le Bois<br>'How does Clara think that Nelly went to Vers le Bois?'

b. **Perqué**$_j$ Clara pens-e [ que $\_{j}$ Susy l' à<br>why Clara think-PRS.3SG COMP Susy CL.NOM.3SG have.PRS.3SG<br>floqu-ò la tchevra]?<br>steal-PST.PTCP DET.DEF.F.SG goat<br>'Why does Clara think that Susy stole the goat?'

As can be seen from the examples in (151)-(152), ValPa behaves exactly like English. The prediction is, thus, borne out: extracting *comèn* 'how' or *perqué* 'why' from the complement clause of a factive verb leads to an ill-formed sentence, while extracting them from the complement of a non-factive verb is perfectly fine, (152). On the other hand, extraction of an argument wh-phrase, e.g., *dequé* 'what' in (153-a), does not give rise to a violation, like the non-factive *think*, as in (153-b).

(153) a. **Dequé**$_j$ Clara so [ que Nelly l' à
what Clara know.PRS.3SG COMP Nelly CL.NOM.3SG have.PRS.3SG
atsit-ò à Vers le Bois $_{-j}$]?
buy-PST.PTCP-F.SG to Vers le Bois
'What does Clara know that Nelly bought in Vers le Bois?'

b. **Dequé**$_j$ Clara pens-e [ que Nelly l' à
what Clara think-PRS.3SG COMP Nelly CL.NOM.3SG have.PRS.3SG
atsit-ò à Vers le Bois $_{-j}$]?
buy-PST.PTCP-F.SG to Vers le Bois
'What does Clara think that Nelly bought in Vers le Bois?'

These data confirm that factive islands are weak islands in ValPa. Furthermore, as expected, they show that semantic islands are not amenable to 'amelioration by copy deletion', unlike the other (post-)syntactic islands discussed in this chapter.

## 10.6 Chapter summary

In this chapter, I have presented evidence that CIwh-phrases are felicitous inside strong islands: relative clauses, complex NPs, as well as *perqué*, temporal and interrogative *se* clauses. At first sight, the felicity of CIwh-phrases inside islands suggested that wh-phrases do not leave the island, which would have been problematic for the overt-covert movement analysis put forth in Chapters 7 and 8. One possibility I considered was that ValPa displays two derivations: in non-island structures, wh-phrases overtly move to their scope position, whereas in island structures, the wh-phrase remains inside the island, with wh-scope being established through other mechanisms, such as Focus Alternatives. To investigate this, I replicated Kotek's (2016) study and placed interveners inside and above the island to diagnose the movement path of ValPa CIwh-phrases. The results show that CIwh-phrases are not subject to IEs, both when the intervener is inside the island and when it is above it. This suggests that CI-wh phrases move out of the island to the matrix HLP, where they scope over the entire sentence. Finally, I resorted once again to PG licensing and binding to demonstrate that movement out of the island happens in narrow syntax, and it does so in one fell swoop from the island LLP to the matrix LLP, without stopping at the island edge.

These results align with the PG licensing and binding facts observed earlier and, taken together, indicate that wh-phrases move *overtly* to their scope position, and that different copies in the chain can be pronounced. Crucially, pronouncing the copy in the island LLP voids island effects. In Section 10.4, I have compared the severely underexplored salvation by (copy) deletion with the more debated cases of salvation by deletion in sluicing constructions (Merchant, 1999, 2001, 2008; Mendes and Kandybowicz, 2023) and concluded that they are fundamentally different. In sluicing cases, it is the deletion of part of the structure that contains the island that has been argued to get rid of the island violation. On the other hand, salvation by (copy) deletion actually does not involve salvation, as the violation does not occur in the first place. I have adopted Fox and Pesetsky's (2005a) approach to successive-cyclicity as a PF requirement. Island violations occur when linearization requirements are not met. Failing to stop at the island edge does not allow the proper ordering of elements within the phase, which will therefore create a contradiction with the order established in the lower (vP) phase. In ValPa, as well as in Romanian, choosing to pronounce a lower copy in the chain lifts the linearization requirements for subsequent steps of movement to happen successive-cyclically through each phase edge (including the island edge) and hence the island violation actually never occurs. Finally, this analysis nicely accounts for the difference between ValPa and Romanian on the one hand, and languages like English on the other: only languages that independently allow pronunciation of a lower copy in the chain display salvation by (copy) deletion.

At this point, a word of caution is in order. Among the vast body of literature on ellipsis, there is no unanimous agreement that ellipsis repairs island violations *tout court*. Merchant (1999, 2001) himself argues that not all islands are amenable to salvation by deletion and suggests that repair by ellipsis might be an illusion. More recently, Barros et al. (2014) argued against repair by ellipsis. Specifically, the authors show that the illusion of repair by ellipsis is a consequence of the availability of non-isomorphic construals. We already knew from various works (Merchant, 1999, 2001; Abrusán, 2011, 2014) that islands do not form a homogeneous class. However, the rich data set and the discussion in Barros et al. (2014) pose challenges for several theories of islands, speaking against a PF account of islands, proposed by e.g., Bošković (2011) a.o.. Moreover, Wu (2022) discusses cases of salvation by deletion in stripping constructions and argues that its apparent ability to violate islands is an illusion created by the evasion strategy: a parse that does not involve an island construction at all. See also Abels (2011) for arguments against repair by ellipsis. A thorough discussion of the implications of these findings for my analysis of salvation by copy deletion is needed in future work. For the time being, I would like to point out that the present chapter is not in any way trying to argue in favor or against repair by ellipsis in island constructions, but about the apparent lack of island violations in (some) ValPa cases.

# Chapter 11: Conclusion

The goal of this chapter is twofold. In Section 11.1, I provide a summary of the dissertation, highlighting the main research questions and findings and closing the loop I started in Chapter 1. In Section 11.2, I discuss some of the more burning questions, pointing to future directions of the work, not just with respect to the topics discussed in this dissertation, but also as a broader research program for the upcoming years.

## 11.1 This dissertation is about what?

This dissertation deals with the constraints responsible for the realization of wh-chains, that is, the decision to pronounce one copy[1] in the chain and not others. With the advent of Minimalism (Chomsky, 1993, 1995, 2000) and the Copy Theory of Movement, it became clear that (i) things move in cycles, one tiny step at a time, (Chomsky, 2001; McCloskey, 2002; Fox and Pesetsky, 2005a; Chomsky, 2008), as in the wh-movement chain in (1); and that (ii) a movement chain formed in narrow syntax leaves behind copies of the moved element in each intermediate transit position, which *technically* are all available for interpretation and realization at Logical Form (LF) and Phonological Form (PF), Figure 11.1. That LF could *choose* which copy in a given

[1] In Valdôtain Patois, only one copy in a given chain can be pronounced hence the phrase *one copy*, but the topic of chain-realization does not exclude languages like Romani where more than one copy can be pronounced (McDaniel, 1986; Felser, 2004; Manzini and Savoia, 2007).

chain to interpret was obvious from the start because of the possibility of different interpretations (e.g. scope readings) for a single linear structure, as discussed in Chapter 2.1.

(1) a. [$_{\text{HLP}}$ **Who** do you [$_{\text{LLP}}$ ~~who~~ think [$_{\text{HLP}}$ ~~who~~ Alex has [$_{\text{LLP}}$~~who~~ seen at the supermarket ~~who~~]]]]?

b. *[$_{\text{HLP}}$ ~~Who~~ do you [$_{\text{LLP}}$ ~~who~~ think [$_{\text{HLP}}$ ~~who~~ Alex has [$_{\text{LLP}}$ ~~who~~ seen at the supermarket ~~who~~]]]]?

c. *[$_{\text{HLP}}$ **Who** do you [$_{\text{LLP}}$ **who** think [$_{\text{HLP}}$ **who** Alex has [$_{\text{LLP}}$ **who** seen at the supermarket ~~who~~]]]]?

d. *[$_{\text{HLP}}$ **Who** do you [$_{\text{LLP}}$ ~~who~~ think [$_{\text{HLP}}$ ~~who~~ Alex has [$_{\text{LLP}}$~~who~~ seen at the supermarket ~~who~~]]]]?

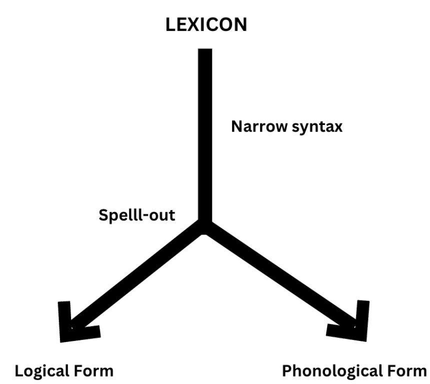


Figure 11.1: The architecture of the grammar in the Minimalist framework (Chomsky, 1993, 1995, 2000)

However, a movement chain must also be overtly realized: at least one of the copies must be pronounced, or else the derivation crashes (1-b). This is a universal requirement (Nunes, 2004; Bianchi, 2019). In most languages, there is a further constraint that prevents the pronunciation of more than one copy. In short, in these languages *exactly one* copy in a given (wh-)movement chain can and must be realized. For quite some time, the assumption was that PF chose to overtly realize the head of the chain, as in (1-a). Nunes (2004) argues that this pattern can be captured by stating that the formal properties of the copies have an influence on PF choosing them for realization. In (1-a), the head of the chain is the copy that has entered the most Agree relations and hence has more formal features than other copies in the chain. Therefore, it is less economical to delete that copy (because that would require deleting all its formal features, which aggravate its deletion cost), as opposed to the other copies in the chain. In short, copy pronunciation follows from economy.

Yet, it is possible to pronounce a lower copy in the chain (Brody, 1995; Bobaljik, 1995, 2002; Groat and O'Neil, 1996), even though theories out there are not clear as to *how* this is implemented by the grammar. Among the reasons supporting pronunciation of a lower copy in the chain, Bošković (2002); Nunes (2004); Franks (2017); Bobaljik and Wurmbrand (2012) have suggested avoidance of a PF crash, as is the case in Romanian multiple wh-questions with sequences of homophonous wh-phrases. More recent work on Igbo (Amaechi and Georgi, 2020) brought forth evidence that it is possible to pronounce a lower copy (the one in situ) in an A'-chain also in the absence of a potential PF crash. Yet, in Igbo focus-chains, the choice of which copy to pronounce is correlated to their interpretation: high copy = wide scope, no exhaustivity, low copy = narrow scope, exhaustivity. The phenomenon of pronouncing a lower copy in a chain is an underexplored one. However, all previous analyses to some extent highlight a strong preference to interpret the same copy at both LF and PF: e.g., if you pronounce the head of the chain then that copy is also interpreted at LF. This decision is taken thanks to a communication channel between LF and PF (Amaechi and Georgi, 2020) and/or soft constraints operating on the PF outputs (Bobaljik and Wurmbrand, 2012).

(2) a. **Ce**$_k$ ~~ce~~$_i$ precede ~~ce~~$_k$ **ce**$_i$? **Romanian**
what precedes what
'What precedes what?'

b. ***Ce**$_k$ **ce**$_i$ precede ~~ce~~$_i$ ~~ce~~$_k$?

(Bošković, 2002, p. 365)

The present dissertation comes in with a new set of data on the realization of wh-chains in the understudied Valdôtain Patois (ValPa) that challenge previous approaches to the phenomenon of movement in narrow syntax with deletion of higher copies in the chain. In a nutshell, this dissertation makes three main contributions: (i) proposes an analysis of optionality in copy pronunciation, (ii) addresses the interaction between copy pronunciation and pragmatic restrictions, and (iii) investigates the consequences of low copy pronunciation on island violations. In addition, this is the first systematic description of ValPa wh-questions. The examination of ValPa data also allows me to propose refinements of the structure of the High and the Low Left Periphery, teasing apart bare wh-movement from D-linked wh-movement, and to offer some considerations on the pragmatics of non-fronted wh-phrases across Romance.

Data-wise, I focus on the difference between the word orders in ValPa wh-questions exemplified in (3). I show that (3-a) and (3-b) are structurally identical: wh-phrases in ValPa successive-cyclically move to their scope-taking position in narrow syntax, but different copies can be pronounced.

(3) a. **Qui** t' à vù ì martsà?
who CL.NOM.2SG have.PRS.2SG see.PST.PTCP at.DET.DEF.M.SG market
'Who did you see at the market?'

b. T'à vù **qui** ì martsà?

Pronouncing the head of the chain gives rise to wh-fronting, as in (3-a), whereas pronouncing a lower copy leads to the word order in (3-b). I show that regardless of the length of the chain, only one of two copies can be pronounced: the head of the chain and the copy in the most local Low Left Periphery (LLP) to the extraction site. While other copies can be interpreted at LF, they can never be pronounced. I take this as evidence that whP in the High Left Periphery (HLP) and whP in the LLP are featurally distinct from the base position and all other intermediate ones: they host a [WH] feature, and that the copy pronunciation patterns in ValPa are reflexes of successive cyclic movement. More specifically, I argue that the optionality in copy pronunciation is the result of a specific ordering of (internal) Merge and upward Agree operations: merge operations driven by [WH] feature are ordered before upward Agree and therefore feed Agree, resulting in reflexes of movement in the form of copy pronunciation only in those positions. Other intermediate positions host an [EPP] feature and counter-feed Agree, resulting in no reflexes in the form of copy pronunciation. This analysis allows us to account for the optionality in copy pronunciation by ascribing the mechanisms to a purely syntactic (feature-based system). This way, syntax remains independent and does not need to 'look ahead' to what is happening in other components (Chomsky, 1957; Bobaljik, 2002).

ValPa presents a further puzzle in copy pronunciation, because the word orders in (3) are not freely interchangeable. (3-b) is pragmatically marked and acts like a strong presupposition trigger (Kripke, 2009; Abusch, 2010; Abrusán, 2014): it introduces a strong existential presupposition that has to be supported by the context. Crucially, however, the pragmatics markedness of the question is independent of the semantic interpretation of the wh-phrase itself. The use of a clause-internal wh-phrase, as in (3-b), is pragmatically marked, but the head of the chain is the one being interpreted at LF for scopal purposes. Therefore, we are faced with an intriguing relation between the copy the grammar selects for pronunciation and the pragmatics of the question, which is independent of the LF interpretation of the wh-phrase for scopal purposes. This relation is problematic for more traditional models of grammar (e.g. the Y-model), where LF and PF are independent from each other and only get input from narrow syntax.[2] I discuss the pros and cons of ascribing everything to narrow syntax (through dedicated features) and relegating the pragmatic restrictions to contextual constraints. Finally, I argue in favor of a purely context-based account, in which the pragmatic restrictions are due to the anaphoricity to the QUD. Questions with a fronted wh-phrase introduce a new QUD, while questions with a CIwh-phrase are anaphoric to the current QUD. More research is needed to test whether this implementation stands up to scrutiny.

Finally, I want to draw attention to this dissertation's analysis of how low copy realization impacts island violations. Clause-internal wh-phrases in ValPa are island-insensitive, yet take matrix scope. By placing interveners inside and above the island boundary and resorting to parasitic-gap licensing, I show that wh-phrases move to the matrix HLP and that deletion of higher copies in the chain voids island effects. In doing so, I investigate the mechanism of "salvation by (copy) deletion" and compare it to the amelioration of island effects under standard ellipsis. If this analysis is on the right track, it expands the range of phenomena where island effects are repaired under deletion. Following Fox and Pesetsky (2005a), I argue that successive-cyclicity is a requirement of linearization and hence enforced post Spell-out. Island violations occur when linearization requirements are not met–that is, when the newly established order of elements in one phase does not reflect previous orderings. Failing to stop at the island edge does not allow the proper ordering of elements within the phase, which creates a contradiction

[2]Not to mention the question as to whether the pragmatic restrictions we witness are in fact encoded at LF.

with the order established in the lower phase. I argue that, in ValPa, choosing to pronounce a lower copy in the chain lifts the linearization requirements for subsequent steps of movement to happen successive-cyclically through each phase edge (including the island edge), and the island violation never occurs. This result calls for a reconsideration of what constitutes an island violation in the first place, suggesting that at least some islands result from constraints on chain realization rather than on movement per se.

## 11.2 Open questions and future directions

This dissertation raises a number of questions, some of which have been answered in these pages and some of which remain to be addressed in future research. In this section, I would like to highlight the critical questions that deserve attention in the near future.

This dissertation deals with the notion of *optionality* in one specific realm of the grammar: copy pronunciation in wh-chains. Even within the Romance group, we observe different cases of optionality: focus-chains, clitic 'climbing', pro-drop, and verb placement are merely some instances. Some degree of optionality is also witnessed in verb movement (Ledgeway and Lombardi, 2005; Schifano, 2018). The analysis put forth here accounts for the copy deletion mechanisms witnessed in ValPa wh-questions, but it is not clear whether it could be generalized to other patterns of optionality. In particular, it needs to be compared to cases of structural ambiguity, which is what Bonan (2018, 2019) proposes for Trevisan wh-questions, which on the surface resemble the ValPa data. On a more general plane, this raises the question of what it means for a structure to be optional in the grammar.

Related to the question of optionality is the question of the timing of spellout decisions. Let us forget for a moment the feature-driven analysis I have proposed. Recall the observation that the ValPa chain realization patterns could very coarsely be depicted by two mirror constraints (among others): pronounce copy as soon as possible or pronounce copy as late as possible. Assuming a bottom-up cyclic derivation and multiple Spell-out (Uriagereka, 1999), in cases of long-distance wh-movement, the decision on whether to realize the copy in the most local LLP to the extraction site must be made well before the grammar can access the alternative position and consider pronouncing that copy.

This, in turn, raises the questions of what exactly is sent to Spell-out and when, a question that dips into the sea of research on phases (Chomsky, 2001, 2008; Gallego, 2010; Müller, 2011; Abels, 2012; van Urk and Richards, 2015; Bešlin, 2023, 2024). While it seems like a trivial concern, it is not. The constraint 'pronounce copy as soon as possible' depends on what exactly is sent to Spell-out. If only the complement of the lowest phase head is sent to Spell-out, then for (3) the grammar would force the pronunciation of the tail of the chain, the copy in-situ, because the copy in the LLP is not in the lowest Spell-out domain. We could, instead, argue that the Spell-out domain is a bit larger, following suggestions by Ko (2003, 2005) and Ko (2007); Fox and Pesetsky (2005a), but then we would have two competitors: $\text{copy}_{\text{n}}$ and $\text{copy}_{\text{n-1}}$.[3] As I argue, the feature analysis proposed in this dissertation circumvents this conundrum of course, but the questions of what constitutes a Spell-out domain and why still remain. These questions also have a bearing on the constraints regulating the syntax-prosody interface. The exploratory and preliminary investigation of the prosody of wh-questions in ValPa shows that prosody is in part sensitive to syntactic structure, pace Elfner (2012, 2015, 2018) and Bocci and Cruschina (2018); Bocci (2013) among others. The question that arises, though, is whether prosodic constraints

[3]Assuming we start the counting from the head of the chain, which would be $\text{copy}_1$.

have a say in copy pronunciation decisions. I leave this open for future research.

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