

ABSTRACT

Title of Dissertation:

ON EXPERIENCERS AND MINIMALITY

Maria Carolina de O A Petersen,
Doctor of Philosophy, 2016

Dissertation directed by:

Professor Norbert Hornstein,
Professor Howard Lasnik,
Department of Linguistics

This dissertation is concerned with experiencer arguments, and what they tell us about the grammar. There are two main types of experiencers I discuss: experiencers of psychological verbs and experiencers of raising constructions. I question the notion of ‘experiencers’ itself; and explore some possible accounts for the ‘psych-effects’. I argue that the ‘experiencer theta role’ is conceptually unnecessary and unsustained by syntactic evidence. ‘Experiencers’ can be reduced to different types of arguments. Taking Brazilian Portuguese as my main case study, I claim that languages may grammaticalize psychological predicates and their arguments in different ways. These verb classes exist in languages independently, and the psych-verbs behavior can be explained by the argument structure of the verbal class they belong to. I further discuss experiencers in raising structures, and the defective intervention effects

triggered by different types of experiencers (e.g., DPs, PPs, clitics, traces) in a variety of languages. I show that defective intervention is mostly predictable across languages, and there's not much variation regarding its effects. Moreover, I argue that defective intervention can be captured by a notion of minimality that requires interveners to be syntactic objects and not syntactic occurrences (a chain, and not a copy/trace). The main observation is that once a chain is no longer in the c-command domain of a probe, defective intervention is obviated, i.e., it doesn't apply. I propose a revised version of the Minimal Link Condition (1995), in which only syntactic objects may intervene in syntactic relations, and not copies. This view of minimality can explain the core cases of defective intervention crosslinguistically.

ON EXPERIENCERS AND MINIMALITY

by

Maria Carolina de O A Petersen

Dissertation submitted to the Faculty of the Graduate School of the
University of Maryland, College Park, in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
2016

Advisory Committee:

Professor Norbert Hornstein, Chair and Co-Advisor

Professor Howard Lasnik, Chair and Co-Advisor

Associate Professor Michael Israel, Dean's Representative

Professor Jairo Nunes

Professor Juan Uriagereka

© Copyright by
Maria Carolina de O A Petersen
2016

Dedication

To my mother, Dora, and in memory of my late grandfather, Tote.

Acknowledgements

There are many people that contributed to the successful accomplishment of this dissertation, and to cite everyone would be a very difficult thing. I will try to make this as brief as possible, and by doing so I will surely miss some names. I apologize for that in advance.

I wouldn't be able to write this dissertation or go through my doctorate if it weren't for the tremendous help of my advisors, Norbert Hornstein and Howard Lasnik. I owe so much to them, both of them are very enthusiastic and encouraging in their own way. There's a great advantage to have two main advisors, especially when they naturally focus on different issues. Every discussion I had with them brought me new insights. Norbert is typically more concerned about the big questions and the big picture, while Howard can focus on the smallest detail one can think of. Having their assistance greatly improved my writing and research over the years. I am so grateful for their patience, attention, and guidance.

I am also grateful for my committee members, Micheal Israel, Jairo Nunes, and Juan Uriagereka, for taking the time to read and think about my work. Michael and Juan, thanks for all great questions and nice conversations. Jairo, thank you so much for opening up some time for an old advisee, it's always a privilege to work with you.

It was a pleasure to have worked with my co-authors Mihaela Marchis Moreno and Arhonto Terzi. Mihaela was a very good friend through my PhD, and I had a nice time traveling to conferences to present our work, which was fruitful and fun. Arhonto was a valuable friend over my PhD years, and a great work partner! I am very honored for all her help and advice.

During my PhD years, I had incredible experiences with so many people in Maryland! I enjoyed the conversations with professors Valentine Haquard, Jeff Lidz, Alexander Williams, Collin Philips, Paul Pietroski, Tonia Bleam, Peggy Antonisse, Omer Preminger. Thank you for your comments on my work and contributions to my growth!

I also want to thank Kathi Faulkingham, Kim Kwok, and Denise Best for their help with administrative processes.

I'd like to extend my appreciation to some of my dear colleagues that I will miss very much from those five years, as well as people that provided me with data and judgments: Julie Gerard, Shota Momma, Sayaka Goto, Yakov Kronrod, Kenshi Funakoshi, Angela He, Dongwoo Park, Gesoel Mendes, Yuki Ito, Alexis Wellwoods, Dustin Chacón, Brooke Larson, Margherita Morando, Mariana Hermann, Sigríður Björnsdóttir, Tom Grano, Max Papillon, Mihaela Marchis, Arhonto Terzi, Sol Lago, Adolfo Ausín, Renato Lacerda, Valentine Hacquard, and Annemarie Van Dooren.

Many people from my home country, Brazil, supported me throughout this past 5 years; they were close friends even in the immense distance. I want to thank my family, for understanding my choices and helping me achieve my dreams. I have an eternal gratitude to my mother Dora and my brother Tony, who cheered for me all along. I'd like to thank my grandmother Jujú for being an example of kindness and love to me. Grandma Jujú sometimes tells me the story of when I was about 5. She asked me what I wanted to be when I grew up. I said "I don't know." She asked: "A

doctor?” I said: “No, I don’t deserve it.” And she laughed at that once we knew I was coming to work on my PhD at the University of Maryland. It seems like that is what I wanted after all (although she originally meant it as a medical doctor).

Other family and friends from Brazil that I miss dearly: Rita Burgos, Cecília Burgos, Pati Leite, Ana Clara, Analuzia Lemos, Marília Matos, Talita Nogueira, Vanessa Lisboa, the Lucy In The Sky and the Flauer.

Lastly, but far from least, there is my husband and best friend, Jordan Kocuba. I don’t know what words to use when expressing my appreciation for sharing your life with mine. I am grateful for your endless support, patience, and love. You are wonderful; you are my world.

Table of Contents

Dedication	ii
Acknowledgements	iii
Table of Contents	v
Chapter 1: Introduction.....	1
1.1 Overview	1
1.2 Experiencers, theta theory, and psych-verbs	2
1.3 Defective intervention and Minimality.....	5
Chapter 2: Experiencers and Theta Theory	9
2.1 Theta roles	10
2.2 Thematic Theory.....	12
2.2.1 Baker (1988, 1997)	13
2.2.1.1 <i>Agents and Patients/Themes</i>	14
2.2.1.2 <i>Thematic theory</i>	15
2.2.1.3 <i>Relative versus Absolute UTAH</i>	16
2.2.1.4 <i>Evidence for Absolute UTAH</i>	18
2.2.2 Dowty (1991).....	19
2.2.2.1 <i>The proto-roles</i>	20
2.3 Experiencers and Theta Theory	22
2.4 Psych-verbs and Experiencers	24
2.4.1 Belletti & Rizzi (1988).....	24
2.4.2 Eventivity and stativity - Pesetsky (1995), Arad (1998), and Landau (2010)	37
2.4.2.1 <i>The accounts</i>	37
2.4.2.2 <i>Inherent Case and the unaccusativity of Experiencers</i>	48
2.4.2.3 <i>LF movement and subjecthood</i>	58
2.4.3 Absolute UTAH and other solutions for Experiencers.....	63
2.5 Experiencers and the Theta-Theory: a discussion	65
2.5.1 Theta Theory: do we need it?.....	65
2.5.2 How many roles?	69
2.5.3 Experiencer theta-role.....	70
Chapter 3: Experiencers in Brazilian Portuguese.....	76
3.1 Psych-verbs in Brazilian Portuguese	77
3.1.1 Cançado's (1995 et seq.) psych-verb classes of Brazilian Portuguese	80
3.2 Brazilian Portuguese's psych-verbs classes: a discussion	85
3.2.1 Class A	85
3.2.2 Class B	90
3.2.3 Class C	95

3.3 The Aspect of psych-verbs	101
3.4 Other syntactic phenomena.....	107
3.4.1 The causative-inchoative alternation	108
3.4.2 The derivations.....	114
3.4.2.1 <i>The simple sentences</i>	114
3.4.2.2 <i>Deriving the passive restriction</i>	123
3.4.2.3 <i>Reflexivization</i>	125
3.4.3 Additional Evidence.....	128
3.4.3.1 <i>Arbitrary pro</i>	128
3.4.3.2 <i>Other predicates</i>	130
3.5 Conclusion: new classes of psych-verb	131
3.5.1 Class A	133
3.5.2 Class B	134
3.5.3 Class C	134
3.5.4 Class C*	135
Chapter 4: Raising across experiencers	137
4.0 Introduction	137
4.1 Counter-evidence to Bruening (2014)	140
4.1.2 Two kinds of adverbs.....	147
4.1.3 Romanian and Brazilian Portuguese adverbials	151
4.1.4 Accounting for the data.....	158
4.2 Cross-linguistic observations on defective intervention.....	165
4.2.1 Romance languages and Greek	165
4.2.2 Icelandic	174
4.2.3 Language groups and Minimality	177
4.3 Is your experiencer intervening?	181
4.3.1 A strictly derivational approach.....	182
4.3.2 The definition of minimality	185
4.3.2.1 <i>On minimal domain and chains</i>	190
4.3.3 Group 1 vs. Group 2.....	192
4.3.4 Group 1 vs. The outliers.....	197
4.4 Raising over experiencers and Point of View.....	206
4.4.1 Brazilian Portuguese Hyper-raising	206
4.4.2 Raising over Experiencers in Brazilian Portuguese.....	211
4.4.3 Point of View: left dislocated subjects in BP.....	214
4.4.3.1 <i>Evidence</i>	214
4.4.3.3 <i>More minimality violations</i>	221
4.4.4 Point-of-View in other languages	226
4.4.4.1 <i>Spanish and European Portuguese</i>	228
4.4.4.2 <i>French and Italian</i>	231
4.5 Conclusion	234
Chapter 5: Hyper-raising and locality in Brazilian Portuguese and Greek	236
5.1 Introduction	236

5.2 Hyper-raising and finite-raising.....	238
5.2.1 Brazilian Portuguese	239
5.2.2 Greek.....	241
5.2.2.1 <i>Greek subjunctives</i>	242
5.3 Hyper-raising as A'-Movement: Greek Indicatives	245
5.3.1 WH-movement.....	246
5.3.2 Idioms	247
5.3.3 Scope.....	248
5.4 Agreement with matrix DPs: indicative complements	252
5.4.1 The derivations.....	252
5.4.2 Is it copy raising?	264
5.5 Non-agreement with matrix subject: subjunctive complements.....	273
5.6 A note on the position of subjects	275
5.7 Conclusion	277
Chapter 6: Concluding remarks	279
Bibliography.....	282

Chapter 1: Introduction

1.1 Overview

The primary goal of this dissertation is to account for the distribution of experiencer arguments, and its consequences for the theory of minimality. The experiencer theta role has received a good amount of attention over the past years in linguistic theory. Yes, experiencers are interesting. They are puzzling, as we will see throughout this dissertation. They are part of numerous constructions, some of which bring to light fundamental questions about the grammar.

In this dissertation, I explore two main questions posed by experiencers. First, in chapters 2 and 3, I question the notion of ‘experiencers’ itself; I explore the consequences of assuming a theory with and without a rigid view on theta roles, and what that implies for the predicates that take the experiencer theta role. I reach the conclusion that the ‘experiencer theta role’ is conceptually unnecessary and mostly undesired, if we want to keep the theory of UG (Universal Grammar) simple and uniform. ‘Experiencers’ can be reduced to different types of arguments, some that align better with a proto-agent role and some with a proto-patient one (in e.g., Dowty’s (1991) proto-roles theory). Moreover, I show that psych-verb classes can be identified as a variety of other verb classes. In particular, I look into psych-verb classes in Brazilian Portuguese.

Second, in chapter 4, I explore experiencer raising constructions and the defective intervention effects triggered by different types of experiencers (e.g., DPs, PPs, clitics, traces) in a variety of languages. I show that defective intervention is

mostly predictable across languages, and there's not a lot of variation. Moreover, I argue that defective intervention effects can be captured by a notion of minimality that requires interveners to be syntactic objects and not syntactic occurrences (a chain, and not a copy).

Another topic related to minimality and raising structures is explored in chapter 5, where I discuss the cases of hyper-raising and finite-raising. Brazilian Portuguese and Greek show some 'unexpected' agreement and movement patterns, which I explore.

1.2 Experiencers, theta theory, and psych-verbs

Experiencer is a thematic role that has been described in the literature as being the bearer of a particular psychological state. Experiencers are assumed to be thematic roles in psychological predicates, belief predicates, perception predicates, and also as an optional argument of raising constructions:

- | | | |
|-----|---|-----------------------|
| (1) | a. The traffic bothers <u>Ana</u> . | (Psychological verbs) |
| | b. <u>Peter</u> believes that Ana is at home. | (Belief verbs) |
| | c. <u>The transients</u> saw the terrible accident. | (Perception verbs) |
| | d. John seems <u>to her</u> to be sick. | (Raising verbs) |

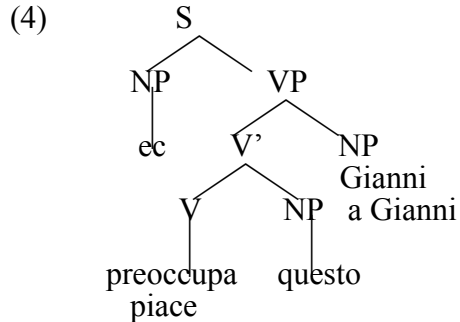
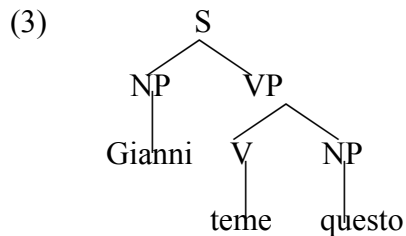
In this dissertation, I focus on the discussion of experiencers in psychological verbs (1a) and raising constructions (1d). The background story that I play with here is that experiencers are intriguing at many levels. At a conceptual level, I discuss in chapter

2 what the consequences are of saying that the arguments underlined in (1) form a natural class of thematic role, and if that is in any way advantageous. Fundamentally, I question whether we need to ‘name’ theta-roles at all. This discussion is based on the generally accepted view that it’s a fundamental feature of natural languages that the mappings between the roles in an event and the positions in a syntactic structure are highly systematic both within and across languages. So semantic agents are typically realized as external arguments, while semantic themes or patients are internal arguments. For example, in English, there isn’t a verb with a similar meaning to *beat*, *kick*, in which the roles are reversed, such that an active sentence like ‘John beat/kicked Paul’ conveys the meaning that Paul was the agent (beater/kicker) and John was the patient (beatee, kickee). However, experiencers seem to challenge this generalization: psych-verbs may express the experiencer argument as a subject, object, or indirect object:

- | | | |
|-----|---|-------------|
| (2) | a. <u>Peter</u> loves long novels. | (Class I) |
| | b. Long novels please <u>Peter</u> | (Class II) |
| | c. Long novels appeal to <u>Peter</u> . | (Class III) |

Crosslinguistic variation in the realization of experiencers, and by the syntactic properties displayed by these classes of verbs increases the puzzle. Faced with these observations, Belletti & Rizzi (1988) a.o. argues that class II and III of psych-verbs in (2) above are unaccusatives (cf. (4)), the general idea is that II and III are underlyingly similar to class I in (3). Notice that in both (3) and (4), the experiencer

argument is higher in the Deep-Structure than the theme argument. The different realizations of these arguments in Surface-Structures are unimportant to the thematic theory.



This view is compatible with the general assumption that theta-roles are assigned systematically. Specifically, this view is compatible with a relative view of theta-roles mapping, such that a thematic hierarchy as in (5) is respected

- (5) The thematic hierarchy
- Agent/Causer >> Theme/Patient >> Path/Location

The above and many other views on psych verbs credit them as ‘special’ in having one or more distinct properties that explain their syntactic behavior and the distribution of experiencers. I will discuss reasons to believe that these views are

overall inadequate. I argue that there is no such thing as a unified thematic role called *experiencer*, and that psych-verbs are also not a coherent verb group. Taking Brazilian Portuguese as my main case study, I claim that languages may grammaticalize psychological predicates and their arguments in different ways. These verb classes exist in languages independently, and the psych-verbs behavior can be explained by the argument structure of the verbal class they belong to.

1.3 Defective intervention and Minimality

Experiencers may also appear in raising constructions like (1d), in which case, they typically lead to what has been called ‘defective intervention’. The phenomenon of defective intervention is a core topic of investigation in the recent minimalist literature, starting with Chomsky (2000). Defective intervention describes the situation when a probe and a goal Agree relation is blocked by a closer matching goal that is inactive in the derivation due to the fact that its features have already been valued. The general explanation for defective intervention follows from a Minimal Link Condition (Chomsky 1995: 311) or a Relativized Minimality (Rizzi 1990, 2001) violation: an element α may enter into a relation with an element β iff there is no γ that meets the requirement(s) of α such that α c-commands γ and γ c-commands β .

Crosslinguistically, defective intervention can take different forms. In a first scenario, defective intervention causes ungrammaticality as in Italian, and Brazilian Portuguese (BP), where dative/oblique DP interveners block subject-to-subject movement as in (5).

- (5) a. *Gianni sembra a Piero fare il suo dovere. (Italian)
 Gianni seems to Piero to do the his duty
 ‘Gianni seems to Piero to do his duty.’ (McGinnis 1998:93)
- b. *O alunos parecem ao professor estar exaustos. (BP)
 the students seem-3pl to-the teacher be-INF exhausted
 ‘The students seem to the teacher to be exhausted.’

There is, however, another scenario where defective intervention can be obviated in languages if the experiencers is a clitic, (6a-b), or a clitic doubled DP, (6c):

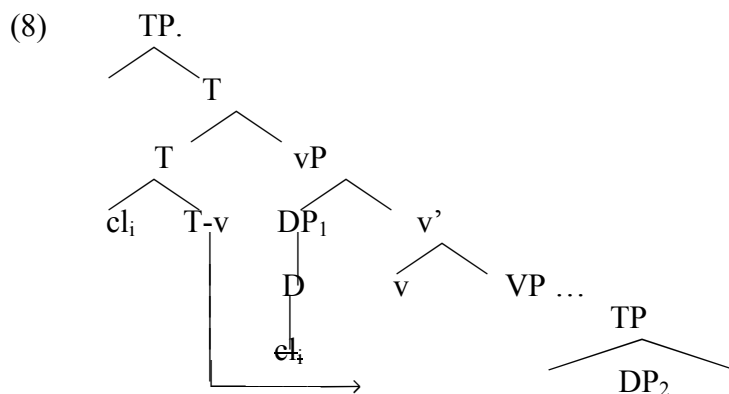
- (6) a. Gianni gli sembra essere stanco. (Italian)
 Gianni him seem-3sg be-INF ill
 ‘Gianni seems to him to be ill.’
- b. O aluno me parece estar exausto. (BP)
 the student me seem-3sg be-INF exhausted
 ‘The student seems to me to be exhausted.’
- c. Juan *(le) parece a María no haber leído a Goethe.
 John 3SG-DAT seems to Mary not have read to Goethe
 ‘John seems to Mary not to have read Goethe.’ (Spanish)

In this dissertation, I discuss the defective intervention effects in different languages, including English, Icelandic, Greek, Romanian, Spanish, French, Italian, and Brazilian and European Portuguese. I reach the generalization that languages’

behavior doesn't vary widely. Movement over A-traces/copies of experiencers and movement over Wh-traces/copies of experiencers is permitted crosslinguistically. Movement over PP experiencers, like in English (7), is possible, while movement over lexical DPs is banned. The variation observed is not arbitrary, but predictive once we revisit the minimality condition(s) on syntactic operations like *agree*.

(7) The students seem to the professor to be tired.

I argue that the cases of clitic doubling and clitics in (6) are particularly telling with regards to what minimality cares about. Specifically, the notion of chain and syntactic objects is crucial for the computation of minimality, and adding this notion to the core definition of minimality is a way to simplify the theory and get rid of additional stipulations, such as that A-traces are invisible for move/agree. The main observation is that once a chain is no longer in the c-command domain of a probe, defective intervention is obviated, i.e., it doesn't apply. More specifically, a chain is not in the domain of a probe if any part of that chain is not in the domain of a probe.



I assume that the Minimal Link Condition (1995) is superior to other accounts of minimality because the condition on ‘closeness’ captures the fact that cliticization renders the higher copy of the clitic as a non-intervener. Thus, assuming that only syntactic objects may intervene in syntactic relations, the clitic chain in (8) is not an intervener for DPs moving to Spec-TP.

Finally, I compare raising with experiencers and raising without experiencers in Brazilian Portuguese and show that the final landing site of the embedded subject in the matrix clause differs in those cases: it’s an A’ – left dislocated – position in the former, while it’s an A-position, presumably the standard subject position in the latter. I account for this asymmetry assuming that the experiencer argument must be promoted to a Point-of-View projection above the inflectional domain of the clause. My proposal builds on the assumption that experiencers in raising constructions are not only arguments of the raising predicate, but they express the point-of-view to which a certain statement is true. This pragmatic role may be grammaticalized in what Tenny & Speas (2003) call ‘evidentiality’ projections, which I argue can explain the syntactic behavior of raising with experiencers in Brazilian Portuguese, and the similar behavior also observed in other languages, like French and Italian.

Chapter 2: Experiencers and Theta Theory

In this chapter, I will discuss the fundamentals of Theta Theory. The question about Theta Theory in Linguistics arises from a bigger question concerning the existence of universally valid constraints on how “deep structure” representations are expressed in the syntactic structure. These issues were raised both in Chomsky’s (1981, 1986) Principles and Parameters (P&P) framework, as well as in Lexical Functional Grammar (and many others).

Theta Theory develops a theory of the structure of theta roles or thematic relations that arguments have with their predicates. Thematic relations are often used as a purely semantic description of the role a noun phrase plays and how it functions with respect to the meaning of the action described by the verb. Theta roles are also thought to be needed for the language acquisition process. In this chapter, I will take a close look at the specific case of psych-verbs and what they tell us about Theta Theory. Specifically, I will argue that UG needs very little thematic theory impressed in it, if at all, to take children from primary language data to a grammar. A coarse and vague notion of Agenthood and Patienthood, (e.g Dowty’s (1991) approach) is suitable for predicting roles and argument positions, and thematic roles can be used as a descriptive tool for linguists, but bear no other linguistic significance. The *Experiencer* theta-role puzzle, which I describe below, can be solved by arguing that *Experiencer* is not a unified class, but can be divided into different roles that fit into either the Agent-like or the Patient-like category.

The layout of the chapter is as follows. In section 2.1 I will discuss the development of the theory of theta roles. Following this in section 2.3 I will present the problems raised by psych-verbs to Theta Theory. In section 2.4 I will discuss different accounts for the Experiencer theta role given in the literature and its consequences for Thematic Theory. Section 2.5 sums up the main issues of the chapter and presents an approach to thematic theory and Experiencers.

2.1 Theta roles

The seminal studies on thematic relations are Gruber (1965) and Fillmore (1968). Fillmore's inquiry regarded the mapping of deep semantic roles into syntactic structure. His main concern is the nature of 'deep' cases in languages, and how new findings on case should lead to a new categorization of that concept in linguistics studies.

Fillmore (1968) developed a theory in which grammatical and morphological case were differentiated from deep case. Grammatical relations such as 'subject' and 'object' are devoid of any semantic attribution, and only stand as a surface structure phenomenon. Crosslinguistic observation showed that case systems differ significantly across languages. The possible meanings associated with different cases are too varied (Greensberg 1966).

Another early work on thematic relations came from Gruber (1965, 1967). For him, every sentence needs a Theme. The importance of the Theme in his theory explains the term *thematic relations*¹.

Chomsky (1981, 1986) introduced Theta Theory as a theory that deals with the semantic relations between arguments and predicates. These relations are a lexical requirement of a head predicate and must be satisfied at Deep Structure (D-structure). The Lexicon determines the theta roles a predicate has, while Theta Theory is concerned with how lexically specified roles are assigned. The central principle of theta theory is the Theta Criterion (Chomsky 1981: 36):

(1) Theta Criterion

Each argument bears one and only one theta-role and each theta role is assigned to one and only one argument.

Chomsky's interpretation of theta roles has a strong syntactic commitment. Theta-roles are assigned to DPs², much like Case assignment. Furthermore, the Theta Criterion must be satisfied at all levels of representation: D-structure, Surface Structure (S-Structure) and LF, complying with the Projection Principle³.

¹ The term *thematic relation* is due to Richard Stanley, also see Jackendoff (1971). Gruber's analysis led to important claims, such as that various semantic fields have a similar structure in terms of the basic functions BE, GO, STAY, and CAUSE and the thematic relations Theme, Location, Source, and Goal.

² Clauses and other complements are also assigned theta-roles. I will focus on the cases which DPs are the theta-marked argument for the remaining discussion.

³ Projection Principle (Chomsky 1986) roughly states that lexical structure must be represented categorically at all levels of representation.

Within Minimalism, Chomsky (1995: 312) assumes that theta roles are different from ϕ -features, they are assigned in different domains, respectively the internal domain and checking domain. Theta-roles are not features, according to Chomsky, but assigned on first-merge⁴. Chomsky assumes a Hale & Kayser (1993) configurational approach to theta-assignment, which I will discuss in section 2.5. A DP is assigned a theta-role by being in a sister configuration with a theta assigner. The Theta Criterion, although not formally accepted in this scenario, is still maintained by the assumption that movement is never to a theta position. Chomsky (1995) maintains this restriction by imposing that theta-assignment is limited to the merger of a non-trivial chain.

In Minimalism, there have been different views on the matter of whether the restriction on movement to thematic positions has any conceptual and empirical advantages (cf. Hornstein 1999, 2001). In chapter 4, I will discuss an analysis that assumes that a DP can bear multiple theta-roles. Besides that additional property, I will assume the generally accepted view that thematic relations take place when a DP merge with its selecting predicate, and that is what drives the interpretation of that DP as an argument of that predicate.

2.2 Thematic Theory

To use language, humans must link participants in an event or state onto grammatical

⁴ Notice that it is not clear why theta-roles should differ from features. Besides, the assumption that theta-roles can only be assigned once to a chain, typically inside the vP shell in a way reintroduces some primitive assumption of a D-Structure. This view has been disputed in recent minimalist literature (see e.g. Hornstein 1999, 2001).

roles in a sentence. ‘The linking problem’ refers to the regulations governing how languages map participants onto syntactic forms, and explaining those regularities.

In this section, I review some of the main theoretical contributions to a Thematic Theory. Because of the little crosslinguistic variability regarding theta-assignment, many linguists believe Thematic Theory is part of Universal Grammar (UG). If UG maps arguments to theta roles, a child learning a language wouldn’t need to learn linking rules of each individual verb/lexical item (s)he learns, but would rather be guided by this principle of the Grammar on how to solve the linking problem. I go over different authors’ accounts in what follows.

2.2.1 Baker (1988, 1997)

To use language, humans must link participants in an event or state onto grammatical roles in a sentence. ‘The linking problem’ refers to the issue of discovering regularities on how languages map participants onto syntactic forms, and explaining those regularities.

There are abundant crosslinguistic similarities on how theta roles are mapped into syntactic structure (Baker 1988; Dowty 1991; Levin & Rappaport Hovav 2005; Tenny 1994). Usually grammatical relations are arranged in a hierarchy like “subject> object> oblique” and thematic relations are arranged in a hierarchy like “Agent> Patient/Theme> Source/Location/Goal”. A general principle postulated by Baker is The Uniformity of Theta Role Assignment – hereafter *UTAH* (Baker 1988, 1997): “Identical thematic relationships between items are represented by identical structural relationships between those items at the level of D-structure.”

The main questions of Theta Theory are how to explain the observed symmetry in languages in an elegant way and how to make sense of the exceptional (or seemingly exceptional) cases for these generalizations, as we will see ahead.

2.2.1.1 Agents and Patients/Themes

What Agents and Patients/Themes consist in and how these grammatical relations are mapped into syntax are areas of little controversy in regards to the linking problem. Given a two-place verb with the θ -grid <Agent, Patient/Theme>, Agent is projected as a subject and Patient/Theme as an object. Evidence for this comes from the observation that in languages of the world there are many verbs that align their arguments like in (3a), but no verbs that do it so like in (3b), where *John* is the agent and *the table* is the theme:

- (3) a. John hit/found/broke the table.
 b. The table plit/vound/proke John.

(Adapted from Baker 1996:76)

There are other syntactic asymmetries between these two positions besides the linking pattern. The Agent-subject has prominence over the Patient-object in a variety of contexts involving anaphora, coreference, and quantification. These show that the verb and the object form a constituent (VP) to the exclusion of the subject; and the subject asymmetrically c-commands the object.

2.2.1.2 Thematic theory

Baker (1997) believes in a simplification of thematic theory when it comes to how many theta roles there are. He follows Dowty (1991) in saying that there's a Proto-Agent, and a Proto-Patient. Baker adds to Dowty's theory of proto-roles a Goal/Location theta role. Baker finds more reasons to collapse theta roles, instead of distinguishing them. Some theta roles, like Comitative and Instrument, are not attested universally, which means for Baker that they are not primitive, but rather constructs of other theta roles. Location and Goal should be collapsed (against Kiparsky 1987, Bresnan & Kanerva 1989), as they are both locative expressions. Benefactive and Recipient theta roles should also be treated as Goals, and therefore these are all collapsed in a broader 'Path-Location' category.

In sum, Baker's hierarchy is as follows:

(5) The thematic hierarchy

Agent/Causer >> Theme/Patient >> Path/Location

Agent/Causer includes the creator of mental representations, the experiencer theta role of verbs like *fear*; Experiencers that undergo a change of mental state (of verbs like *frighten*) are Themes/Patients, and maybe some Experiencers are also Path/Locations⁵. The syntax needs nothing more than these distinctions to generate the universal linking.

⁵ We will see more details on Baker's account of Experiencers in section 2.4.3.

2.2.1.3 *Relative versus Absolute UTAH*

The thematic theory literature has developed a few different ways of interpreting UTAH and the thematic hierarchy in general. The main dispute is whether the association of the thematic role is related to a particular position in an absolute sense, or whether only the relative positions of the arguments are important. On the first view (Absolute UTAH, AUTAH henceforth), the correlation of each theta role to a specific position in the structure is unbreakable. On the second view (Relative UTAH, RUTAH henceforth) (Belletti & Rizzi 1988, Larson 1990, Speas 1990, Li 1990), however, a Theme must respect the hierarchy and be projected below an Agent/Causer and above a Goal; it doesn't really matter in which exact syntactic position it is projected.

The evidences for RUTAH come from a few different areas. First, Speas (1990:73) expresses perhaps the clearest reason that needs to be considered — the fact that in some cases the expression of arguments seems to be context dependent. The example she cites involves the Recipient role, which may be a subject (as in (6a)), but only if there is no Agent present in the clause (as in (6b)).

- (6) a. John received a package from Baraboo.
 b. Mary sent a package to John from Baraboo.

(Speas, 1990: 73)

Similarly, it is well known that Instruments can appear in the subject position in English (cf. (7b)), but again only if there is no explicit Agent (cf. (7c)).

- (7) a. John loaded the truck with a crane.
b. The crane loaded the truck.
c. *The crane loaded the truck by John.

(adapted from Levin 1993:80)

The third kind of evidence comes from psych-verbs like *love* and *fear* (cf. (8a)), that seem to have a transitive syntax much like any other action verb (cf. (8b)), but have different theta roles, Experiencer and Theme (cf. Grimshaw 1990 and Belletti and Rizzi 1988 for classes of ‘unaccusative’ psych verbs).

- (8) a. Mary hates John.
b. Mary killed John.

In all these examples, projection seems to care about relative rankings of thematic roles, rather than their specific positions.

However, an absolute version of the UTAH can still be maintained, and a way to account for these cases comes from Dowty’s (1991) idea that the basic thematic roles are prototype concepts, and not categorically defined ones. Baker suggests that in (6a) the subject *John* acts in the event as an Agent (he makes a decision to accept the item). In (7b) the subject is not an Instrument, but an Agent/Causer, as it has to have power to partially act/move on its own. Finally, in (8a), *Mary* is the subject

because she has more “agenthood” than *John*, according to a Dowty’s approach to this problem⁶.

2.2.1.4 Evidence for Absolute UTAH

A great source of evidence to distinguish AUTAH and RUTAH come from intransitive verbs/one place predicates syntax: how are Themes and Agents represented in those? RUTAH predicts no restriction on how Agents and Themes are expressed in syntax, as long as they observe the thematic hierarchy. On the other hand, AUTAH predicts that each of these theta-roles will always be associated with a specific position regardless of whether other arguments and theta roles are being projected in syntax.

It is well known that unaccusative and unergative verbs contrast in this respect. Specifically, unergative verbs project their solely agentive argument as a subject in all levels, while unaccusative verbs project their Theme/Patient argument as a complement/object at first merge. These facts led to the formulation of the The Unaccusative Hypothesis (Perlmutter 1978, Burzio 1986, Levin & Rappaport Hovav 1995), which states that a sole argument of an agentive intransitive predicate is a subject at all levels, but the sole argument of a non-agentive intransitive verb is generated as an object.

Baker (1997) accepts the standard argument that the Unaccusative Hypothesis is true crosslinguistically - this is the strongest evidence for the AUTAH. The author acknowledges that it is possible to account for the Unaccusative Hypothesis under a RUTAH view as well. Several ways of doing so are positing that unergatives are

⁶ We will see Baker’s and Dowty’s analysis of Experiencers in more detail in section 2.4.3.

concealed transitives (with a covert/cognate object), and that Unaccusatives are underlying transitives, with a suppressed Agent. Baker however thinks these hypotheses are not well motivated, “one simply does not see cognate objects with all unergatives in most languages, nor are unaccusatives consistently derived from transitives morphologically” (Baker 1997:116).

An absolute view of UTAH better explain the unaccusative hypothesis in the adult grammar, however it requires a level of syntactic analysis on the part of the learner that is surprisingly refined such that causative-inchoative pairs, and unaccusatives can be correctly interpreted and acquired in a language like English, for example, which has little surface evidence to differentiate unergatives and unaccusative. I will discuss some problems in what follows.

2.2.2 Dowty (1991)

The purpose of Dowty (1991) is to lay some methodological groundwork for studying thematic roles with the tools of model-theoretic semantics, and to propose some new strategies for addressing problems in this area. The basic idea behind Dowty’s (1991) proposal on theta theory is that underlying basically all of the generalized argument roles (i.e., thematic roles) that a predicate may assign are the two “proto-roles” Proto-Agent and Proto-Patient. A theta role is a set of entailments of a group of predicates. Dowty thinks theta-roles are second order properties indexed with their argument positions.

Thematic role boundaries in the literature are unclear at best, according to Dowty. For example, Jackendoff (1983) divides Agent into Agent and Actor. Cruse

(1973) divides it four ways: Volitive, Effective, Initiative, and Agentive. Dowty (1991) believes if we adopt the finer categorization of roles to achieve certain distinctions we might miss generalizations by not being able to refer to the grosser category, like Agent, for example. I agree with Dowty; multiplying theta roles don't seem to be advantageous theoretically, especially if there isn't a general consensus. More importantly, with a vast number of theta-roles, the decision on what thematic roles to assign to certain arguments is not obvious and becomes an arduous choice in the language learner perspective.

2.2.2.1 The proto-roles

Dowty's hypothesis is that thematic-roles are not discrete categories, but rather a cluster of concepts that make up a proto-role⁷. To work in such a framework, one has to accept that arguments may have different degrees of membership in a role type.

Entailments characterize each of these two proto-roles, Proto-Agent and Proto-Patient (see also Keenan 1976, 1984). Each of them is hypothesized to be independent from the other, although in many cases they appear as a cluster. For example, in *John sees/fears Mary*, the subject John is an example of a Proto-Agent (P-Agent) as it is a sentient/perceptive. An example of the Proto-Patient (P-Patient) is in *John erased the error*, where the object is a P-Patient as it ceases to exist.

Dowty (1991) believes the simplicity of only two proto-roles could help explain how our cognitive apparatus has evolved in such a way that something like an

⁷ Dowty follows Rosch & Mervis 1975's idea of prototypes.

opposition between two proto-roles is enough for making a preliminary categorization of event participants for purposes of learning and organizing a grammar.

For Dowty (1991), that the proto-roles coupled with an argument selection principle (principle that determines which role is associated with which argument position, arguments with greater P-Agent entailments will be the subject of the predicate, while arguments with greater P-Patient entailments will be the object) will determine the relative hierarchy of theta roles. The argument selection principle constraints how a natural language maps arguments of a predicate into syntactic positions. This explains why hierarchies like (9) are typically observed.

(9) Agent > {Instrument/Experiencer} > Patient > {Source/Goal}

Such hierarchies fall out of the two Proto-Role definitions and the argument selection principle.). In theories in which Agent, Patient, etc. are introduced as primitives, hierarchies like (9) must be stipulated.

Dowty's theory is not a semantic one, i.e., it's not an independent part of the semantic component. The nature of the proto-roles comes from the lexical meaning of each verb. The lexical entailments that make up each P-role are an expression of the predicate meaning. P-roles are derived by argument selection and thus they are not syntactic or semantic features in his theory. They exist to work as a default in language acquisition. Language learners learn how arguments are mapped to syntactic positions due to their entailments pattern. Presumably the child will have the cognitive ability to distinguish between certain entailments in a context, e.g., whether

volition, causation, and/or change-of-state are involved, and that will aid the child into mapping arguments appropriately. According to Dowty, “It may turn out that our cognitive apparatus has evolved in such a way that something like an opposition between two proto-roles is a means of making a preliminary categorization of event participants for purposes of learning and organizing a grammar” (Dowty 1991:575).

Lastly, Dowty (1991) discusses his view on the Unaccusative Hypothesis and how it fits in his analysis of thematic roles. As shown by Rosen (1984), it’s not always easy to predict from the meaning of an intransitive verb to which class it will belong in a given language. It’s not clear that crosslinguistically the Unaccusative Hypothesis is safe: different languages treat some verbs as unaccusative and others as unergative (Rosen 1984). Also, the tests to categorize unaccusatives and unergatives sometimes put the boundary in different places (e.g. the ban on impersonal passives of unaccusatives doesn’t stand, Zaenen 1988). I believe that Dowty’s proto roles theory coupled with an instantiation of AUTAH is a good solution to explain the linking problem, especially when seen under the language acquisition perspective. I will elaborate on those in section 2.5.

2.3 Experiencers and Theta Theory

Predicates describing psychological states show nearly synonymous verbs that have opposite linking patterns:

- (10) a. Jordan likes long novels.
- b. Jordan fears spiders.

c. Jordan worries about the ozone layer.

(11) a. Long novels please Jordan.

b. Spiders frighten Jordan.

c. The ozone layer worries Jordan.

The sentences in (10) and (11) seem to have simple syntactic structures with an inversion of theta role assignment. Similar inversions are very common across different languages. Verbs in (10) are subject Experiencer verbs and verbs in (11) are object Experiencer ones.

Unlike other verb classes, psych-verbs that involve an Experiencer role pose a problem to UTAH. Experiencers are sometimes mapped to the external/ subject position and sometimes to the object/complement position, interchanging positions with the Theme⁸ argument. Moreover, Experiencers can also be indirect objects:

(12) This music appealed to Mary.

The alternation in (10) and (11) can be very pervasive in many languages, such as Hebrew⁹ (Reinhart 2001). Most languages will have two or three types of the psych-verbs illustrated above, and in many languages those alternations will be very

⁸ I make the terminological choice of calling ‘Theme’ the theta role of the non-Experiencer argument in psych-verbs. We’ll see in section 2.4.2 that the Theme role was divided in the literature divided into more than one theta roles.

⁹ In most languages, e.g. English and Brazilian Portuguese, these pairs of verbs are limited to a few items.

productive. Notice one has a few ways to treat these facts and conceptualize UTAH or any version of Theta Theory:

- (13) (i) Assume that the data in (10) and (11) show that UTAH is false.
- (ii) Consider that the sentences in (10) and (11) have similar underlying syntactic configuration, (11) involves a nontrivial syntactic derivation.
- (iii) Consider that thematic roles in (10) sentences are different from the ones in (11) sentences.

Option (ii) is assumed in Postal (1971), Belletti & Rizzi (1988), and Landau (2011).

Option (iii) is defended by Pesetsky (1995), Dowty (1991), and Baker (1997). In the next section I will discuss some approaches to a solution of kind (ii) and (iii). In this chapter and chapter 3 I will argue for option (iii). As we will discuss, there are reasons to believe that (ii) is false and a proto role theory can account for the linking pattern seen above.

2.4 Psych-verbs and Experiencers

2.4.1 Belletti & Rizzi (1988)

The main goal of Belletti & Rizzi (1988) is to give an account of some syntactic peculiarities of psychological verbs in Italian. The broader problem in the background of this paper is how thematic representation maps into syntactic structure. Belletti & Rizzi's work on psych verbs classifies them in three different classes:

Class I: Nominative Experiencer, Accusative Theme

(14) Peter fears spiders.

Class II: Nominative Theme, Accusative Experiencer

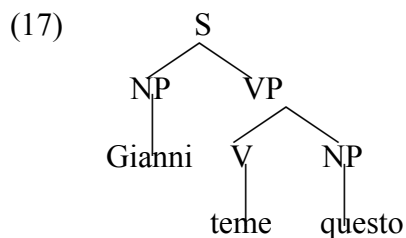
(15) Spiders frighten Peter.

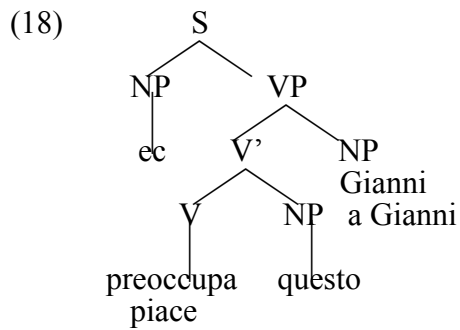
Class III: Nominative Theme, Dative Experiencer

(16) Roller-coasters appeal to Peter.

As we saw above, the classic problem posed by psych-verbs is that Experiencer theta role is projected to different syntactic configurations, apparently in an arbitrary way. This conflicts with the assumption that theta roles/theta-grids are always predictably mapped onto D-structure, as proposed by UTAH.

Belletti & Rizzi (1988) follow Postal (1971) in his suggestion that sentences in (15) and (16) are transformationally derived from (14). In sum, only (14) (with correspondent structure in (17) below) exhibits the underlying syntactic representation of psych-verbs, NP-movement is responsible for deriving (15) and (16) from the D-structure structure in (18) below.





Belletti & Rizzi further argue that all class III verbs are unaccusatives, an idea that is generally accepted by other scholars¹⁰. They argue that class II verbs are also unaccusatives and that is the twist they need to maintain an analysis of psych-verbs compatible with a relative view of the UTAH.

Notice that the theta role assignment in all classes of psych-verbs is now regular, i.e., Theme + verb theta-marks the Experiencer in both (17) and (18) above. Belletti & Rizzi (1988) suggest that substantive distinctions between theta roles are irrelevant within formal grammar but it is important to the syntax-cognitive systems interface. Mapping of theta roles onto D-structure positions happens in a principled way, but further grammatical processes exclusively use structural information so only indirectly refer to theta structure. They argue for a RUTAH, where Experiencers are higher in the thematic hierarchy than Themes.

The authors show how the unusual properties of psych-verbs (see also Postal 1971, Jackendoff 1972) are derived from the claim that verb classes II and III are unaccusatives. I illustrate some of these properties below.

¹⁰ In the next section, I present the syntactic properties of class II and III verbs.

i) The subject of class II verbs is not a deep subject, but a derived one. This can be tested in different ways, for example, a construction with a derived subject cannot be embedded under a causative verb in Italian (Burzio 1986):

(19) a. Gianni ha fatto [Mario telefonare]. (transitive)

Gianni made [Mario call]

b. * Gianni ha fatto [Mario_i essere licenziato e_i]. (passive)

Gianni made [Mario_i be fired e_i]

(Belletti & Rizzi 1988: 303)

Classes I and II of psych verbs contrast here, Belletti & Rizzi illustrate that class II verbs (cf. (20a)) display unaccusative behavior, as opposed to class I verbs (cf. (20b)), which pattern with transitives.

(20) a. * Questo lo ha fatto preoccupare/commuovere/attrarre ancora più a Mario.

this him has made worry/move/attract even more to Mario

‘This made Mario worry/move/attract him even more’

b. Questo lo ha fatto apprezzare/temere/ammirare ancora più a Mario.

this him has made estimate/fear/admire even more to Mario

‘This made Mario estimate/fear/admire him even more’

(Belletti & Rizzi 1988: 303)

ii) The availability of verbal passives is another topic discussed by Belletti & Rizzi. They argue that since verbs without a thematic subject cannot undergo passivization across languages, class II (and III) verbs will not allow passivization, while class I will. In Italian, the verb *venire* ('come') can only be part of verbal passives, while *essere* 'be' is compatible with both verbal and adjectival passives. A test with *venire* is therefore more reliable, and we see a contrast between (21) and (22) below.

- (21) a. Gianni viene temuto da tutti. (Class I)

Gianni comes feared by everyone

- b. Gianni viene apprezzato dai suoi concittadini.

Gianni comes appreciated by his fellow-citizens

- c. Questa scelta viene rispettata dalla maggioranza degli elettori.

This choice comes respected by the majority of the voters

(Belletti & Rizzi 1988: 310)

- (22) a. *Gianni viene preoccupato da tutti (Class II)

Gianni comes worried by everybody

- b. *Gianni viene affascinato da questa prospettiva.

Gianni comes fascinated by this perspective

- c. *Gianni viene appassionato dalla politica.

Gianni comes excited by politics

(Belletti & Rizzi 1988: 311)

Another notorious puzzle raised by the class II verbs (like *preoccupare*) is how the experiencer in the object position can bind an anaphor contained within the subject, an apparent violation of c-command requirement on binding.

(23) (Psych-verb)

a. Questi pettegolezzi su di sè preoccupano Gianni più di ogni altra cosa.

These gossips about himself worry Gianni more than anything else

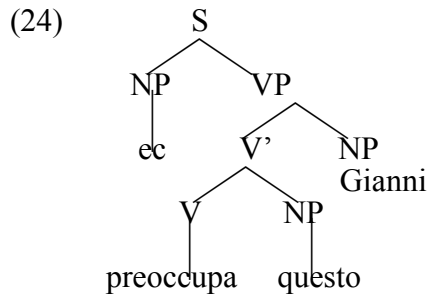
(Non-Psych-verb)

b. *Questi pettegolezzi su di sè descrivono Gianni meglio di ogni biografia ufficiale.

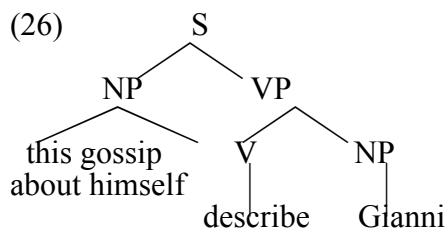
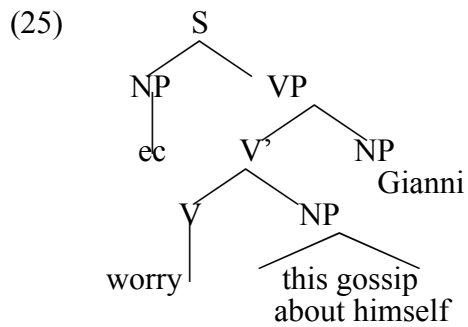
These gossips about himself describe Gianni better than any official biography

One approach to this problem is to exploit the thematic difference between these structures and to use a non-structural approach to anaphors (positing that Experiencers are more prominent than Themes, cf. Jackendoff 1972, Pesetsky 1995).

Under the Belletti & Rizzi analysis of class II psych-verbs, the anaphor contrast in (23) gets a straightforward account. The contrast is expected if class II verbs have non-thematic subjects and both arguments are objects, the Experiencer being projected higher than Theme (the structure in (18) is repeated below for convenience).



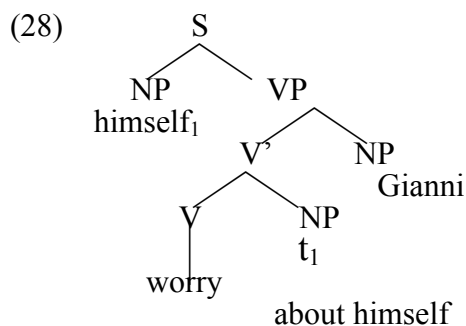
The c-command relationships of anaphors and antecedents in (23a) and (23b) are very different. In (23a), the c-command necessary for binding is met at D-structure (cf. (25)), in (23b), the requirement is not met in any level of representation (cf. (26)). Belletti & Rizzi show how we need to assume that Principle A can be fulfilled at D-structure independently. The contrast in (23) is therefore evidence for the structure in (24).



Belletti & Rizzi's (1988) approach creates yet another binding issue, namely why an anaphor inside the subject can be bound by an object Experiencer (27a), but an anaphor subject can't (27b).

- (27) a. Pictures of himself_i worry John_i/him_i.
 b. *Himself_i worries John_i/him_i.

Looking at the tree structure in (25) above, we expected (27b) to be okay. *Himself* is bound in D-structure, so it must be that (27b) is excluded in a different way. Belletti and Rizzi (1988) argue that (27b) is a violation of Principles B or C (a pronoun and a referential expression must be (locally) free). Note the S-structure in (28), the anaphor binds the pronoun or the referential expression in (27b), but not in (27a) as the anaphor is embedded and doesn't c-command outside its DP. Principles B and C cannot be regarded as anywhere principles¹¹, but must be fulfilled at S-structure. Some evidence for this last claim is also included in their discussion.



¹¹ See also Lebeaux (1998) for the possibility that principle C is an everywhere principle, i.e., it must be fulfilled in all levels of the derivation.

Belletti & Rizzi discusses Romance reflexive properties to argue for a derived subject status of class II psych-verbs. The paper says that the unacceptability of clitic anaphors with class II verbs is evidence of the unaccusativity of this class of verbs. This follows from the Chain Condition (Rizzi 1986) and Theta-Criterion, which rules out NP-movement crossing an argument (the clitic reflexive) that is coindexed with that NP. In detail, arguments in θ' - positions must be connected to traces in θ -positions through chain formation in order to satisfy the θ -criterion at S-structure; only positions in configurations of local binding can be connected through this chain formation, i.e., potential coindexed binders can disrupt the chain. In the example (29) below, the derived subject is ill-formed because the argument filling the θ' -subject position cannot be connected to its trace due to the intervention of the coindexed clitic (Belletti & Rizzi 1988: 296)¹²:

(29) * Gianni_i si_i preoccupa Gianni_i. *Italian*

|_____X_____|

Gianni self worries

‘Gianni worries himself.’

Besides these, Belletti & Rizzi also discuss other properties instantiated by psych-verbs. Class II Experiencer objects show islandhood behavior, for example,

¹² Romance clitics *si/se* have multiple functions, such as reflexive, passive, impersonal and unaccusative, or inchoative. The sentence in (29) and similar shown here are grammatical as an inchoative, with the reading ‘Gianni has gotten worried.’ Although this is an important fact about psych-verbs, it has not been discussed by B&R, Arad, or Landau, to my knowledge. I will discuss the inchoative use of psych-verbs in detail in chapter 3.

which indicates that Experiencers are not canonical objects, which can be extracted from its position, but oblique ones. One such property is transparency to extraction processes: direct objects differ from subjects, prepositional objects and adverbials in that they, by and large, allow extraction of material in Italian. See below the contrast of extracting from class I and class II objects:

- (30) a. La compagnia di cui tutti ammirano il presidente.
 the company of which everybody admires the president
 b. *La compagnia di cui questo spaventa il presidente.
 the company of which this frightens the president

- (31) a. La ragazza di cui Gianni teme il padre.
 the girl of whom Gianni fears the father
 b. *La ragazza di cui Gianni preoccupa il padre.
 the girl of whom Gianni worries the father

(Belletti & Rizzi 1988: (83), (84))

Under a Barrier-system (Chomsky 1986), Belletti & Rizzi argue that extraction from direct objects, because they are L-marked, i.e., lexically theta-marked, will be okay, in contrast to subjects and adverbials. Experiencers of Psych-verbs class II are not L-marked, presumably because they are not theta-marked by a lexical head, but by a V' – Experiencers are specifiers inside a VP, cf. (25). As we can see in the structure in (25) above, the Experiencer NP is in Spec-VP and therefore will constitute a barrier

for extraction, the VP segment inherents barrierhood and extraction from the Experiencer NP produces a subjacency violation. B&R propose then that the accusative Case assigned by the psych-verbs is actually an inherent Case. This explains some of the patterns shown by object Experiencers. They follow Burzio's Generalization and argue there's no structural accusative, as structural accusative is assigned to the object only if a theta role is assigned to the subject. As class II verbs don't have a thematic external argument, no accusative Case assigned to the Experiencer. Class III verbs (*piacere*) act the same way, they have inherent dative as the Experiencer. In addition, in some languages one can see the inherent property of the accusative (German and Icelandic)¹³.

In German, object psych verbs behave in a variety of ways, having object Experiencers as structural accusatives in (32a), inherent accusatives in (32b), and datives in (33) (see McFadden 2006 for relevant tests).

(32) a. Mich ärgern solche Leute.

me-ACC annoy such people

'People like that annoy me.'

b. Mich interessieren solche Leute.

me-ACC interest such people

¹³ Klein & Kutcher 2005 shows that the unaccusative analysis for psych-verbs in German does not hold. For example, the verb classes that Experiencers are Accusatives and Datives do not uniformly select *sein*, the auxiliary in which is chosen for unaccusative verbs in German, contra Belletti & Rizzi 1988. Besides that, the paper shows that not all object Experiencers behave as eventive verbs, against the causative account for object Experiencers of class II given by Pesetsky 1995, Grimshaw 1990, a.o., as we will see in the next section.

‘People like that interest me.’

(McFadden 2006: (30))

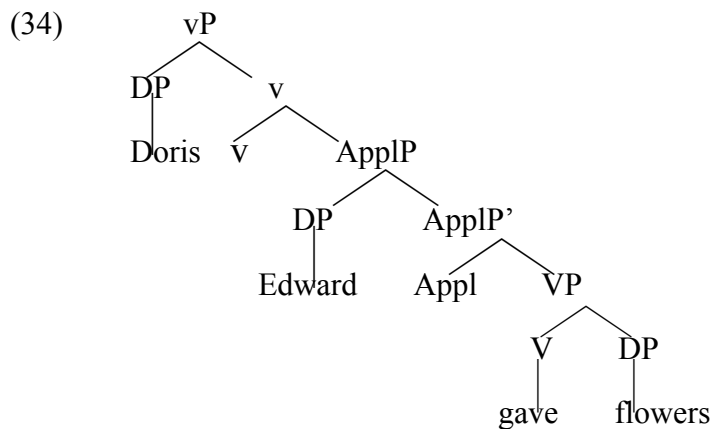
(33) sie gefällt mir

3s:NOM appeal:3s:PRS 1s:DAT

‘She appeals to me.’

(Klein & Kutscher, 2005: (15))

McFadden (2006) rejects that inherent Case is tied to unique thematic values. The author abandons the inherent Case account for datives and argues that the datives’ properties in German and other languages can be derived by their different argument structure. Specifically, he argues that dative arguments are introduced by an Applicative head above the VP (following many such as Marantz 1993, Pylkkänen 2002), while direct objects are complements of V. The external argument is introduced by v (Chomsky 1995).



(McFadden 2006: (5))

Dative Case also has a somewhat consistent semantics (see also Pylkkänen 2002, Cuervo 2003, McIntyre 2006). McFadden comments that the syntactic structure of verbs with similar meaning may differ and one can find morphological and syntactic

evidence for their different structure. For example, despite the shared concept, German verb pairs like *gratulieren* ‘congratulate’ and *beglückwünschen* ‘congratulate’, and *gefällt* in (33) and *mag* ‘like’ which has a nominative Experiencer, like in English¹⁴, these pairs have different syntax.

Following Belletti & Rizzi’s (1986) insight, Landau (2010) argues for the inherent Case status of object Experiencers in languages, but I will show in what follows that the inherent Case analysis of object Experiencers isn’t sustainable in many languages. There’s quite a lot of variation on how languages grammaticalize psych-verbs, instead, and some languages have a strong preference for having Experiencers as an oblique argument.

¹⁴ Klein & Kutscher (2005) show that the Stimulus arguments of psych-verbs bear a variety of Cases, from Accusative, Dative, genitive and being introduced by a preposition. This shows that the eclectic argument structure of these verbs and its Case choice is not restricted to Experiencer role.

- (i) Exp/NOM & Stim/ACC
 ich mag dich
 1s:NOM like: 1s:PRS 2s:ACC
 ‘I like you.’
- (ii) Exp/NOM & Stim/DAT
 ich traue dir
 1s:NOM trust: 1s:PRS 2s:DAT
 ‘I trust you.’
- (iii) Exp/NOM & Stim/GEN
 ich gedenke seiner
 1s:NOM commemorate: 1s:PRS 3s:GEN
 ‘I commemorate him.’
- (iv) Exp/NOM & Stim/PP
 ich hadere mit dir
 1s:NOM quarrel: 1s:PRS PREP 2s:DAT
 ‘I quarrel with you.’

(Klein & Kutscher, 2005: (1)-(9))

2.4.2 Eventivity and stativity - Pesetsky (1995), Arad (1998), and Landau (2010)

2.4.2.1 *The accounts*

Pesetsky (1987, 1995) had the insightful idea to distinguish the theta roles associated with the ‘Theme’ argument of a psych-verb. This led to big innovations on how to account for the linking problem posed by psych-verbs. Pesetsky provided systematic semantic distinctions between class I and class II verbs, thus explaining away the apparent difference in linking patterns.

In the first case, the “Theme” object is interpreted as Target of Emotion or Subject Matter, whereas in the second case the “Theme” subject is interpreted as a Cause. The sentence in (35b), for example, does not entail Bill was angry at the article as (35a) does, since the article could have provoked an anger in Bill directed at the government, for example. Even if Bill likes the article, it has caused Bill to be angry (the article is a Cause) in (35b), whereas Bill must have formed a bad opinion about the article in (35a) (the article is a Target of Emotion or Subject Matter):

- (35) a. Bill was very angry at the article in the Times.
b. The article in the Times angered/enraged Bill. (Pesetsky 1995: 56)

Below in (36) is Pesetsky’s (1995) Thematic Hierarchy, in which Experiencers are higher than Target of Emotion/Subject Matter but lower than Cause. Pesetsky, thus, argues for RUTAH, where Experiencers might be realized as external or internal arguments, depending on the other selected thematic roles for that verb.

(36) Thematic Hierarchy

Agent > Cause > Experiencer > Target (of emotion)/Subject Matter

Following Arad (1998), Landau (2010) shows that psych-verbs are not aspectually or syntactically uniform. Some verbs facilitate a stative reading (37), while others can have either agentive or stative reading equally available (cf. (38)). Landau argues that class III verbs are stative, and can't be used agentively¹⁵.

(37) depress, worry, preoccupy

(38) amuse, terrify, shock, surprise, frighten

Arad (1998) and Landau (2010) show that object Experiencer verbs (class II) only show the psych-effects pointed out by Belletti & Rizzi (1988) when they are stative (non-agentive). The eventive reading of a psych-verb is achieved when someone or something is causing some change of mental state in the Experiencer. In contrast, the stative reading has neither an Agent nor any change of mental state. As argued by Pylkkanen (1997), it involves perception of a certain stimulus by the Experiencer. A mental state is triggered by this perception¹⁶.

¹⁵ In this chapter, I will use the terms *agentively* and *eventive* indiscriminately, as they are both used in this literature.

¹⁶ Arad 1998 actually has three different readings of psych-verbs (see (i) below), depending on two factors: the presence/absence of a causer and the existence of a change of state in the experiencer (Arad 1998: 3-4).

(i) a. The agentive reading, e.g. Nina frightened Laura deliberately.

Belletti & Rizzi's (1988) discuss, for example, that class II predicates cannot be embedded under causative verbs (cf. (39)). This constraint is typical of verbs with no external argument, i.e., causative verbs require an embedded Agent/Cause.

- (39) *Questo lo ha fatto preoccupare /commuovere/attrarre ancora di più a Mario
'This made Mario worry / move / attract him even more'.

(Belletti & Rizzi 1988: 303)

Note, now, that if an agentive reading is forced, the class II verb can appear in this construction with no difficulty:

- (40) Gli ho fatto spaventare il candidato per farlo lavorare di più
'I made him frighten the candidate_i to make him_i work harder.'

(Arad 1998:8)

Arad (1998) and Landau (2010) show that when in (40) the embedded clause forces an unambiguously agentive reading the causative restriction is lifted. That same rationale goes on with other every psych-effect property/test¹⁷.

b. The eventive reading, e.g. The explosion frightened Laura.

c. The stative reading, e.g. Blood sausage disgusts Nina.

¹⁷ Bouchard (1995) and Arad (1998) claim that any argument can be an Experiencer and that the differences in types of psych-verbs are due to aspectual properties. For example, Bouchard shows that if the subject can't perform a physical action, the subject will be interpreted as trigger of mental state in a sentient/experiencer, (instead of an agent), see contrast below:

- (i) a. John disturbed the table. (table: theme)

b. John's behavior disturbed Paul. (Paul: experiencer) [Arad 1998:13]

The exceptional anaphora binding has also proven to be unsustainable. Cançado (1995) notices that that BP's verbs equivalent to class II verbs allow binding of an anaphor inside the subject Theme¹⁸:

(41) Rumores sobre si₁ preocupam Rosa₁.

Rummors about self worry Rosa

'Rummors about herself worry Rosa'

(42) Retratos de si mesma₁ aborrecem Rosa₁.

Rummors about self really worry Rosa

'Rummors about herself worry Rosa'

Belletti & Rizzi's explain these facts based on the D-structure unaccusative representation of class II verbs, as we saw in section 2.4.1. The superficial Theme subject is c-commanded by the object Experiencer in D-structure allowing the binding to take place in that level of representation.

However, Zribi-Hertz (1989), Bouchard (1992), Arad (1998), and Cançado (1995) notice that this kind of binding is not particular to psych-verbs, but also appears with other types of verbs, like transitive causative verbs:

¹⁸ This fact was noticed by Postal and further discussed by Belletti & Rizzi 1988, Bouchard 1992, Pesetsky 1995, a. o.

- (43) A confiança excessiva em si mesma₁ matou Maria₁.
 the trust excessive in herself killed Maria
 ‘The excessive trust in herself killed Maria.’ (Cançado 1997: (23))
- (44) a. Each other’s remarks made John and Mary angry.
 b. Pictures of each other make us happy. (Pesetsky 1995, (124a,d))

Pesetsky (1995) argues that class II psych-verbs and causatives involve a Causer argument that is associated with two theta role positions: one below and one above the Experiencer or Patient object. The lower position the Causer is generated in is responsible for the satisfaction of Principle A. However, as commented by Landau (2010), some cases completely exclude the possibility of the antecedent c-commanding the anaphor:

- (45) The picture of himself in Newsweek shattered the peace of
 mind that John had spent the last six months trying to restore.
 (Pollard & Sag 1992, (62c))

- (46) These nasty stories about himself broke John’s resistance.
 (Bouchard 1992, (38c))

With this we can conclude that nonstructural factors must be involved in the backward binding phenomena observed with psych-verbs and other types of verbs. Hence, backward binding doesn’t provide any specific insight to psych-verbs. Crucially, it cannot serve as an argument for their unaccusativity.

Arad (1998), Folli & Harley (2005), Pylkkänen (2008) and others have suggested that little *v* can have different flavors, e.g. cause or state. For Arad, the verb projects as a lexical head *V* on the stative reading, and on the non-stative/eventive reading, the verb is *v*, the head projecting the agent/causer. In both cases, either the Agent/Causer or the stimulus projects as an external argument (higher than the Experiencer, which is the object).

Landau (2010) proposes that many of the unusual properties that Experiencer objects exhibit crosslinguistically follow if the Experiencer arguments of non-agentive (readings of) psych-verbs are not direct objects but are taken to be underlyingly oblique, i.e., objects of an abstract locative preposition. For Landau, Experiencers are mental locations and the grammatical realization for location is as a subject or oblique. After a crosslinguistic survey, Landau observes that the oblique/location character of Experiencers is clear with class II verbs¹⁹, as “in many languages, object Experiencers can be oblique and in some languages, object Experiencers must be oblique” (Landau 2010:15)²⁰.

The oblique Case associated with object Experiencers is also inherent, an idea first put out by Belletti & Rizzi (1988). Inherent Case is tied to a thematic role

¹⁹ Object Experiencers are prepositional/oblique regardless of whether they have overt or null prepositions. Differently from object Experiencers, Landau suggests subject Experiencers will only be oblique if there's overt evidence for it. For example, in many languages, class I verbs are often construed periphrastically, like in (i).

(i) Ana tem medo de Pedro. (Brazilian Portuguese)
 Ana has fear of Peter
 ‘Ana is afraid of Peter’

²⁰ This happens particularly in agentive psych-verbs. Although it is not clear whether in the languages surveyed by Landau, all the PP/oblique properties of the object Experiencers disappear when the psych-verb has a stative interpretation, as should be expected by Landau's claims.

(Chomsky 1986, 1995). Landau assumes that inherent Case is universally assigned by P. Therefore we expect that object Experiencers should display PP/dative behavior and that the case of the Experiencer should resist syntactic suppression. These are precisely the kinds of evidence Landau pins down to Experiencers throughout his book. However, as we will see in what follows, this trait of Experiencers is not as general crosslinguistically as Landau claims.

Landau (2010) has a different take from Arad (1998) on the eventivity distinction observed for psych-verbs. He argues that non-agentive psych-verbs are unaccusatives, like the class III verbs, and that agentive class II verbs are typical transitive verbs. The argument structures for these verbs suggested by Landau are very much like Belletti and Rizzi's, except that now only some class II verbs fall into the unaccusative category.

Stative class II psych-verbs realize an Experiencer and a Theme and, according to Landau (2010), these Experiencers are inherently case-marked by a null P (and inherent Case is only assigned to internal arguments (see Landau 2010, Zaenen, Maling, & Thráinsson 1985, Sigurðson 1989, 1992)). It follows from this that non-nominative Experiencers are internal arguments. Landau wants to maintain the thematic hierarchy in (36) above and he does so by assuming that stative class II and class III verbs are unaccusatives (the remaining Theme argument is also internal and lower than the Experiencer).

One example of Landau's analysis at work comes from the ban on Romance reflexivization with clitic *si/se*, for example in (47) below (cf. also (29) above).

(47) *João se preocupa. BP

John self worries

‘John worries himself.’

Arad (1998) observed that class III of psych-verbs in Italian do allow clitic reflexivization (cf. (48)), as well as agentive class II verbs (cf. (49)):

(48) a. Gianni si piace.

Gianni si appeal

‘Gianni likes himself’

b. Abbiamo insegnato ai bambini a piacersi.

have taught to-the children to appeal-si

‘We taught the children to like themselves / think highly of themselves’

(49) Gli studenti si spaventano prima degli esami per indursi a studiare di più.

the students si frighten before the exams to urge-si to study more

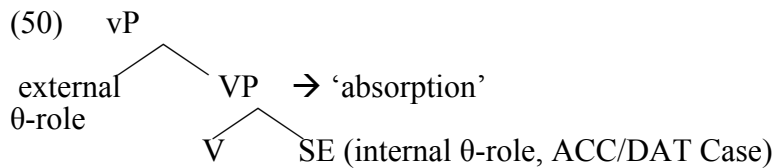
‘The students frighten themselves before exams in order to urge themselves to study harder’

(Arad, 2000: (9b))

Class III verbs are taken to be unaccusatives by Belletti and Rizzi (1988), so the above examples falsify Belletti and Rizzi's claim that the lack of an external argument (unacusativity) is inherently responsible for this property²¹.

Landau (2010) instead argues that reflexivization is a reduction operation that renders verbs as unergatives (Reinhart 1997, et seq.). The reduction absorbs one Case, either Accusative or Dative, and allows only one theta-role to be projected. The theta-role that is reduced in the process may be the external one, but it need not be (as class III doesn't have an external theta role assigned and still can reflexivize).

Because different theta-roles may be absorbed through reflexivization, Landau (2010) claims that the definitive property of reflexive *si/se* is that they may absorb accusative or dative Case, but not oblique Case, see (50).



In this scenario, the preposition can be seen as a marker of dative Case, and not a real preposition. In French, accusative and dative arguments *se* exists, but not oblique ones²².

²¹ I will discuss reflexive clitics pattern in psych-verbs in more depth next section and in chapter 3.

²² Note that although sentences corresponding to (51a) and (52) have similar judgments in BP, (51b) does not, (i). This indicates that Landau's absorption rule is at least under variation across languages.

(i) * Ele se comprou um carro (pra si mesmo).

he se buy a car to himself

'He bought himself a car.'

(51) Accusative *se*

a. Il s'est accusé (lui-même).

he se-is accused (himself)

'He accused himself'

Dative *se*

b. Il s'est acheté une voiture (à lui-même).

he se-is bought a car (to himself)

'He bought himself a car'

(52) Oblique *se*

a. Il a parlé de lui-même.

he has talked of himself

'He talked about himself'

b. * Il s'est parlé (de lui-même).

he se-is talked (of himself)

'He talked about himself

(from Landau 2010: (74), (75),

due to M.A. Friedman)

Remember that Landau (2010) argues that stative psych-verbs assign an inherent Case to their Experiencer, and in languages like English, what looks like an accusative Case of Experiencers is actually an inherent oblique as well. Because inherent case cannot be absorbed by a reflexive clitic, the impossibility of class II

verbs to show reflexivization is readily accounted for. As for class III, the dative Case can be absorbed by the reflexive and therefore reflexivization is acceptable²³.

Landau (2010) can also account for why agentive class II verbs allow reflexive clitics (cf. (49)). Remember that agentive class II psych-verbs are transitive, their Experiencer receives a structural accusative Case. As now the Experiencer bears a structural Accusative, *se* can absorb its Case and generate the reflexive reduced sentences. Note that some psych-verbs in BP are resistant to reflexivization, even when an agentive reading is attempted as shown in (53):

(53) a. *Os estudantes se preocuparam antes dos exames pra poderem estudar mais.

the students self preoccupy before the exams to get study-INF more

‘The students worried themselves before exams in order to get themselves to study more.’

b. ?? Pedro se intimidou na busca de ficar alerta e treinar duro para a

[competição.

Pedro self intimidated in search of stay alert and train hard to the competition

‘Pedro intimidated himself in order to stay alert and to train harder for the competition.’

²³ Notice, however that this assumption is irreconcilable with Landau’s claim that all non-subject Experiencers are oblique. Infact. Landau (2010) himself argues that dative Experiencers are also inherently Case-marked, so at this point I am unsure how his analysis can actually account for the reflexive facts. There’s also evidence that an applicative head structurally inserts dative arguments, which are the inherently Case marked argument (McIntyre 2006, McFadden 2006).

In the next chapter, I will discuss reflexivization in BP; we'll see that some class II psych-verbs allow a reflexive clitic, and that Landau's account for lack of reflexivization based on inherent Case can't explain BP's pattern.

2.4.2.2 Inherent Case and the unaccusativity of Experiencers

Returning to Landau's (2010) and Belletti & Rizzi's (1988) proposal that inherent Case is assigned to Experiencers. Belletti & Rizzi (1988) argue that psych-verbs assign an inherent Case to their Experiencer and their motivation was mainly theoretical, as their analysis relied on the claim that psych-verbs class II and III are unaccusatives. However class II verbs seem to have Accusative object Experiencers, which is an apparent violation of Burzio's generalization. Belletti & Rizzi solve this problem by stating that class II verbs assign an inherent Accusative, and Burzio's generalization only applies to structural accusative Case²⁴.

Landau (2010) on the other hand, provides evidence in favor of the inherent (oblique) Case nature of the object Experiencer when the psych-verb is stative. In many languages one can see the true nature of object Experiencers as an oblique either overtly (Greek, Russian, Navajo) or covertly (English, Italian). Landau derives

²⁴ Cançado (1995) argues against Belletti & Rizzi's approach to inherent Case marking on object Experiencers, due to lack of evidence. Cançado assumes that the Experiencer receives structural accusative Case. Cançado argues that because clitic accusatives show up in contexts where there's no evident external argument involved in a sentence, it can't be that Burzio's generalization is correct.

- (i) a. Não tinha uma nuvem no céu.
 not have any cloud in-the sky
 b. Nuvens? Não **as** tinha no céu.
 cloud not 3pl-CL have in-the sky

many properties of class II and class III psych-verbs from oblique status of Experiencers, and claims it is a universal property of psych-verbs.

Languages like Greek and Navajo express most or all of their object experiencers as indirect objects. However, Landau shows that a small set of languages seems to indicate that Experiencers are oblique objects, but some of the cases discussed are not general. Take, for example, Spanish. The examples raised are those with idiosyncratic verbs like *gustar* ('like') that take a quirky object Experiencer. The other evidence is the fact that for some dialects of Spanish, object Experiencers seem to alternate between the dative object clitic *le* in agentive contexts and accusative clitic *lo* in non-agentive ones.

In other languages, like French, the evidence comes rather indirectly, with a periphrastically expressed psychological predicate like the one below.

(54) a. Jean donne du soucis à Marie.

Jean gives some worry to Marie

'Jean worries Marie'

b. Il y a en Pierre un profond mépris de l'argent.

there is in Pierre a deep contempt of money

'There is in Pierre a deep contempt of money'

(French: Bouchard 1995: 266, ex. 13c,d, from Landau (2010: 18))

This phenomenon is not restricted to psychological predicates, but is actually quite broadly used in BP, for example in (55) and (56). This cannot be used to show that these

verbs too should be analyzed as containing an indirect object, either in BP or by generalizing crosslinguistically.

(55) a. Pedro abraçou Maria.

‘Pedro hugged Maria.’

b. Pedro deu um abraço na Maria.

Pedro gave a hug in-the Maria

‘Pedro gave a hug to Maria.’

(56) a. Pedro confia na Maria.

Pedro trusts in-the Maria

‘Pedro trusts Maria.’

b. Pedro tem confiança na Maria.

Pedro has trust in-the Maria

‘Pedro has trust/faith in Maria.’

It seems that in Brazilian Portuguese there’s no compelling evidence that a prepositional inherent Case is involved in stative class II psych-verbs. BP has little overt Case marking distinctions, all of them are seen in the pronominal system. When the Experiencer is stressed in a contrastive focus context, the use of a preverbal object clitic is no longer available, and the choice of Case for the strong pronoun depends on the choice of verb.

- (57) a. Pedro preocupou A MIM/??EU
 Pedro worries me-OBLIQUE/me-ACC
- b. Pedro intencionalmente assustou A MIM/??EU
 Pedro intentionally scared me-OBLIQUE/me-ACC
- c. Pedro beijou *A MIM/EU
 Pedro kissed me-OBLIQUE/me-ACC
- d. Pedro mandou a carta PRA MIM/*EU
 Pedro sent the letter to me-OBLIQUE/me-ACC

Notice above that both stative (57a) and agentive (57b) class II psych-verbs require a dative form of the strong object pronoun, while an action verb (57c) requires the accusative form and the location argument in (57d) requires a dative plus a real preposition *pra* ('to'). Therefore there isn't much we can conclude about the prepositional/inherent flavor of stative object Experiencers.

There are other reasons to believe that in Brazilian Portuguese, the object of psych-verbs is not inherently Case marked. Kato & Nunes (2008) and Nunes (2009) show that prepositions that assign inherent Case can be omitted in WH-questions in Brazilian Portuguese, while true prepositions can't. That accounts for the contrast seen below²⁵:

- (58) a. O João gosta *(d)a Maria.
 the João likes of-the Mary
 'João likes Mary.'

²⁵ It should be noted that BP doesn't generally allow P-stranding (Salles 1997).

b. (De) quem que o João gosta?

of who that the João likes

‘Who does João like?’

(59) a. O João riu *(d)a Maria.

the João laughed of-the Mary

‘João laughed at Mary.’

b. *(De) quem que o João riu?

of whom that the João laugh

‘Who did João laugh at?’

As you see by the contrast above, although both verbs subcategorize for a PP headed by *de* (‘of’), this preposition can only be dropped with the complement of *gostar* (‘like’), which assigns inherent Case to its complement (cf. (58)), but not *rir* (‘laugh’), as *de* assigns a structural Case in (59)²⁶. So inherent Case in Brazilian Portuguese seems to have an overt marking, even if this marking may be lifted under some conditions. Despite the fact that most psych verbs in BP don’t show overt prepositions, below I test psych verbs of different classes and see their behavior under WH-extraction of the Experiencer.

²⁶ The same pattern seen in (58) and (59) above can be observed with the preposition *com* (‘with’). The reader is referred to Kato & Nunes 2008 and Nunes 2009 for full details on this analysis.

- (60) a. Esse livro agrada (a)o Pedro. Class III
 this book pleases to-the Pedro
 ‘This book pleases Pedro.’
 b. ?*(A) quem esse livro agrada?
 to whom this book pleases?
 ‘Who does this book please?’
- (61) a. O aquecimento global preocupa/aborrece (*a) Pedro. Class II stative
 Global warming worry/bother to Pedro
 ‘Global warming worrys/bothers Pedro.’
 b. (A) quem aquecimento global preocupa/aborrece?
 to whom gloal warming worry/bother
 ‘Who does global warming worry/bother?’
- (62) a. Pedro atormentou Maria Class II agentive
 Pedro tormented Maria
 ‘Pedro tormented Maria.’
 b. (?*A) quem Pedro atormentou?
 to whom Pedro tormented
 ‘Who did Pedro torment?’

- (63) a. Pedro intencionalmente comoveu Maria. Class II agentive
 Pedro intentionally moved Maria
 ‘Pedro intentionally moved Maria.’
 b. ?(A) quem Pedro intencionalmente comoveu?
 to whom Pedro intentionally moved
 ‘Who did Pedro intentionally moved?’

The examples in (60) indicate that the object Experiencers of class III verbs which obligatorily take an oblique Experiencer with an overt preposition in Spanish and Italian don’t really behave like that in BP. The Experiencer argument of class II verbs in BP only optionally takes a preposition in both declarative and interrogative sentences. Some class II verbs allow an optional preposition only when the object Experiencer is WH-moved (similarly to Italian, see Belletti & Rizzi 1988), which could be an indication that inherent Case is assigned to these object Experiencers. However this property doesn’t align with the stative/agentive distinction argued by Landau (2010) to define oblique Experiencers and direct objects Patients respectively, as agentive verbs may either allow or not these prepositions, see contrast between (62) and (63). Besides that, the preposition is not available in the declarative sentences with these verbs, therefore we cannot make any definitive conclusion about the nature of these prepositions based on this test.²⁷

²⁷ Although the object extraction with a preposition in (61) and (63) is much better than typical direct object Patients in (i) below, some non-psych verbs also allow the extra preposition in WH-questions of direct object, see (ii) below:

- (i) *A quem Maria beijou/criticou?
 to who Maria kissed/criticized?

From the above we can conclude that there's no good evidence supporting the claim that object Experiencers in BP bear inherent Case. Overall, there's not even good evidence to say that Experiencers are indirect objects, with the exception of the class III verbs *apelar* ('appeal')²⁸. That object Experiencers (in either stative or eventive verbs) receive an oblique inherent Case cannot be substantiated in Brazilian Portuguese, and here I assume this is better argued for in languages that actually show evidence for the inherent oblique assignment.

Remember that Landau (2010) claims that not only are the Object Experiencers of stative psych-verbs oblique, but they receive an inherent Case crosslinguistically; additionally, stative psych-verbs are unaccusatives. There's no evidence that in BP object Experiencer verbs are unaccusatives. For example, BP disallows post verbal subjects and null referential subjects as a general rule, differing from many Romance languages in that respect (see e.g. Duarte 1995, 2003)²⁹. Unaccusative verbs however allow the surface subject to come postverbally in absolute past participle constructions (cf. (64a)), in contrast to unergative (cf. (64b)) and transitive verbs (cf. (64c)) (c.f. Duarte 2003):

(64) a. Morreu uma pessoa no acidente,...

Died a person on the accident

(ii) A quem Ana convenceu/acolheu?

To whom Ana convinced/received?

²⁸ It's also possible that object Experiencers of verbs that only admit stative readings (like *worry*, *concern*) do have a different Case marking system; perhaps a null preposition or inherent Case is involved in those cases, based on data in (57)-(59). In the next chapter, I will refute this line of account.

²⁹ We will look at BP's null subject properties in more detail in chapter 4.

b. *Brincado um menino na varanda...

Played a boy in the porch

c. *Abraçado a sua amiga, Maria, ...

hugged the her friend, Maria

Notice that psych-verbs of class II that are considered unaccusatives by Belletti & Rizzi and Landau, do not allow such formation³⁰:

- | | | |
|------|---|-------------------|
| (65) | a. *Preocupada uma menina (com o trânsito), ... | Class II stative |
| | Worried a girl with the traffic | |
| | b. *Humilhado um senador (com o video), ... | Class II agentive |
| | Humiliated a senator with the video | |
| | c. *Animada uma garota (com a novidade) ... | Class II eventive |
| | Cheered up a girl with the news | |

Nunes (2008, 2009) has shown that arguments that receive inherent Case in Brazilian

³⁰ Notice that according to Landau 2010 and Belletti & Rizzi 1988, the direct object of psych-verbs class II is actually the Theme argument that ends up as the subject in these sentences. That would predict that the inversions in sentences in (65) would result in the Theme subject argument being post-verbal. That is also unacceptable:

- | | | |
|-----|--|-------------------|
| (i) | a. *Preocupado um rumor, (Maria) ... | Class II stative |
| | Worried a rumor, (Maria) | |
| | b. *Humilhado um video, (o senador)... | Class II agentive |
| | Humiliated a video, (the senator) | |
| | c. *Animada certa novidade, (a menina) ... | Class II eventive |
| | Cheered up some news, (the girl), | |

Portuguese turn out to be inert for A-movement. Because we are testing objects in BP, passivization is the main A-movement test we can apply.

We will see in the next chapter how psych-verbs behave in that respect, as well as regarding other psych-effects. I will conclude that a class of object Experiencer psych-verbs are not transitives or unaccusatives, but they are two-argument ergative verbs. They share some properties of unaccusative verbs, but also differ from them in other properties, and they don't assign inherent Case.

Beyond BP, there are languages like Chinese, Yucatec Mayan, and Turkish that don't mark their Experiencers in any different fashion than their regular direct objects and they don't show any psych-effects (Verhoeven 2008, 2010). Moreover, the literature shows that not all languages are sensitive to the stative/agentive distinction. Verhoeven (2010) using a judgment solicitation task, shows that the languages studied split into two groups regarding the semantic properties of their transitive object Experiencer verbs: German and Modern Greek distinguish between two types of Object Experiencers, agentive and stative ones, while Chinese, Yucatec Mayan, and Turkish show a uniform class of Object Experiencer verbs, specifically they behave like canonical transitive verbs. The results of the experimental study provide systematic evidence that the agentivity and stativity of transitive EO verbs is subject to typological variation, languages that have syntactic psych-effects with their object experiencer verbs, like Greek and German, also seem to distinguish semantically stativity and agentivity, while other languages don't have either.

2.4.2.3 *LF movement and subjecthood*

Ultimately, Landau (2010) argues that despite the fact that non-nominative Experiencers lack some properties of subjects, all Experiencers are LF-subjects. Object Experiencers moves to Spec-TP in LF as specifiers. The silent or overt preposition that Case-marks Experiencers has a location feature [loc], which must be properly interpreted at LF³¹ and therefore is the trigger for the LF-raising of Experiencers.

Now we get the full picture: precisely the same Experiencer arguments that manifest all the oblique properties discussed in the first half of this monograph, also manifest the LF-subjecthood properties, to which we turn below. Both sets of properties stem from the nature of the preposition that assigns quirky Case to the Experiencer DP.

Therefore Landau's approach favors a RUTAH view, following his predecessors Belletti & Rizzi (1988) and Pesetsky (1995). Although Experiencers might be a lower argument in D-structure, they raise to a subject position at LF due to a [loc] feature. This only happens with stative/unaccusative psych-verbs Experiencers.

³¹ Landau assumes that the T head is the locus of temporal and spatial interpretation of the clause and therefore temporal descriptions, such as the Experiencer (mental location) must merge with T. Notice that this step implies that theta-roles are syntactically relevant, as suggested by Landau, that "something about the special interpretation of experiencers arises from these prepositions" (Landau 2010:89). So a mental locative relation between the stimulus/causer and experiencer is encoded by the feature [loc], which has syntactic requirements. Although the claim is that all locatives should move overtly or covertly to TP due to this feature, there's no evidence that languages do that. Additionally, I thank Norbert Hornstein (p.c) for pointing out that Landau's assumption about locative interpretation would imply that small clauses have a TP projection:

(i) I saw Bill sit down *in the garden*.

The main motivation presented for analyzing object Experiencers as subjects, what Landau calls “LF Quirkyness”, is taken from adjunct control. The crosslinguistic evidence comes from class II and class III psych-verbs in control structures involving various types of embedded nonfinite complements. The generalization taken from Relational Grammar research (Perlmutter 1984, Harris 1984, a.o.) is essentially as below:

- (66) Given a structure [...X... [s PRO...]], where X is a matrix argument and S is a non-finite adjunct.
- a. X may control PRO if X is a surface subject.
 - b X may control PRO if X is a dative/accusative Experiencer.
 - c. X may not control PRO if X is anything else (e.g., accusative Patient, dative, Goal).

The main point to observe is that accusative Experiencers – unlike standard direct objects – can control non-finite adjuncts. Compare (67) and (68) in Italian, for example (Perlmutter 1984, from Landau 2010):

- (67) Sono stato sgridato dalla mama con tanta furia [da pentirmi/*si subito].
 ‘I was scolded by mother so furiously that I/*she immediately felt remorseful
- (68) Gli sono mancate vitamine tanto [da ammalarsi].
 ‘He lacked vitamins to such an extent that he got sick.’

Landau (2010) assumes that the adjuncts under discussion attach at the TP level – sisters to T' or TP and that adjunct control is a case of secondary predication.

Adopting the assumption that predication requires mutual c-command, then the class of possible controllers of a TP adjunct will be the DPs that mutually c-command it at the relevant level, which for Landau is LF. Therefore, only LF occupants of Spec-TP will be able to control into the adjunct, and that includes the Experiencer raised at LF by locative inversion.

Despite the claims from Landau (2010) that adjunct control is an independent problem object Experiencers pose and the main reason for a locative inversion account for Experiencers, it seems that the data presented by Landau quoting other authors is insufficient to prove this point. Notice that examples like (68) can induce contrasting judgments. In English, for example, the Experiencer object is not able to control PRO in the adjunct clause³²:

- (69) a. *Society affairs irritate Peter before attending them.
b. * Society affairs irritate Peter before criticizing them.

Furthermore, examples from Italian like (68) do not clearly show the authors' point as the class III Experiencer object is a dative clitic that is attached to the verb. In these sentences, the subject is a *pro*-drop expletive and therefore there is no other possible interpretation for the controlled PRO other than the dative clitic. All other examples in Italian that show the restriction in place have an agentive subject that takes control

³² I thank Norbert Hornstein for pointing out these examples to me.

of PRO (see (67)). In addition, clitics adjoin to the verb, unlike other moved DP (cf. (70d)). It's possible that the different types of operations provide different outputs for the control in the adjunct clause.

- (70) a. La mamma mi ha sgridato con tanta furia [da pentirsi/*mi subito].
 'Mother scolded me so furiously that she/*I immediately felt remorseful'
- b. Sono stato sgridato dalla mama con tanta furia [da pentirmi/*si subito].
 'I was scolded by mother so furiously that I/*she immediately felt remorseful'
- c. * Gliel'ho detto tante volte [da arrabbiarsi].
 'I said it to him so many times that he got angry'
- d. * A Giorgio è stata detta la stessa cosa tante volte [da diventare matto].
 'The same thing was said to Giorgio so many times that he went crazy'

(Perlmutter 1984, from Landau 2010)

All other language examples had a similar issue. Some used clausal Experiencer with *seem* raising construction:

- (71) Sutoraiki o yatte inagara, roodoosya ni wa keisya no hoo ga tadasiku omoeta
 strike-ACC doing be-while workers-DAT-TOP employer-GEN side-NOM
 correct seemed
 'Although they₁ were on strike, the employers position seemed correct to the workers₁'

(Perlmutter 1984, from Landau 2010)

Notice that the Experiencer in (71) is higher in the clause than any object, as it is inserted as a specifier by a head in the main verbal phrase (an Applicative head, a vP or RP, see e.g. McGinnis 1998). These Experiencers behave differently from psych-verb Experiencers as we will see in chapter 4. Therefore, these examples again don't seem to categorically show an unexpected control of adjunct PRO as they are high in the clause structure.

Here I provide some tests of adjunct control in Brazilian Portuguese. The judgments refute the claim that object Experiencers are especially able to control into adjuncts. Below in (72) neither the object of *criticar* ('criticize') nor the Experiencer object of the psych-verb *ameaçar* ('threaten') can control the subject PRO of the adjunct clause.

- (72) a. Pedro₁ criticou Carlos₂ depois de PRO_{1/*2} aceitar a promoção de cargo.
 Pedro criticized Carlos after accepting the promotion of position
- b. Pedro₁ ameaçou Carlos₂ depois de aceitar PRO_{1/*2} a promoção de cargo.
 Pedro threatened Carlos after accepting the promotion of position

In other cases, Experiencer objects (cf. (73a,c) with one possible antecedent and (73b) with two possible antecedents) as well as other objects (cf. (73d,e) are largely deviant as antecedents for an adjunct control clause.

- (73) a. ?? O barulho assustou Maria₁ ao PRO₁ entrar no quarto.

The noise scared Maria while entering in-the room

b. Pedro₁ assustou Maria₂ ao entrar PRO_{1/*2} no quarto.

Pedro scared Maria while entering in-the room

c. ??A luz cegou Maria₁ ao PRO₁ entrar no quarto.

The light blinded Maria while entering in-the room

d. Pedro₁ abraçou Maria₂ ao PRO_{1/*2} entrar no quarto.

Pedro hugged Maria while entering in-the room

e. Pedro₁ deu o livro pra Maria₂ ao PRO_{1/*2} entrar no quarto.

Pedro gave the book to-the Maria while entering in the room

If this evidence for LF quirkiness is dropped, the main argument by Landau to defend the LF movement of the experiencer is lost. Given that, I will here assume with Arad (1998) that the verbal composition of different classes of psych-verbs explains the properties they carry. Stativity and eventivity come from the predication properties, and not from either the experiencer's LF-movement or the verb unaccusativity (contra Belletti & Rizzi 1988 and Landau 2010).

2.4.3 Absolute UTAH and other solutions for Experiencers

Dowty (1991) and Baker (1997) want to explain the experiencer linking 'problem' in a different way. They share some of the same ideas, but also differ in their approaches in many ways. Remember from section 2.3 that Dowty's theory depends on comparing argument positions according to how many Proto-Agent or Proto-Patient

Notice that Dowty (1991) doesn't believe in a structured version of UTAH. He argues there's no specific link between P-Agent and P-Patient theta roles and the specific argument positions of subject and direct object respectively. The relation between proto-roles and grammatical relations in languages like English is only a tendency.

On the contrary, Baker (1997) wants to maintain AUTAH. He rejects Belletti & Rizzi's (1988) thematic hierarchy and their proposed unaccusative syntax of class II and III verbs altogether. Baker analyzes the subjects of (74b) as Proto-Agents (they are a Cause). The backward binding effects pointed out by Belletti & Rizzi (1988) as a strong argument for their analysis turned out to be a spurious generalization, as discussed in section 2.4.2.1. As a consequence of Baker's approach, (74b) is not an unaccusative structure. The source of the special "psych-effects" associated with psych-verbs like in (74b) is null Ps introducing the Experiencer argument, which can be thought of as a (mental) goal or locative. The Experiencer is very much like an applied object (Goal or Benefactive), explaining why it is a weak island and why object Experiencer verbs can't be nominalized, form compounds or have unaccusative counterparts.

2.5 Experiencers and the Theta-Theory: a discussion

2.5.1 Theta Theory: do we need it?

There are some steps a child learning any natural language needs to take in order to map the surface form to the underlying one. Upon listening to a sentence like 'Jordan ate the mango', the child needs to identify participants in a sentence. Participants

taken to be Theme or Agent conceptually have to be associated with a linguistic representation. After that is determined, syntactic processes may happen (passivization, WH-question formation, raising, etc) and the syntactic representation may change, however the participants/theta roles should remain the same (by the Projection Principle, Chomsky 1981). Remember that children do not have access to the underlying structures and transformation, only the resulting sentences. They should learn how to attribute theta-roles in the simple cases first, and use those generalizations for advanced structures. That is if we assume that theta-roles are indeed necessary in all stages of language acquisition and use. If theta roles are, on the other hand, a tool in UG to guide the infant in acquiring a language based on primary data, then we can assume that once some sort of thematic role interpretation of enough cases is experienced and learned, the child can disregard the thematic-role tool and use the semantics of each predicate and syntactic knowledge to assign its argument interpretations that we, as linguists, may want to annotate as having one theta-role or another.

A fundamental feature of natural languages is that the mappings between the roles in an event and the positions in a syntactic structure are systematic both within and between languages. As we discussed throughout this chapter, Theta Theory is an attempt to capture this property in language. If parsing of grammatical arguments into theta roles were arbitrary, one would expect that languages would vary dramatically in how they do so. One would expect to see ‘clear’ Agents having indirect objects as their typical position in some languages, and that is simply not the case.

Therefore, many linguists believe that children must have a baseline on how to parse grammatical arguments into the semantic roles they play in the event. This baseline is hard-wired in their UG knowledge. Once some information is learned through verbs, say the child now knows that action verbs like *kick* and *hug* will have Agents grammaticalized as external arguments and Themes/Patients as internal arguments, then the child can apply this knowledge to other verbs they learn.

Some sort of thematic theory is especially necessary for intransitive verbs, crucially if one takes the Unaccusative Hypothesis to be true. In languages like English, where generally one argument verbs must realize their argument as a subject in S-structure (due to Case reasons and/or EPP), the initial data children are exposed to can be very misleading. Therefore it seems reasonable for linguists to assume some knowledge in UG guides children learning any language to acquire the syntactic mapping of theta roles.

That said, the main question remaining is where this knowledge is located. Baker (1997) believes that UTAH is specifically important at the interface of language and interpretation, the “Conceptual-Intensional system” (CI, Chomsky 1995) and therefore that UTAH should apply at the LF level, as this is the last syntactic level before CI.

Whether UTAH or some alike rule is needed in syntax at all is a matter of debate. Dowty, for example, is against UTAH and in favor of a more lexical approach to theta roles. Theta roles can be identified through entailments and therefore are not really relevant to the syntax or semantics, but they are a consequence of predication selection rules.

Baker (1997) suggests as a final note that the thematic hierarchy may in fact be reduced to lexical decomposition of predicates: [x CAUSE [y BECOME [AT STATE z]]], following Marantz (1994), and Hale & Kayser (1993). In this case, x is the Agent, y the Theme and z the Goal/Location, and that is derivable by the argument selection/argument structure of the clause. If this conceptual structure is directly mapped to the syntax (with abstract heads), then it follows automatically that x is the subject, y the direct object and z oblique. In other words, the more closely our syntax reflects conceptual structure, the more trivial UTAH becomes, possibly redundant.

Given that the tools to decompose the conceptual structure of our clauses semantically and syntactically must be part of UG, it seems plausibly true that a thematic hierarchy and even UTAH are not needed, i.e. they are derived and not fundamental. However, one can still question why the argument structure of a clause is the way it is. Why are Agents promoted by say a root CAUSE that is always higher than the other roots that introduce Themes, for instance? This turns into a bigger question that goes beyond just the linking problem. The regularity of theta-assignment must be instituted somewhere in the grammar and it is true that no matter where linguists anchor it, asking why things are the way they are (and not in any other specific way, or simply arbitrary) is fundamental to the development of the linguistic theory. This topic however surpasses the aims of this dissertation.

2.5.2 How many roles?

This question seems to be less important, and may be in part of a terminological issue, rather than a theoretical one. As we saw, linguists have different reasons to multiply or to reduce the number of theta roles available in languages, and many times it is not clear whether these decisions are purely terminological, i.e., as a tool for researchers to facilitate explaining certain phenomena by referring to theta role names, or whether these decisions actually bear some theoretical consequence.

I consider with Dowty (1991) and Baker (1997) that there aren't great reasons to distinguish many different theta roles. An advantage of Dowty's system is that details of theta roles are unimportant, you need entailments to identify which Proto-role each argument falls into. Under Chomsky's view, besides the Theta Criterion two-way uniqueness statement, theta roles don't seem to be important for the grammar in many ways. To my knowledge, a fine-grained thematic theory that distinguishes many theta roles doesn't seem to have theoretical advantages over a coarse-grained thematic theory that distinguishes only two or three "macroroles" in a syntactic level.

With Minimalist glasses, postulating a big number of thematic roles is not an economical view of UG. If they are not necessary for any set of reasons in the grammar and in its acquisition, then distinguishing theta roles may only be useful for terminology and description in the linguist's work.

The Thematic Theory may be fully functional with a binary and possibly a ternary distinction (e.g. Baker (1997)). These are different roles that will consistently

take different grammatical relations in the sentence. With this, one to three place predicates can easily be accounted for, in terms of their thematic role alignment.

It is also of little significance whether you name these thematic roles as Agent, Patient/Theme, Goal/Location (as Baker does) or any variant of these. It's our intuition that Agent is an appropriate terminology for most external arguments, but again, that need not be the case. Sometimes, as we saw in this chapter, external arguments are Experiencers, and we may want to be able to distinguish Experiencers and Agents at a semantic level. However the discussion in this chapter points out that this distinction seems to be of little importance in syntax.

In conclusion, considering thematic roles and UTAH as reflexes of the semantic composition of the clause is an elegant solution to the linking problem. In addition to taking away the apparent arbitrariness of the statements concerning where the Theme and the Agent appear, this approach makes it possible to distinguish unergative verbs from unaccusative verbs within a bare phrase structure system without claiming that either is a disguised transitive. Assuming these suggestions from Baker to be on the correct track, UTAH can indeed be reduced to a matter of a "virtual conceptual necessity" in DS/first merge configurations, as now UTAH follows from independently needed mechanisms in the grammar.

2.5.3 Experiencer theta-role

We saw in section 2.4 that the Experiencer theta role is a subject of much controversy in the Thematic Theory literature. Experiencers potentially pose a big problem to AUTAH. Because they can be external arguments (75a), direct objects (75b) and

indirect objects (75c), many people have either supported a relative version of UTAH (like Belletti & Rizzi 1988, Landau 2010 to name a few), or tried to reduce the thematic role *Experiencer* to other roles that could be captured by AUTAH (Baker 1997) or maybe not adopt UTAH in the first place (like Dowty 1991).

- (75) a. Jordan fears spiders. (class I)
b. Spiders frighten Jordan. (class II)
c. Suspenseful movies are appealing to Ana. (class III)

Before asking ourselves if and why we need the Experiencer theta role at all, let's first re-classify and organize the kinds of Experiencers we have seen so far in this chapter. After much work done on the aspect of psych-verbs, we should now be convinced that not all class II verbs are the same. According to Landau's (2010) analysis, the eventive class II verbs behave like regular transitives, and therefore have Experiencers as direct objects (cf. (75a)). The non-eventive/stative class II verbs show unaccusative behavior and their Experiencer argument behaves like an oblique. Therefore they are indirect objects (cf. (76b)). The remaining cases of Experiencers are: i) subjects of class I verbs, which show regular transitive syntax (cf. (76c)); ii) indirect objects of the class III verbs that are typical unaccusatives (cf. (76d)).

- (76) a. John deliberately scared *Ana*. (Direct Object)
 b. Mangos please **P_{null}** *Ana*. (Indirect Object)
 c. *Ana* loves mangos. (Subject)

d. Loud Rock music is appealing to *Ana*.

(Indirect Object)

Notice that class II in (76b) and class III (76d) verbs have Experiencers as indirect objects. Landau (2010), following Belletti & Rizzi (1988), argues that both these classes of psych-verbs are inherently theta-marked. More specifically, that there's an overt or covert P that assigns Case and theta-roles to these Experiencers. Landau argues that all Experiencers are mental locations (Landau 2010: 6)³⁵ and that all non-subject Experiencers bear inherent case (Landau 2010: 20).

However, Landau admits that there's no good reason to believe all Experiencers are PPs, i.e., have the [loc] feature associated with 'location'. First, subject Experiencers in many languages do not show properties of locatives or PPs, and therefore are not considered being locative elements by the author. Second, the eventive class II psych-verbs do not project Experiencers as locative PPs, these Experiencers pattern like direct objects, receiving accusative Case from V.

The facts listed above provides evidence that the theta role *Experiencer* is not a unified category, and there's no one (or two!) syntactic realization associated with Experiencers. Although Landau's ultimate claim is that all Experiencers are locatives, subject Experiencers and direct object Experiencers do not conform to this generalization, as noted by Landau himself.

Landau's claim that all Experiencers are LF subjects also doesn't capture the distribution of Experiencers. First, class I Experiencers do not have the [loc] feature associated with locatives (which are the trigger for movement of the Experiencer to

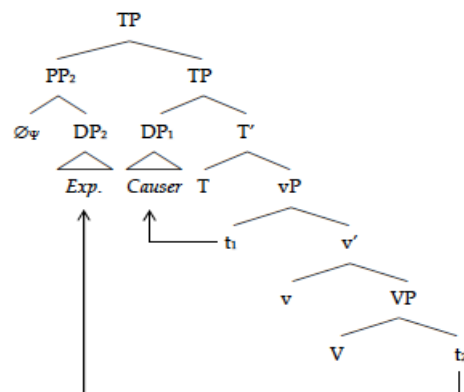
³⁵ A similar assumption was made by Baker 1997 in an attempt to accommodate object Experiencers into his tripartite thematic roles scheme, see section 2.4.3.

TP). These Experiencers are subjects independently of the theoretical assumptions that promote class II Experiencers be adjoined to TP at LF. They are subject Experiencer verbs that project their Experiencer role to the external argument at deep structure. This seems to undermine the core argumentation for the Experiencer theta role being encoded in language as a locative/location.

Second, Landau seems hesitant considering the status of the Experiencer object of class II eventive verbs throughout his book. In the majority of the discussion, eventive class II Experiencers are also part of the objects that are inherently Case marked and move at LF as a locative. Landau (2010:87) illustrates in a tree structure that these Experiencers have a silent (locative) P and it is moved at LF to TP.

(77)

(168) a. Eventive Psych Verbs: LF



However, towards the very last page of his book, Landau finally agrees that not all object Experiencers can be treated the same way conceptually, as the ‘psych-effects’

are observed only in a subpart of them (the class II from stative predicates, and class III). Landau suggests then that class II eventive predicates should be thought of as regular transitive object, with no [loc] P as a inherent Case assigner and so on.

Experiencers can be seen as a category that expresses theta roles that share some similarities, but it need not to be promoted to a unique thematic role itself. Take, for example, Baker's view on the issue, according to his tripartite system of theta roles. Subject Experiencers can be categorized as an Agent proto-role, object Experiencers can be put together with Location/Goal. However Baker doesn't yet divide class II verbs between eventive/stative, as this theoretical development comes later with Arad (1998). After solving this missing link, it seems reasonable that Experiencers of class II stative predicates like *worry* should be part of the Locatives/Goals theta role (at least in languages where these Experiencers show oblique properties), while Experiencers of eventive psych-verbs like *frighten* should be part of the Theme/Patient category. Again, when causality is implied in the psych-verb, it's evident that the Experiencer is undergoing a change of state/mind and therefore is the prototypical direct object argument, fitting into the Patient/Theme thematic role very well. In this view, Baker's purpose is accomplished, as one need not assume a RUTAH, and the AUTAH will explain the distribution of different types of 'Experiencers'. Although more evidence in other topics of theta role theory is fundamental in order to show that AUTAH is superior to RUTAH, or vice-versa, I don't think the Experiencer theta role case provides enough evidence for one version of the UTAH over the other.

Dispensing with the Experiencer theta role seems to be an economical minimalist approach to the problem, considering that the syntactic and semantic behavior of these Experiencer arguments fit well in each of the thematic roles categories they are reduced to. The theta role *Experiencer* therefore should be restricted to a terminological function. ‘Experiencer’ is a disjunctive group that may be vaster than the Experiencers we are limiting ourselves to talk about in this chapter. For example, many consider underlined phrases below too as Experiencers.

- (78) a. Peter believes that Ana is at home. (Belief verbs)
b. John seems to her to be sick. (Raising verbs)
c. The transients saw the terrible accident. (Perception verbs)

All these roles share some ‘thematic’ similarities, but vary in how they fit into the argument structure of each specific predicate that takes them.

Throughout this dissertation, I hold constant the assumptions discussed here on theta roles and the Experiencer role. I will use the term *Experiencer* as a terminological tool. In the next chapter, I will investigate Brazilian Portuguese’s psych-verbs. I will depart from previous analysis of psych-verbs in this language, and suggest a new analysis for classes of psych-verbs that account for their behavior. Importantly, I will show that psych-verbs aren’t special: they pattern like the classes of verbs to which they belong.

Chapter 3: Experiencers in Brazilian Portuguese

In the last chapter, we saw that psych-verbs show some interesting properties that have been explained in many different ways in terms of the syntactic status of these verbs. In this dissertation, I use “Experiencer” as a terminological expression, as its semantic content doesn’t have any grammatical relevance

In this chapter, I will look at psych-verbs in Brazilian Portuguese. Some psych-verbs in BP don’t quite behave as unaccusative verbs (as shown in the last chapter), or as unergative verbs. I will propose a syntactic structure that can capture the quirky pattern of these verbs. I will first review Cançado’s (1995, 2012) analysis of psych-verbs in this language. I will then discuss some of the properties of BP’s psych-verbs, and show that Cançado’s classification is insufficient to explain them. Finally I will propose a new classification for psych-verbs that makes use of proto-roles (Dowty 1991, Baker 1997), as argued for in chapter 2. I will argue that there are four classes: stative Class A and class B verbs, and eventive class C and class C* verbs. Psych-verbs that show psych effects are ergative verbs with no external arguments and two internal ones. Unlike previous accounts, I will argue that accusative case is assigned in those structures to the Experiencer. Importantly, this analysis concludes that psych-verbs have no special status in the grammar; their behavior can be explained by each class’s syntactic and semantic properties.

3.1 Psych-verbs in Brazilian Portuguese

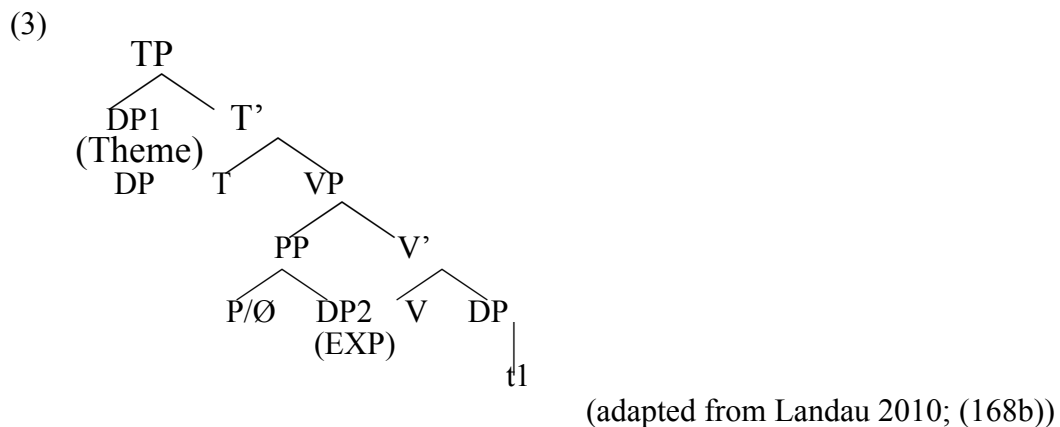
Cançado's (1995) work refutes Belletti & Rizzi's (1988) and other unaccusative analyses of psych-verbs, arguing that it cannot account for the Brazilian Portuguese psych-verb patterns. One main piece of evidence against the unaccusative analysis of psych-verbs in BP comes from inchoative (or anticausative) constructions of Object Experiencers verbs of class II:

- (1) a. Maria/o rumor preocupou/ chateou/ animou/ apavorou Pedro. Class II
Maria/ the rumor worried/ bored/ cheered up/ frightened/ Pedro
'Maria/the rumor worried/bored/cheered up/frightened Pedro.'
- b. Pedro se preocupou/ chateou/ animou/ apavorou Class II inchoatives
Pedro SE worried/ bored/ cheered up/ frightened
'Pedro got worried/bored/cheered up/frightened.'

The existence of inchoative class II forms of prototypical stative class II verbs poses a problem for the unaccusative status of these verbs proposed by Belletti & Rizzi (1988), Landau (2010) and others: specifically, for the assumption that the Experiencer argument is inherently Case marked or is a locative. Inchoative verbs are considered to be change of state predicates that have an unaccusative syntax (see e.g. Dowty 1979). They can be derived from causative verbs that don't represent their external argument, see parallel between (1) and (2):

- (2) a. The wind/Peter opened the door. Causative
b. The door opened. Inchoative

If that is the case, then the Experiencer *Pedro* in (1b) must be conceived as undergoing a change of state and therefore, being a direct object of a transitive verb, just like *the door* in (2). The subject in (1a) is a Cause external argument. These facts are incompatible and unexplained under an unaccusative analysis, where the subject argument in (1a) is considered the direct object of the verb, whereas the Experiencer argument is inherently case-marked, see Landau's structure for instance:

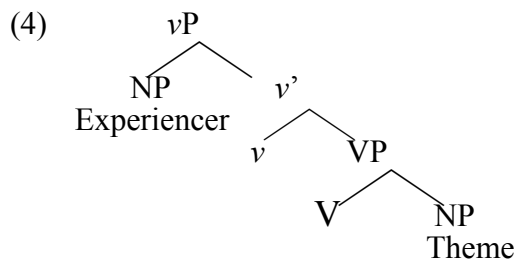


This is because inchoative structures like in (1b) are unaccusative, and the lack of accusative Case forces the underlying object to move to a subject position to receive nominative. If (3) is the correct structure for (1a), we would expect the Theme argument to undergo movement to a subject position in its derived inchoative, and not the Experiencer as in (1b). Furthermore, if the Experiencer receives an inherent Case,

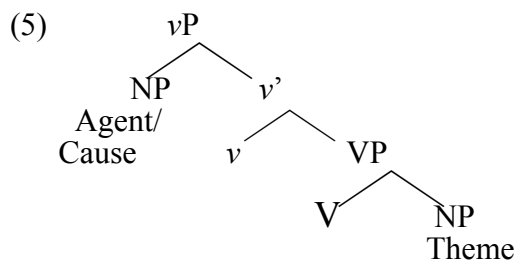
it should not participate in structural Case marking positions and alternations, contrary to fact.

The biggest challenge in this chapter is to reconcile the inchoative facts with other properties of some psych-verbs that seem to indicate they are unaccusatives. I will provide an analysis which classifies psych-verbs in three main groups:

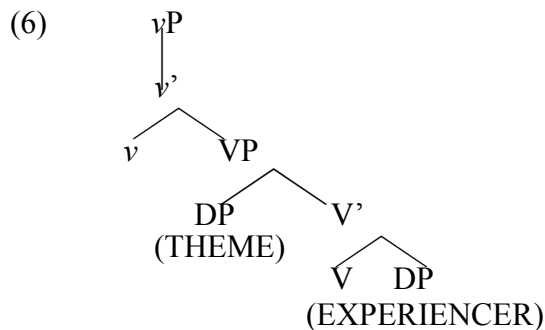
1) transitive non-causatives, which comprises class I verbs like *amar* ‘love’ and *temer* ‘fear’. These verbs share a transitive structure with Experiencers as external arguments, the analysis of this verb class as in (4) is not controversial in the literature.



2) Object-Experiencer verbs that are causative-transitives, such as *atormentar* ‘torment’ and *tranquilizar* ‘calm down’; they have the Theme as an external argument. These verbs do not show psych-effects, they behave like ordinary transitive verbs, with argument structure as in (5):



3) Object-Experiencers verbs that are ergatives. This class of verbs shows psych-effect in BP, they are considered by many to be unaccusatives, as discussed in chapter 2 and above in (3). I will argue that they don't have an external argument in the strict sense, but they do project a vP that is able to assign accusative Case (Bennis 2014, Wood & Marantz 2014). The argument structure of these verbs is illustrated in (6) below³⁶.



3.1.1 Cançado's (1995 et seq.) psych-verb classes of Brazilian Portuguese

In order to capture the psych-verbs properties, Cançado (1995) builds on Jackendoff's (1983, 1987, 1990) Lexical Conceptual Structure (LCS) framework and Chierchia (1989), proposing a Generalized Theory of Theta Roles (Franchi 1994, Cançado 1995). In Cançado's theory, the content of theta roles is important and they are part of an independent semantic component in the grammar. Theta roles are specific

³⁶ See also Cyrino, Nunes & Pagotto (2009) also assume that verbs of like *preocupar* ('worry') that can't passivize take two internal arguments, contra Cançado (1995 et seq.).

structural configurations in the conceptual structure and have direct influence in the grammar.

Cançado (1995 et seq.) proposed four classes of psych-verbs, which I enumerate below. Class A³⁷ verbs correspond to class I verbs (Belletti & Rizzi 1988). They are verbs like *temer* ('fear'), *desejar* ('desire'), *admirar* ('admire'), *respeitar* ('respect').

- (7) José teme o cachorro.

José fears the dog
Experiencer Objective

- (8) TEMER: <<Experiencer, < Objective >>

Class B verbs are comparable to class II verbs. They are verbs like *aborrecer* ('annoy'), *deprimir* ('depress'), *encantar* ('enchant'), *magoar* ('hurt').

- (9) Rosa preocupava a mãe.

Rosa worried the mom
Cause Experiencer

- (10) PREOCUPAR: <<Cause <Experiencer >>

³⁷ I am using an alphabetical nomenclature for Cançado's classes of psych verbs in order to avoid confusion between her verbal classification and Belletti & Rizzi's (1988) class I, II and III verbs.

Cançado (1995) identifies the Class C verbs, which corresponds roughly to agentive/eventive class II verbs as observed by Arad (1998) and Landau (2010). This class has some syntactic properties that distinguish it from the class B/class II verbs, and therefore should have its own class. More examples of these verbs are *conquistar* ('conquer'), *derrotar* ('defeat'), *honrar* ('honor'), *humilhar* ('humiliate').

- (11) [A chegada da polícia] acalma a multidão.
the arrival of the police calmed down the crowd
Cause Experiencer

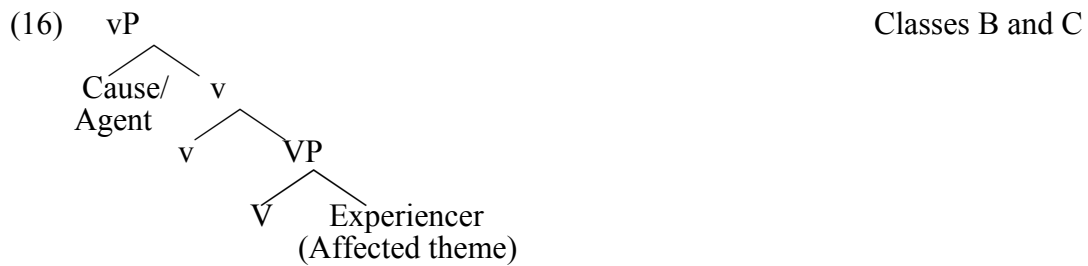
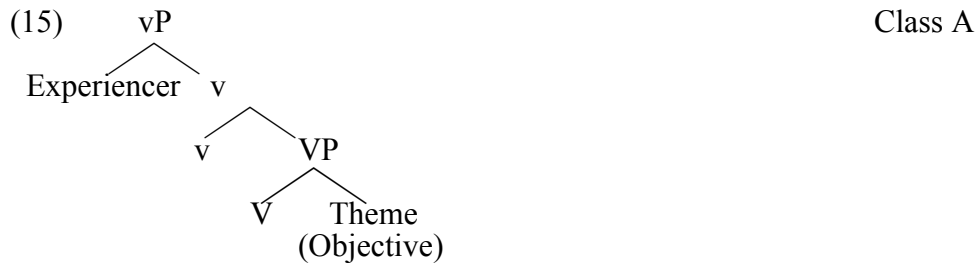
- (12) [A polícia] acalma a multidão.
the police calmed down the crowd
Agent Experiencer

- (13) [Os cacetetes da polícia] acalmaram a multidão.
the mace of the police calmed down the crowd
- Instrument Experiencer

- (14) ACALMAR: <<Agent/ Instrument/Cause <Experiencer> >

Class C verbs have a Cause or Agent subject and an Experiencer object. They differ thematically from class B in that the subject position also accepts an Agent theta-role, in addition to Cause. Cançado argues class C agentive character is what determines its

syntactic behavior, as we will see in the next section³⁸. Syntactically, all classes of psych-verbs are transitives, and although not specified by Cançado, I deduce they have the structure in (15) and (16) below:



³⁸ Class D is yet another new class of psych-verbs. Examples from this class are *alarmar* ('alarm'), *tormentar* ('torment'), *fascinar* ('fascinate'), *seduzir* ('seduce').

- (i) a. Maria animou José.
Maria cheered up José
Agent Experiencer
b. ANIMAR: <<Agent <Experiencer>>
- (ii) a. A chegada de Maria animou José.
The arrival of Maria cheered up José
Cause Experiencer
b. ANIMAR: <<Agent/Cause <Experiencer>>

Class D is similar to class B and C verbs (and different from class A verbs) in that it has an object Experiencer. Cançado 1995 argues they may behave syntactically like class B or class C depending on whether the sentence has an agentive reading or not. Cançado 2012 points out that class D can be collapsed with class C, as they present the same argument structure. In this dissertation, I collapse class C and D following Cançado's 2012 suggestion.

Cançado (1995) opts for a fine-grained thematic distinction, against Dowty (1991), Baker (1988, 1997), Chomsky (1981, 1986) and many others. The author believes a fine distinction of theta roles is needed to explain certain phenomena in language and therefore proto-roles or a coerced number of theta roles are theoretically inadequate, as they cannot account for a number of facts. Cançado (2012) however has a different proposal based on semantic verb decomposition, as we will see in section 3.2.

This classification fits with Cançado's thematic hierarchy, which is illustrated in (17). Cançado postulates macro thematic functions, which are prototypical roles in the spirit of Dowty's Proto-roles. Each of these macro functions has entailments, which come from their predicates. The macro function CAUSE comprises theta roles like Agent, Instrument, Cause; AFFECTED OBJECT comprises theta roles like Patient, Experiencer, and STATIVE is comprised of theta roles such as Objective³⁹.

(17) CAUSE > AFFECTED OBJECT > STATIVE

Notice that class A Experiencers are under the CAUSE macro-function, while object Experiencers of classes B, C, and D are AFFECTED OBJECTS. That way, this thematic hierarchy is able to capture the syntactic positions in which arguments of psych-verbs in BP are inserted. I discussed in chapter 2 that a fine-grained distinctions of theta-roles is rather problematic and that their definitions are very obscure. At the end of this chapter, I will propose an account that dispenses with such classifications and relies on very 'broad' role-like distinctions.

³⁹ Cançado 1995, 1997 classifies Objective theta-role as stative: it enters into a relation with the predicate that doesn't result in a change of state, unlike Affected Objects.

Now that I have presented Cançado's analysis of BP's psych-verbs, let's move on to some discussion of her system and some revisions and suggestions.

3.2 Brazilian Portuguese's psych-verbs classes: a discussion

In this section, I discuss some syntactic properties associated with the psych-verb classes suggested by Cançado (1995 et seq). This discussion will be important for defining BP's psych-verb behavior. Based on this, and following some insights from previous work like Arad (1998) and Landau (2010), I propose a reanalysis of Cançado's classes in the next section. Specifically, I propose that Class A and B are stative verbs, but only the former is a transitive verb. I will argue that class C is not homogeneous, but divided into classes C and C*: both classes are change of state predicates: the former are accomplishment verbs, with a true Agent as an external argument, while the later are ergative achievement verbs which behave syntactically like class B verbs.

3.2.1 Class A

Cançado's (1995 et seq.) class A verbs are simple transitive structures (like Belletti & Rizzi's (1988) class I). The theme argument is considered to be an Objective. The Objective theta role is a stative one, as the Objective doesn't undergo a change of state (cf. Grimshaw 1990):

(18) Class A

TEMER: V, { Experiencer^{+control}, Objective }

D- and S-structure subject d. object

This class seems to be in perfect alignment with class I. It has the Experiencer argument merged as subject and the Theme argument merged as object in D- and S-Structure. Cançado (1995) however claims that Experiencers of class A have control over the process that the psych-verb implies, i.e., they have control over the mental state they are in. Cançado uses the below examples to show that the semantic role of the Experiencer involves control over his feelings because the Experiencer can make a conscious decision about the psych-verb in use.

(19) a . Eu vou parar de gostar de você.

I will stop of liking of you

‘I will stop liking you.’

b. Eu decidi que não vou mais me aborrecer com isso.

I decided that not will more self-1sg worry with this

‘I decided that I will not worry about this anymore.’

In what follows however I question such claims. I believe the Experiencer in those predicates does not necessarily hold control over their state of mind/psychological state. First, it’s not clear that the examples in (19) can be read exclusively in a psychological way. The verb *like* might mean ‘be favorable’, ‘be positive about’,

which might indicate a judgment of the liker, and not really a state of mind. The same is true for *worry*, as it can really mean ‘think/consider negatively of’. When that is the case, such as in the examples in (19) above, these verbs convey an action/activity, or an intention to ‘stop liking’ and ‘stop concerning’, and not really a psychological state. Moreover, even granted that the examples in (19) can actually imply a conscious decision by the Experiencers to change their mental states, it is wrong to generalize that characteristics to all class A verbs. Let’s see some examples that illustrate that:

- (20) a. Ana ainda ama seu ex-marido, apesar de saber de todo o sofrimento que ele causou a ela.

Ana still loves her husband regardless of know of all the suffering that he caused to her

‘Ana still loves her husband regardless of being aware of all the pain he caused her.’

- b. Eu tento não temer as ruas do meu próprio bairro, mas não adianta muito não.

I try not fear the streets of my own neighborhood but not help much not

‘I try not to fear my own neighborhood’s streets, but I can’t help myself.’

The sentence in (20a) might be true even if Ana separated because she was mistreated continuously by her ex-husband. Ana may know that her old partner was and still is not a good person overall, and that the downside of staying with him outweighs his

good traits. However she still feels love for him and that feeling doesn't simply go away because of a rational decision Ana made. Similar interpretation comes about from (20b), where even in a scenario where the speaker knows his/her city has been better policed and is safe, (s)he might still fear going outside alone in some circumstances.

Descriptively class A verbs can be defined as having Experiencer subjects and Theme objects. Following our minimal thematic theory of Dowty-Baker type as discussed in chapter 2, we can say that the Experiencer is taking a Proto-Agent theta-role, as it entails sentience/perception from its part. The Theme is a Proto-Patient, it can be interpreted as stationary (relative to movement of another participant) and/or change of state.

Cançado (2012) argues class A verbs can be decomposed into a possessive semantic structure (Van Valin 2005) (cf. (21)), as they can be paraphrased as in (22b):

(21) temer: [X HAVE < TEMOR > for Y]

fear

fear

(22) a. Pedro teme Maria.

Pedro fears Maria

‘Pedro fears Maria.’

b. Pedro tem medo de Maria.

Pedro has fear of Maria

‘Pedro is afraid of Maria.’

The main difference between (21) and the non-decomposable structure in (23) below is that Y is an argument of the noun root ‘FEAR’ in the former, while in the latter HAVE establishes a possessive relationship between X and Y.

- (23) *temer*: [X TEME Y]
 fear fear

Cançado (2012) recognizes there isn’t much syntactic evidence in favor of this decomposition. The advantage of this is class A would be part of a larger class of predicates that are composed by possessive HAVE.

There is indeed a lack of evidence in favor of predicate decomposition for class A verbs. These verbs behave like typical transitive verbs, as they passivize and reflexivize, in contrast to *HAVE* + *root* predicates, like *ter pena de* (‘have/feel pity for’):

- (24) a. *Ana é amada pelo Pedro.*
 Ana is loved by-the Pedro
 ‘Ana is loved by Pedro.’
 b. *Ana se ama.*
 Ana self love
 ‘Ana loves herself.’

(25) a. *Pedro é tido medo pela Maria.

Pedro is have fear by-the Maria

‘Maria is afraid Pedro.’

b. *Ana se tem medo.

Ana self have pity

‘Ana pities herself.’

Therefore I consider for the purpose of our discussion that the analysis in (23) is superior to that in (21) for class I predicates.

3.2.2 Class B

Class B verbs are different from class A primarily as they have an object Experiencer.

Class B is Belletti and Rizzi’s (1988) class II equivalents. Cançado (1995 et seq.)

claims verbs from this class have a Cause argument in the subject position.

Differently from Belletti and Rizzi’s *preocupare* class II verbs, Cançado’s Class B verb arguments are not derived elements.

(26) Class B

PREOCUPAR: V, { Cause^{-control}, Affected Experiencer }

D- and S-structure: subject d. object

Cançado labels the non-Experiencer argument of these predicates as CAUSE^{-control},

which means that those arguments trigger the process described by the verb and that results in a change of state of mind by the Affected Experiencer. We saw in section 3.1 that these verbs have inchoative counterparts. They are considered causatives by Cançado, following Pesetsky (1995) but there's no agentivity involved in the process described, therefore the “– control”. Classes C and D however are agentive-causative verbs (details in the next section), and behave differently from class B due to the volition associated with the subject Cause argument. Based on Levin & Rappaport (2005), Cançado, Godoy & Amaral (2013) propose the following semantic structure for class B verbs:

(27) [[X ACT/STATE] CAUSE [BECOME Y <STATE>]]

Cançado, Godoy & Amaral (2013) argue that an animate DP in the subject position of these verbs cannot denote a person. The external argument is a Cause interpreted as an unspecified eventuality (event or state) in which an animate DP participates.

Cançado (2012) and Cançado, Godoy & Amaral (2013) argue that this can explain the lack of passivization of class B verbs, see (28). Cançado & Franchi (1999) propose that the use of passive constructions in BP is restricted to sentences with an Agent, and no direct causation is involved in the semantic structures in (27) above.

(28) a. Pedro preocupou Maria.

Pedro worried Maria

‘Pedro worried Maria.’

b. *Maria foi preocupada pelo Pedro.

Maria was worried by-the Pedro

I believe the notions developed by Cançado, Godoy & Amaral (2013) are obscure, and can't uniformly apply to the data. Besides, there's no syntactic evidence of how these concepts should combine in any way to explain the lack of passivization as a consequence. For example, the sentences below in (29) and (30) can be passivized despite the fact that they have non-agent like external arguments that exercise no control over the event. Even psychological readings of non psych-verbs can be passivized (cf. (30)):

(29) a. As terríveis resenhas destruíram o livro de Ana Pula.

the terrible reviews destroyed the book of Ana Pula

'The terrible reviews destroyed Ana Paula's book.'

b. O livro de Ana Paula foi destruído pelas terríveis resenhas.

Ana Paula's book was destroyed by-the terrible reviews

'Ana Paula's book was destroyed by the terrible reviews.'

(30) a. O amor inextinguível cegou Ana Paula.

the love inextinguishable blinded Ana Paula

'The inextinguishable love blinded Ana Paula.'

b. Ana Paula foi cegada pelo amor inextinguível.

Ana Paula was blinded by-the love inextinguishable

‘Ana Paula was blinded by the inextinguishable love.’

Besides passivization, Cançado, Godoy & Amaral (2013) argue that the structure in (27) can explain why Class B verbs seem to be resistant to reflexivization, even in tentative agentive contexts:

(31) *Os estudantes se preocuparam antes dos exames pra conseguirem estudar mais.

the students self preoccupy before the exams to get study-INF more

‘The students worried themselves before exams in order to get themselves to study more.’

The authors claim that only arguments that denote a person can establish coreference with the reflexive clitic *se*, and because the subject of class B verbs denotes eventualities, they can’t be absorbed by *se* or be an antecedent for the Experiencer. This account leaves us with many questions, such as why the subject *os estudantes* in (27) doesn't denote a person and how this restriction works exactly to prevent syntactic reflexivization.

Remember that Cançado differs from Landau (2010), who argues that the lack of both passivization⁴⁰ and reflexivization are consequences of the unaccusative syntax of stative psych-verbs. As we saw in chapter 2, there’s little evidence in BP for the proposed strict unaccusativity of psych-verbs.

⁴⁰ Landau 2010 argues that languages that allow either pseudo-passives or oblique quirky subject passives will also allow verbal passives of nonagentive eventive Class II verbs. These are languages like English and Finnish. See Landau 2010, chapter 4 for a detailed analysis of psych-verb passives.

However, Cançado (2012) and Cançado, Godoy & Amaral (2013) analysis of object Experiencer psych-verbs is similar to Arad's (1998), and Landau's (2010) in arguing that class II psych-verbs are not uniform and consist of at least two distinct types of verbs. Cançado diverges from the cited authors though in the nature of the difference between these verb classes: Arad and Landau argue that the readings of a verb, either stative or eventive (agentive/causative), have syntactic implications (for Landau, statives are unaccusatives and for Arad, statives have no vP, only VP); Cançado argues that both verb classes are causatives, class B is a causative that derives a change of state, while classes C and D are causative-agentive that derive a change of state initiated by an intentional act.

Elaborating on Arad (1998), I argue that class B verbs are transitive statives that have a stimulus subject argument, in which the perception of the stimulus triggers a state of mind from the Experiencer. Contra Cançado (1995 et seq.), I will show in this chapter that these predicates don't pattern like change of state verbs. A similar idea has been developed by Marin & McNally (2011), who have convincingly shown that psych-verbs of class B (and some class C) do not denote a change of state, but are either atelic stative verbs or atelic punctual achievement. These verbs entail a change of state, instead of denoting one. Marin & McNally (2011) show that inchoativity is distinct from telicity.

Stative verbs typically can't be complements of a perception verb (see Maienborn 2005). Notice that classes A and B verbs can't work as complements to *see*, but class C can⁴¹. This indicates that class B and C differ in that the first is stative

⁴¹ I will show in the next section that some class C verbs, which I will call class C*, share with class B

and the second is eventive.

- (32) *Pedro viu Maria amar Dudu. Class A
Pedro saw Maria love Dudu
- (33) *Pedro viu Maria preocupar a mãe dela. Class B
Pedro saw Maria worry the mother of-her
- (34) a. Pedro viu Maria humilhar a mãe dela. Class C
Pedro saw Maria humiliate the mother of-her
- b. Pedro viu Maria animar a mãe dela. (Class C*)
Pedro saw Maria cheer up the mother of-her

3.2.3 Class C

Cançado (2012) argues that class C verbs are causative-agentive. The subject is a typical Agent argument that may be an Instrument and a Cause too. Cançado builds on the idea that the feature agentivity splits the object Experiencer classes of psych-verbs. This semantic information is syntactically relevant, and is captured by positing two different thematic roles, Cause^{-control} and Cause^{+control} (or Agent). The object Experiencer is an Affected Object in both cases.

the non-agentive feature. Classes B and C* contrast, however, in that the former is stative (cf (33)), while the later is eventive (change of state), see (34b).

(35) *Acalmar* ‘calm down’

ACALMAR: V. [CAUSE ^{+control}, Affected Experiencer }

D- and S-structure subject d. object

(36) [[X ACT (VOLITION)] CAUSE [BECOME [Y]]] (Semantic structure)

According to Cançado (1995 et seq.), Class C psych-verbs behave syntactically as agentive predicates, however the syntactic difference between classes B and C is not clear in their proposal — their difference relies on the thematic composition of the external arguments. I noticed that although most class C verbs can be passivized (cf. (37)), some can’t – even in tentative agentive readings (cf. (38)):

(37) a. A paciente foi tranquilizada pelo médico (com sua serenidade).

the patient was pacified by-the doctor with his serenity

‘The patient was calmed down by the doctor (with his serenity).’

b. Lara foi humilhada pelo marido (com seus insultos).

Lara was humiliated by-the husband with his insults.

‘Lara was humiliated by her husband (with his insults).’

d. Ana foi seduzida pelo charmoso poeta (com suas belas rimas).

Ana was seduced by-the charming poet with his beautiful rhymes

‘Ana was seduced by the charming poet (with his beautiful rhymes).’

e. Ana foi atormentada pelas cenas do documentário *Earthlings*.

Ana was tormented by-the scenes of-the documentary *Earthlings*

‘Ana was tormented by the scenes of the documentary *Earthlings*.’

(38) a. *Pedro foi animado pela Maria (com suas palavras encorajadoras).

Pedro was cheered-up by-the Maria (with her words encouraging)

b. *Pedro foi apavorado pela Maria (com seus gritos)

Pedro was frightened by Maria (with her screams)

The above test shows that class C verbs don't behave like a unit. Cançado (2012) and Cançado, Godoy & Amaral (2013) claim that [+agentivity] is a necessary feature for passivization in Portuguese. Some verbs in class C allow an agentive reading and they can be passivized, and some verbs can't. The agentivity attributed to these verbs can be confirmed by an independent test. Only agentive predicates can be embedded under directive predicates (see Lakoff 1966). The class C verbs that cannot be passivized can't be embedded under a directive predicate either (39), in contrast to those that can be passivized (40)⁴²:

(39) Eu forcei Pedro a seduzir/ atormentar Maria

I forced Pedro to seduce/torment Maria

'I forced Pedro to seduce/torment Maria.'

(40) */??Eu forcei Pedro a animar/entusiasmar Maria

I forced Pedro to cheer up/excite Maria

⁴² Notice that class A verbs can't be embedded under directive predicates either, indicating that they are not agentive and they lack the [+control] feature Cançado (1995 et seq) argues they have (see section 3.2.1):

(i) *Eu forcei Pedro a amar/ temer Maria

I forced Pedro to love/ fear Maria

Notice that class B verbs cannot be agentive either, as argued by Cançado (1995 et seq):

(41) */??Eu forcei Pedro a preocupar Maria

I forced Pedro to worry Maria

Although agentivity and passivization correlate, I will argue in the next section for a structural explanation for the lack of passives. Cançado (2012) and Cançado, Godoy & Amaral (2013) also argue that agentivity is responsible for the availability of reflexive *se*. We saw in the last section that class B verbs don't allow reflexivization. Cançado points out that Class C allows reflexive *se* because the Cause argument is an individual (an Agent) that can corefer to the reflexive. I'd like to point out that not all class C or C* allow reflexive *se*:

(42) Maria se acalmou/ humilhou.

Maria SE calmed down/ humiliated

‘Maria calmed herself down/humiliated herself.’

(43) Maria se ??animou/ *entusiasmou.

Maria SE cheered up/excited

For the authors, the different semantic structures in (27) and (36) are the cause of their different syntactic behavior: (36) generates passives and reflexives, while (27)

doesn't. Notice that semantically, causative verbs are generally thought to involve a cause event that causes the result state, regardless of the kind of external argument syntactic status (a clause or a DP) or semantics (Agent, Cause) (see e.g. Marantz 2015). Therefore Cançado's claims are not generally sustained, and the exact explanation for how these restrictions are derived from these verbs semantics is not given. Although Cançado (1995, et seq) stipulates these claims, agentivity seems to indeed correlate with certain syntactic behavior of psych-predicates, and I believe there's a syntactic reason for this connection.

Let's take, for example, the reflexive clitic *se* construction. *Se* has underspecified person features (can be either 2nd or 3rd person) and surfaces as a reflexive with transitive verbs. The perception that agentivity is necessary for reflexivization comes from the fact that causative verbs that are typically reflexivized must have a human/animate Cause, that will then be interpreted as an Agent external argument. Inanimate objects can't be reflexivized, unless they are empowered with supernatural force or sorts, e.g., (44b) is okay if the ball has the inherent property of rolling itself:

- (44) a. Pedro rolou a bola no chão.
 Pedro rolled the ball on-the floor
 'Pedro rolled the ball on the floor.'
 b. *A bola se rolou no chão.
 the ball self rolled on the floor

Notice however that agentivity is not a sufficient feature for reflexivization either⁴³.

(45) a. As meninas coletaram flores.

‘The girls gathered flowers.’

b. *As meninas se coletaram.

the girls self collected

(46) a. Ana venceu o jogo deliberadamente.

Ana won the game deliberately

‘Ana deliberately won the game.’

b. *Ana se venceu.

Ana herself won

Intended: ‘Ana defeated herself.’

We will see in section 3.4.2.3 how to accommodate the reflexivization restrictions on psych-verbs based on their syntactic status. Although agentivity tests seem to track syntactic behavior of psych-verbs, it alone cannot explain the behavior of BP’s psych-verbs. The non-agentive class C verbs (let’s call it class C* from now on) share some features with class B verbs, and I will argue that both of them are not

⁴³ Notice that (45b) is good in English, as ‘collect oneself’ means ‘compose oneself’, see (i). In Brazilian Portuguese, (45b) can’t have that meaning, or any possible meaning this verb gives, such as ‘select oneself’, ‘pick oneself’.

(i) Jordan collected himself in that awkward situation.

typical change of state verbs, but atelic achievements and states respectively. Class B verbs are stative that include reference to a boundary of that state, while class C* verbs are achievements and atelics (Marin & McNally 2011). Class C* shares features of class C too: they both are eventive. Syntactically, however, class C* behaves very similarly to class B. I will provide evidence that the subject of those verbs is not a typical Cause/Agent.

3.3 The Aspect of psych-verbs

Landau (2010) suggests that agentivity in class II verbs is linked to change of state (i.e. accomplishment), while non-agentive class II verbs do not denote a change of state and are states or achievements. This description is suitable for many psych-verbs crosslinguistically. However, the link between syntactic structure and aspect doesn't come as Landau proposes: although agentive verbs (class C) are transitive, statives (class B) and achievements (class C*) are not unaccusatives in BP. Besides, I can refine some of the aspectual notions to fit better with psych-verbs behavior. In what follows I investigate the aspect of BP's psych-verbs classes we have outlined in the previous section⁴⁴.

Temporal modification with *in-adverb* is restricted to telic interpretation, where the culmination of the process arrived in that time (see Dowty 1979). Typically, achievements and accomplishments can be modified by telic *in-adverb*, but not by atelic *for-adverbs*. In contrast, we should expect the rejection of *in-adverbs*

⁴⁴ Although in this chapter I concentrate on BP, it is quite possible that many Romance languages have similar distinct verb groups as BP (see Marin and McNally 2011 for Spanish). I will leave aside class A verbs in this comparison as it is uncontroversial that they are stative.

and acceptance of *for-adverbs* with stative or activity verbs. Let's first see Class B behavior regarding this test.

(47) Maria preocupou Pedro [#em menos de dois dias/ por um ano]

Maria worried Pedro in less of two days/ for a year

‘Maria worried Peter in less than two days/for a year.’

This test corroborates that class B is stative. Cançado's class C verbs however have a mixed behavior. Class C verbs allow telic modifiers⁴⁵, (48), while class C* verbs disallow them, (49).

(48) Maria tranquilizou Pedro [em menos de cinco minutos/ por dez minutos]

Maria tranquilized Pedro in less of five minutes/for ten minutes

‘Maria tranquilized Pedro in less than five minutes/for ten minutes.’

(49) Maria animou Pedro [#em menos de cinco minutos/ por dez minutos]

Maria cheered up Pedro in less of five minutes/for ten minutes

‘Maria excited Pedro in less than five minutes/for ten minutes.’

According to Rothstein (2004), the verb property of appearing with telic modifiers is characteristic of accomplishments and achievements, and it correlates with the property of ‘denoting an event of change’. Thus activities and states are not events of

⁴⁵ Class C verbs also allow atelic modifiers (cf. 48), however in this case the verb has an atelic/non-punctual reading.

change, in this theory. So far classes B and C* are atelic, while class C is, or can be, telic.

The progressive aspect can appear with accomplishment and activity verbs, but not with achievements and statives. Below I show the test on BP's psych-verb classes⁴⁶:

- (50) a. *A chuva está deprimindo Pedro hoje. Class B

the rain is depressing Pedro today

- b. ?? A audição para a peça está preocupando Maria hoje.

The audition for the play is concerning Maria today

- (51) a. Maria está tranquilizando Pedro na sala de aula. Class C

Maria is calming-down Pedro in-the room of class

‘Maria is calming down Pedro in the classroom.’

- (52) a. ?? Maria está animando Pedro na festa. Class C*

Maria is cheering up Pedro in-the party

⁴⁶ However some achievement verbs may appear in the progressive (cf. (i), Rothstein 2004:ex (7c-d)). Classes B and C* verbs may appear in progressive when there's a longer stretch of time at stake (cf. (ii)). It's possible the progressive morphology has a different use in these cases, but I leave this question aside for the moment

- (i) a. The tram is arriving at the tram stop.
b. We are reaching the mountaintop.
- (ii) Esta situação está me preocupando muito recentemente.
This situation is me-CL worrying much recently
‘This situation is worrying me too much lately.’

b. *Maria está apavorando Pedro no cinema.

Maria is frightening Pedro in-the cinema

Rothstein (2004) argues that the availability of progressive in verbs marks the semantics of an incomplete event that denotes different stages of an event. Stative and achievement verbs don't occur with progressive as they are not inherently extended in time and therefore analyzable into stages in the appropriate way.

Our tests show that class B verbs ban the progressive aspect and allow *for-adverbs*, which indicate they are states. Class C verbs behave like accomplishments: they allow progressive aspect and *in-adverb* modifiers. Class C* verbs ban the progressive aspect and allow *in-adverbs*, which indicates they are achievements⁴⁷.

Finally, I will provide one more test to confirm class C and C* differ aspectually. Only accomplishments can be found as complements to the verb *terminar* ('finish'). This is because *finish* requires that its complement describe an event that involves both a process and a culmination (see Rothstein 2004). Class C verbs, but not class C*, can be embedded under *finish*:

⁴⁷ Verbs like *apavorar* (class C*) e *chatear* (class B) seem to be good with progressive aspect, as shown below. These verbs are interpreted as activities in this context, explaining their behavior.

(i) a. A violência na cidade está apavorando Pedro recentemente.

The violence in-the city is scaring Pedro recently

'The violence in the city scares Pedro recently.'

b. Pedro estava chateando Maria hoje de manhã.

Pedro was annoying Maria today in morning

'Pedro was annoying Maria this morning.'

- (53) a. Pedro terminou de tranquilizar Maria. Class C
 Pedro finished of tranquilize Maria
 ‘Pedro finished tranquilizing Maria.’
- b. ?? Pedro terminou de animar Maria. Class C*
 Pedro finished of cheer up Maria
 ‘Pedro finished cheering Maria up.’

Likewise, *parar* (‘stop’) requires its complement to have duration, and therefore achievements cannot be complements of *stop*. See how classes C and C* contrast again:

- (54) a. O paramédico/a música parou de tranquilizar Maria. Class C
 the paramedic/the music stopped of tranquilize Maria
 ‘The paramedic/the music stopped tranquilizing Maria.’
- b. ??Pedro/a notícia parou de animar Maria. Class C*
 Pedro/the news stopped of cheer up Maria
 ‘Pedro/the news stopped cheering up Maria.’

The examples in (53) and (54) are consistent with my proposal that Class C verbs are accomplishments and class C* verbs are atelic achievements. Only the former are agentive verbs (cf. (40)).

This is an output that closely matches with Marin & McNally (2011) conclusion on the aspectual properties of inchoative object experiencer verbs like (55) below in Spanish:

- (55) a. Marta se ha aburrido.
Marta SE has bored
'Marta has gotten bored.'
- b. Josep se ha enfadado.
Josep SE has angered
'Josep has gotten angry.'

(Marin & McNally (2011; (2))

The authors argue that inchoativity and stativity are not incompatible properties. There are two aspectually distinct subclasses of Spanish reflexive psychological verbs: one subclass, illustrated in (55a), is formed by inchoative verbs that include reference to the state in question, while another subclass, illustrated in (55b), is represented by atelic achievement verbs. The latter are strictly punctual (according to the characterization of punctuality in Piñón (1997)) and do not include reference to the state. By the tests presented here, I believe class B constitutes the first subclass identified by Marin & McNally, while class C* constitutes the second class. As it may be noticeable by now, class C* is closer syntactically and semantically to class B than to class C.

Now that I have an aspectual analysis of these classes of verbs, I will propose a syntactic structure that is compatible with that assessment, and that can explain the syntactic behavior of each of these classes.

3.4 Other syntactic phenomena

Below in table 1 we see the summary of the main syntactic properties discussed in this chapter so far.

Classes	Class A	Class B	Class C	Class C*
Properties	<i>Amar</i>	<i>Preocupar</i>	<i>Humilhar</i>	<i>Animar</i>
Passives	✓	×	✓	×
Reflexive <i>se</i>	✓	×	✓	×

Table 1

As shown in table 1, classes A and C, and class B and class C* behave similarly. Classes A and C are ‘typically’ transitive, while classes B and C* are not. In previous sections we saw that there’s a correlation between being agentive and showing the psych effects. Agentivity and/or eventivity have motivated syntactic accounts for different classes of psych-verbs by other authors, e.g. Landau (2010) a. o. argues that agentive psych-verbs are transitive, while stative ones are unaccusatives and have inherently case-marked Experiencers. Agentivity has also served as a semantic account for the facts (Cançado 1995 et seq). In what follows, I will demonstrate how ergative syntax can explain these psych-effects observed in BP without resorting to agentivity/eventivity. I will also discuss how psych-verb classes pattern regarding two other syntactic properties, namely causative-inchoative alternation and arbitrary *pro*.

3.4.1 The causative-inchoative alternation

A closer comparison to causative/inchoative alternations seems to be important, as semantically and syntactically psych-verbs have been claimed to belong to the causative verb class (Pesetsky 1995, Arad 1998, Cançado 1995 et seq, a.o.). I showed in section 3.1 that BP has inchoative psych-verbs, and this is evidence against the unaccusative account for those verbs, proposed by Belletti & Rizzi (1988), Landau (2010), a.o.. Below we can observe that ergative *se* is acceptable with verbs in classes B, C*, and (most) class C⁴⁸, but Class A can't occur in this frame, (56) can only have a reflexive reading.

- (56) Ana se ama/admira/teme Class A
Ana SE love/admire/fear
Inchoative: #‘Ana is loved/admired/feared.’
Reflexive: ‘Ana loves/admires/fears herself.’
- (57) Pedro se preocupou/ chateou/ apavorou/ aborreceu Class B
Pedro SE worried/ annoyed/ cheered up/ frightened/ bored
‘Pedro has gotten worried/annoyed/ frightened/ bored.’

⁴⁸ Some class C verbs don't have inchoative counterparts. I suggest that this can be explained if the verbs in (i) need a cause with control argument, or an Agent, as only verbs that don't *need* an external trigger that exercises control can appear in the inchoative frame.

- (i) *Pedro se seduziu/ provocou/ conquistou
Pedro SE seduced/ provoked / conquered
‘Pedro has gotten seduced/ provoked/ conquered.’

(58) Pedro se horrorizou/ tranquilizou/ humilhou Class C

Pedro SE terrorized/ tranquilized/ humiliated

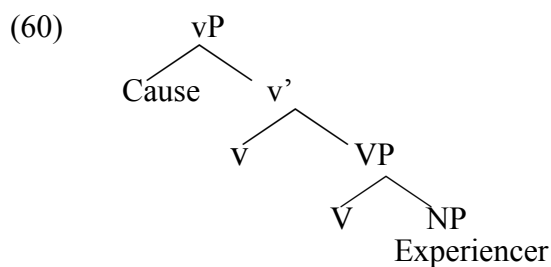
‘Pedro has gotten terrified/tranquil/ humiliated.’

(59) Pedro se animou/ entusiasmou Class C*

Pedro SE cheered up/excited

‘Pedro has gotten cheered up/excited.’

Class A verbs lack inchoative counterparts (cf. (56)) because they don’t have affected objects (i.e. object that undergo a change of state), which is a semantic requirement for this alternation (c.f. Cançado 2012). Class C verbs are transitive change of state verbs, which means that it’s not surprising they have an inchoative alternation. Their structure is as follows:



Cançado argues, following Levin & Rappaport Hovav (1995) (see also Dowty's 1979 BECOME operator), that this is evidence that object Experiencers verbs are from the class of transitive causative verbs that describe a change of state and that can derive an intransitive inchoative counterpart. The alternation is derived when the causation subevent is dropped in (61), leaving an inchoative verb representing the result of the change of state, see (62).

(61) [[X ACT(VOLITION)] CAUSE [BECOME Y <STATE>]] Causative

(62) [[BECOME Y <STATE>]] Inchoative

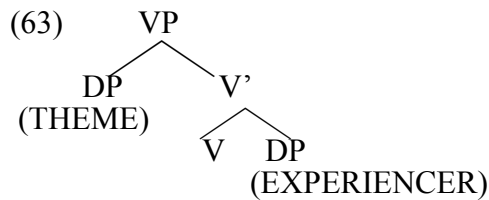
(Cançado 2012:4)

However, as argued by Marin & McNally (2011), inchoative verbs need not denote a change of state. The authors show extensively that that is the case with psych-verbs. The authors show independently that inchoative psych-verbs that I classify as being class B are statives, while the ones of class C* are achievements. Class B verbs are compatible aspectually to the predicates described by Marin & McNally (2011) to be stative:

“lexically specified to refer to the true initial interval of a state, but not to any interval prior to the onset of that state. If the predicate entails reference to this initial interval, it will have to be the case that prior to that interval, the state did not hold. From this fact it will be possible to infer that a change has taken place immediately prior to the onset of the state being referred to. Thus, though such a predicate would qualify as inchoative in the same sense as BECOME, it would not qualify as a change of state predicate in the same sense.”

(Marin & McNally 2011:471)

Class C* verbs are very similar, however they denote the beginning of the psychological state, but not the state itself. Assuming Marin & McNally (2011) to be correct, the point to be noticed here is that these verbs are semantically inchoative, but only presuppose a change of state. The object Experiencer is an affected object, however the interpretation of these verbs need not be linked to the typical semantic scheme proposed for inchoative-causative alternations in (61) and (62). Specifically, I believe that although class B and C* verbs in (57) and (59) above are inchoatives, their ‘causative’ counterparts are not really causative structures syntactically or semantically. The subject argument considered by the advocates of a causative structure for class II psych-verbs to be a Cause is actually an internal to VP argument that I will call Subject Matter (Pesetsky 1995)⁴⁹:



In the previous sections, we saw that the aspectual and syntactic behavior of classes B and C* allow us to assume this syntax. I can explain their inchoative-‘causative’ alternation by means of saying that the inchoative structure can come about independently of the causative form^{50,51}. I believe there’s a semantic asymmetry

⁴⁹ Only the name theta-role name *Subject Matter* is being borrowed from Pesetsky (1995), but not his syntactic assumptions. I will assume that classes B and C* have the same basic syntactic representation, and I will disregard here their aspectual differences as there’s no evidence they are reflected in their basic argument structure.

⁵⁰ Under Piñón’s (1997) analysis of causative-inchoative alternation (see also Parsons 1990) one can

between the complement and specifier of the VP projection in (63) above. Although both arguments are part of the change of event or state defined in the VP domain, the complement Experiencer is the affected object, the argument that participates in inchoative constructions.

Semantically, we know that causative verbs relate two events, one to cause another (Parsons 1990, Pylkkanen 1998, 2008):

(64) a. John melted the ice.

b. John was an agent of some event that caused a melting of the ice.

(Pylkkanen 1998: 79)

Notice that the meaning of psych-verbs classes B and C* is really not of strict causation between two events, but one where the Subject Matter argument is the point of reference for the change of state presupposed by the psych-verb.

(65) a. Maria/ the rumor worried Peter.

dispense with the necessary link between causative-inchoative verbs and object psych-verbs. Drifting away from most traditional accounts for causative-inchoative alternations, Piñón argues that a causative-inchoative verb and its inchoative counterpart are both derived from their shared alternating verb stem. This analysis has the advantage of explaining why certain verbs only have the inchoative (e.g. *bloom*) or the causative (e.g. *dirty*) version. This view is consistent with the analysis given here that psych-verb constructions in (56)-(59) are not derived from causative-inchoative verbs.

⁵¹ Grimshaw (1990) and Pesetsky (1995) have argued for an account for some class II verbs bearing no external argument, although the details of our analysis differ greatly.

b. # Maria/the rumor were the agent/actor of an event that caused Peter to get worried.

c. Peter became worried in the face of/with regards to Maria/the rumor.

I'd argue that the getting worried event is not related to the external argument in a causation relation semantically, or by the structure in (63) above. Nothing changed the internal state of Peter but himself, the Subject Matter is related to the aboutness of Peter's worry. However the Subject Matter *Maria* and *the rumor* may be taken to be a cause of Peter's change of state pragmatically. Although, as we will see below, some argue that the presence of a vP introduces a causation interpretation even with no external argument projection. In chapter 2, I have argued for Dowty's (1991) view of thematic relations. Class B and C* argument entailments are in (66) and (67) respectively:

(66) Subject Matter

- | | |
|---|-----------------------------|
| a. (Causation); independent existence | (Proto-Agent entailments) |
| b. Stationary relative to another participant | (Proto-Patient entailments) |

(67) Experiencer

- | | |
|--|------------------------------|
| a. Sentience/Perception; independent existence | (Proto-Agent entailments) |
| b. (causally affected)/ change of state | (Proto-Patients entailments) |

It's debatable whether 'causation' in (66a) and 'causally affected' in (67b) are part of the entailments. I argued above that causality is not semantically part of class B and C* predicates, however whether some causality is thematically entailed is an even murkier issue. Either way, these verbs have approximately the same amount of P-Agents and P-Patients entailments. Psych-verbs may be considered to have the 'Subject Matter' argument as a P-Agent, while the 'Experiencer' argument is a P-Patient, under corollary 1, which expresses "If two arguments of a relation have (approximately) equal numbers of entailed Proto-Agent and Proto-Patient properties, then either or both may be lexicalized as the subject (and similarly for objects)" (Dowty 1991: 576). Under corollary 2, "if two nonsubject arguments have approximately equal numbers of entailed P-Patient properties, either or both may be lexicalized as direct object" (Dowty 1991: 576). As the Subject Matter is a subject in the surface, one can interpret these arguments as P-Agents. Though they are merged as objects, and I believe better accounted for if assumed to have a P-Patient role, following Dowty's corollary 2.

3.4.2 The derivations

3.4.2.1 The simple sentences

The syntactic puzzle psych-verbs of class B and C* pose is the following: these verbs forbid their object from moving, and that is what lack of passivization and reflexivization shows. However, when the Subject Matter argument is dropped in the inchoative sentences, the Experiencer argument can successfully move out to the

subject position. I believe that the structure proposed in (63) can explain these facts, namely, that the A-movement of the Experiencer is blocked when the Subject Matter argument is present. First, I will explain how the simple sentence below can be derived:

(68) O rumor preocupou Pedro.

the rumor worried Pedro

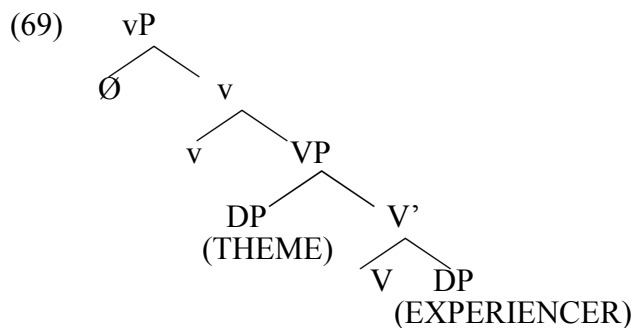
‘The rumor worried Pedro.’

I have argued that these Experiencers are not inherently Case marked, based on lack of evidence for that in BP. Experiencers show properties of direct object in BP, including being able to participate in an inchoative structure. The objecthood of Experiencers is also confirmed in other languages. For example, Herschensohn (1992, 1999) shows that tests with partitive *en*, accusative clitics, passivization, *criore* constructions, and *qu* morphology indicate that Experiencers of *amuse* in French are direct objects.

I will suggest two ways to explain the Case assignment pattern of these verbs. One option – which I will not go into in detail – is to assume a configurational Case account (Marantz 1991, McFadden 2004, Preminger 2011). This view departs from the traditional model where functional heads assign Case via Agree (Chomsky 2000, et seq, a.o.). In this view, the accusative Case is a dependent Case, which is assigned when a structural Case has been assigned. In a nominative-accusative alignment, the structurally lower DP in the pair of arguments receives dependent case. This Case

assigning model is fully compatible with the structure in (63) above, where the theme is a higher argument that moves to receive nominative Case, whereas the Experiencer receives the accusative dependent Case.

In the traditional model of Case assignment, though, I will assume that these verbs have a vP projection (or VoiceP from Kratzer 1996) that does not project an external argument.



For Wood & Marantz (2014), v can introduce a change of state or be a transitivizing projection without necessarily introducing a cause event with an external argument Cause or Agent. In fact, Wood & Marantz argue that v can vary in interpretation, from V_{D_0} of causative verbs to V_{Become} in inchoative verbs. The interpretation of v will correlate to the syntax of the structure, so there's no motivation to posit different syntactic features on the head v.

This is similar to Pylkkanen's (1998 et seq) proposal of the existence of unaccusative causatives implying a causing event when there's no external argument. Her analysis allows for the existence of causatives without an external argument. Japanese adversity causatives are an example of the use of a v when it appears without the projection of an external argument (Wood & Marantz 2014, and

Pylkkanen 1998 et seq.). It's argued these are cases of possessor raising, where the possessor of the object will raise and take place of the subject of the clause, the adversity causative asserts the existence of a causing event without relating any participant to it. Adversity causatives do not have an implicit external argument, as it's argued for passives.

Similar ideas have been presented by Alexiadou & Agnostopolou (2004) and Bennis (2004). Bennis, for example, argues there are two different levels of ergativity: simplex ergativity where there's a VP without a vP, and complex ergativity where there's a v-projection without an external argument, and psychological verbs are used as examples of complex ergative predicates. The vP projection introduces a causation interpretation, regardless of the lack of an external argument. The author arrives at the conclusion that Experiencers are structurally Case-marked in Dutch, and they are true internal arguments. The same is true for the Theme argument, they are shown to be derived subject and true internal argument. Bennis believes the presence of v triggers the interpretation of causality. He argues that v has available an accusative Case to assign. Bennis' and my account differ, however, especially with respect to the exact VP configuration. Bennis believes the Experiencer argument is in Spec-VP and the Theme argument is the complement of V, as there's evidence for that in Dutch. I believe the structure in (63) better captures the behavior of the Experiencer observed so far in BP: they allow inchoative constructions.

In line with these accounts, the sentences in (70) and (71) can be derived as below:

(70) O rumor preocupou Pedro.

The rumor worried Pedro

(71) a. [_{VP} v-V [_{VP} o rumor [preocupar Pedro]]

b. [_{VP} Pedro_{ACC} [_{v'} v-V [_{VP} rumor [V Pedro]]

c. [_{TP} T [_{VP} Pedro_{ACC} [_{v'} v-V [_{VP} rumor [V Pedro]]

d. [_{TP} o rumor T-v-V [_{VP} Pedro_{ACC} [_{v'} v-V [_{VP} ~~the rumor~~ [V ~~Pedro~~]]

Assuming Chomsky's (1993, 1995) view of economy of derivation and shortest move as in (72) below, the target position of the movement and the intervener position must be equidistant from the goal (moving element), that is, they must be contained in the same minimal domain of some head or head chain. If that is obtained, then movement to either position will be considered the 'shortest move', it will obey the Minimal Link Condition (MLC) 'K attracts α only if there is no β , closer to K than α , such that K attracts β .' (Chomsky 1995: 311).

(72) γ is closer to α than β in [α P [... γ ... β ...]] iff:

(a) γ c-commands β , and;

(b) α and γ are not in the same minimal domain.

(Chomsky 1995: 299)

In (71b) above, after V head-adjoins to v, the minimal domain of v includes spec-vP, VP and its content (v's immediate constituents). Thus either *Pedro* or *the rumor* are

free to move to Spec-vP (see Chomsky 1995: ch. 3). The head *v* has phi-features and probes a DP. In this case, *v* agrees with the Experiencer *Pedro*, and assigns Accusative Case to it. In (71c) the matrix T is merged in the derivation and probes down. The V-*v* complex head moves to T, and the chain CH {*v*-T} will include in its minimal domain both *Pedro* in Spec-vP and the empty position Spec-TP, which are equidistant from the moving element *the rumor*. The DP *the rumor* in Spec-VP moves to Spec-TP and agrees with T, receiving nominative Case and checking EPP, making the shortest move without violating the MLC.

Let's see the alternative derivation that yields unacceptable sentence in (73) with the intended meaning of (74), where the Experiencer receives Nominative and the Initiator receives Accusative:

(73) * *Pedro preocupou o rumor.*

Pedro worried the rumor

Intended: 'The rumor worried Pedro.'

(74) a. [_{VP} *v* [_{VP} the rumor [preocupar Pedro]]]

b. [_{VP} the rumor_{ACC} [_{v'} *v*-V [_{VP} ~~rumor~~ [V Pedro]]]

c. [_{TP} T [_{VP} the rumor_{ACC} [_{v'} *v*-V [_{VP} ~~rumor~~ [V Pedro]]]

d. [_{TP} Pedro T-*v*-V [_{VP} rumor_{ACC} [_{v'} *v*-V [_{VP} ~~the rumor~~ [V Pedro]]]

↑ _____ *

Again both internal arguments, *Pedro* and *the rumor*, are in the same maximal projection, and after V adjoins to *v*, Spec-*v*P, *the rumor* in Spec-VP and *Pedro* as a complement of the V are in the same minimal domain. The head *v* has phi-features and probes a DP to agree with. This time in (74b) above, the agreement and accusative Case assigning happen with the Subject Matter *the rumor*. In (74c) the matrix T is merged in the derivation and probes down. Considering that V-*v* complex head moves to T⁵², according to Chomsky (1995:186), and Bobaljik & Jonas (1996), there's no minimal domain that includes both the target of movement Spec-TP, *Pedro* in Spec-*v*P and the trace of *Pedro* in Spec-VP. Although head movement expands the minimal domain of a head, this is not a recursive process. The two latter positions are in the minimal domain of the chain CH {*v*-V}, while the former two positions are in the minimal domain of the chain CH {T-*v*}. Chomsky's shortest move is evaluated derivationally and, as a result, two specifier positions may be equidistant from a complement position, as it was the case in (71) above. However there's no case where more than two specifiers are equidistant from another position (see Chomsky (1995: 186), and Bobaljik & Jonas (1996) for details). Because Spec-VP – containing a copy of *the rumor* – is closer to the Experiencer *Pedro* than Spec-TP, *Pedro* cannot move to Spec-TP without violating the MLC (i.e., not taking the shortest move). *Pedro* is not assigned Case and the derivation in (74) crashes.

Under the above explanation, the derivation in (74) is excluded independently. Let us suppose a different scenario, where the derivation above in (74) is successful.

⁵² Notices that cases with auxiliary verbs that are assumed to be merged in T and that no main verb raising to T takes place pose a problem to this analysis. One way out of this problem would be to assume that the verb features move to T, allowing the minimal domain to be extended.

That would rule in as grammatical the sentence in (73), which we know is unacceptable. Specifically, under Chomsky's (1995:4.10) revised definition of locality for shortest move, as in (75) below, *the rumor* in Spec-vP and *Pedro* are equidistant from the Probe T in (74c):

(75) γ is closer to α than β in $[\alpha P [\dots \gamma \dots \beta \dots]]$ iff:

- (a) γ c-commands β , and; (b) α and γ are not in the same minimal domain, or;
- (c) γ and β are not in the same minimal domain.

(Chomsky 1995: 356)

In this case, *Pedro* can move and agree with T, this being a legitimate movement. Empirically, we know that the derivation in (71) is the one chosen. If (73) is not independently excluded, the question we face is why the first derivation in (71) is preferred over the one in (73).

I believe there's a solution for this case. The derivations above have an asymmetry, namely the kinds of paths they make. The derivation in (71) repeated schematically in (76) below shows a crossing path of movement, while the derivation in (73) repeated in (77) below forms nested paths of movement.

(76) $[_{TP} \text{ the rumor } T\text{-}v\text{-}V [_{vP} \text{ Pedro}_{ACC} [v' v\text{-}V [_{VP} \text{ the rumor } [V \text{ Pedro}]]]]$

(77) $[_{TP} \text{ Pedro } T\text{-}v\text{-}V [_{vP} \text{ rumor}_{ACC} [v' v\text{-}V [_{VP} \text{ the rumor } [V \text{ Pedro}]]]]$

Murasugi (1992) shows that crossing paths is associated with NP-movement of arguments in nominative-accusative languages, and that is derived by functional projection properties of those languages. If that is assumed, the nested paths in (77) seem to be dispreferred in the grammar of those languages. I can assume that that is the reason why psych-verbs with the structure in (63) above have Experiencers as objects in Nominative-Accusative languages.

Other languages indicate that this analysis is on the right track. Pesetsky argues for a causative account for psych-verbs, and supporting evidence for that comes from Object Experiencer psych-verbs in Japanese that have an overt causative morpheme, while this morpheme is null in English-like languages. It's been shown by Motomura (2004) that psych-verbs taking causative morpheme *SE* in Japanese do not passivize, for example, as a consequence of the lack of an external argument (see also Miyagawa 1989).

(78) Kaminari-no oto-ga Kyoko-o kowa-gar-ase-ta
thunder-Gen sound-Nom -Acc scared-GAR-caus-past
'The sound of thunder scared Kyoko'

(Motomura 2004: (28))

Japanese object experiencer psych-verbs show a very similar pattern to the one pointed out for BP: both arguments are internal, however a functional head introduces an accusative Case assigner. Accusative is assigned to the Experiencer, while

nominative is assigned to the Subject Matter. The lack of external argument inhibits these psych-verbs in both languages from having passives.

The characterization given in the literature to psych verbs as unaccusatives is largely incorrect. These verbs are better characterized as ergatives, as although they do not project an external argument, they do have a verbal head that assigns structural accusative.

3.4.2.2 Deriving the passive restriction

We've seen that unlike classes A and C that have external arguments, Classes B and C* don't allow passives:

- (79) a. *Maria foi preocupada por Pedro. Class B
Maria was worried by Pedro
b. *Pedro foi animado por Ana. Class C*
Pedro was cheered-up by Ana

With the assumption that these verbs have two internal arguments and no external one (see (63)), I have an explanation for the lack of passives. Notice that verbs that don't allow for external arguments don't typically passivize:

- (80) a. Maria nasceu.
Maria born

‘Maria was born.’

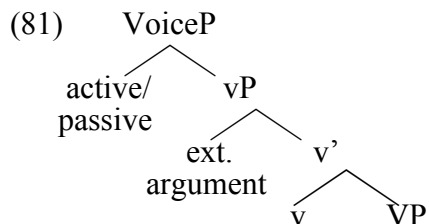
b. *O medico nasceu Maria.

the doctor born Maria

c. *Maria foi nascida.

Maria was born

It has been argued in the literature that passive morphology modifies the head *v* introducing an external argument. Passive attaches outside the domain that introduces the external argument and thus has as its input a transitive structure, this is the case for languages like English and German (and BP), see Collins (2005), Bruening (2012), Merchant (2013) a.o.. In other words, in languages of this type passive is an operation on an active transitive verb phrase, and it derives passive VPs:



In line with Bruening (2012), I assume that passive voice contains an external argument that may be phonologically null but is syntactically present. The lack of an external argument in *vP* can account for why classes B and C* do not allow passives: an incompatibility between passive Voice head and the argument-less *vP* it combines with. Bruening accounts for the lack of unaccusatives in passives by assuming these don't have the appropriate functional head to combine with the Passive head. I leave

aside the details for this incompatibility, the main point is that the lack of passives in class B and C* verbs can be traced down to the lack of an external argument, a position that has been argued for independently in current literature.

3.4.2.3 Reflexivization

Another piece of the puzzle of class B and C* psych-verbs is their inability to form *se* reflexives in Romance. This behavior has been attributed to their unacusativity, as we saw in section 3.2.

- (82) *Maria se preocupou/ animou. Class B/C*
 Maria self worried/cheer-up
 ‘Maria has gotten worried/cheered up.’

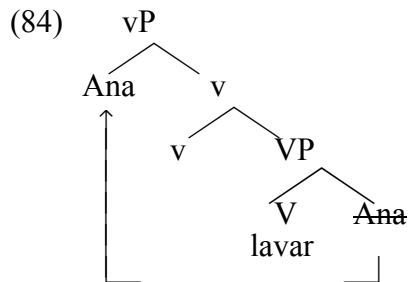
Much work has been done on Romance *se* reflexives. Alboiu, Barrie & Frigeni (2002) show that the *se* morpheme in Romance is an underspecified [+human] argument with a person feature and is not inherently reflexive – reflexivity is an epiphenomenal feature. Based on multiple tests, they argue that in reflexive structures, the DP (e.g. *Ana* in (84)) is the external argument while the morpheme *se* is the reflexive object. Alboiu, Barrie & Frigeni (2002) analyzes Romance reflexivization with *se* in terms of movement, following Hornstein (1999, 2001). If thematic roles are seen as features

that are checked via movement⁵³, the derivation of a sentence in (83) is obtained as in (84) below:

(83) a. Ana se lavou

Ana self wash

‘Ana washed herself.’



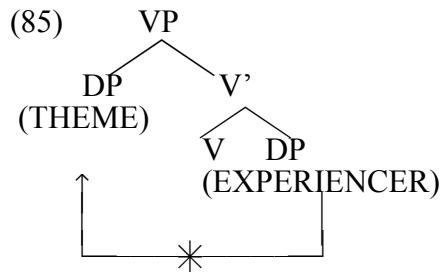
The derivation in (84) contains one argument DP *Ana* that first merges with V.

Because this numeration only has one DP, *Ana* has to move to Spec-vP to satisfy the head *v* requirements. According to Hornstein (1991, 2001) a non-trivial chain is formed and both copies of that chain must be pronounced to satisfy Case.

Assuming that the above described basic mechanisms of forming *se* reflexives in Romance are correct, I propose a straight-forward account for why psych-verbs of classes B and C* won't form them. Given the structure in (63), repeated below in

⁵³ Note that a configurational view of theta-roles is also consistent with the movement theory of reflexivization. The system must allow however for the theta-roles to be interpreted/read under internal-merge, besides external merge, which is argued against by many in the field (see Hornstein 1999, 2001 for discussion).

(85), I argue that A-movement from the complement position of VP (Experiencer argument) to the specifier position of the same VP is too short and non-economical (Abels 2003).



Notice that nothing prevents the reflexive interpretation of the sentences like in (82) above, as these sentences are good with full reflexives, see (86). Presumably, non-clitic reflexives are derived in a different fashion, they are not due to movement alone. That the reflexive interpretation is available for classes B and C*, but the *se* reflexive is not, is explained under my analysis – the lack of *se* reflexives is a result of the unsuccessful derivation due to independent reasons in the grammar.

(86) Maria preocupou/ animou a si mesma.

Maria worried/cheer-up to self-her

‘Maria worried/cheered up herself.’

3.4.3 Additional Evidence

3.4.3.1 *Arbitrary pro*

So far class B and C* behave similarly syntactically, e.g. they disallow passivization and reflexivization, but can appear as inchoative verbs. I accounted for this behavior assuming that these verbs are ergatives that project a v head without an external argument. In contrast, class C psych-verbs are transitives with a Cause/Agent external argument. The ability to accept arbitrary *pro* is additional evidence for this analysis⁵⁴:

- (87) ??Chatearam a mãe do Pedro ontem à noite com a música alta. Class B

bothered the mother of-the Pedro yesterday at night with the music loud

‘They bothered Pedro’s mother with loud music yesterday night.’

- (88) Humilharam Maria no palco. Class C

humiliated Maria in-the stage

‘They humiliated Maria on the stage.’

- (89) ??Animaram Maria com música e carinho. Class C*

cheered-up Maria with music and tenderness

‘They encouraged Maria last night with music and tenderness.’

⁵⁴ The generic reading of *pro* is associated with all kinds of predicates, including derived subjects, while the impersonal reading is not accepted with derived subjects (Cinque 1988). Here we discuss the latter.

Belletti & Rizzi (1988) argued that the unacceptability of *pro* as a subject of class II verbs comes from the derived nature of this subject. Arbitrary interpretation comes from theta-marking by INFL and because class II verbs are unaccusatives, they cannot bear arbitrary null subject interpretation (see Belletti & Rizzi (1988) for details). It's well-known that antecedents of 3PL indefinite null subjects must be [+human], and that they trigger an existential interpretation (see Suñer 1983, Jaeggli 1986, Cinque 1988). The DP subject must, therefore, denote an individual in order to comply with this restriction. According to Barbosa (2013), in cases of 3PL arbitrary readings 'the variable introduced by the null NP is bound under existential closure and the arbitrary reading obtains' (Barbosa, 2013:49).

Here we see that in BP arbitrary *pro* can show up with classes C of object Experiencer verbs (cf. (88)), but not with classes B or C* (cf. (87) and (89)). One explanation for these facts is that the null variable *pro* can only be introduced as an external argument (cf. Cinque 1988, fn. 17), which is not unreasonable as languages vary on the availability of null subject and object arguments, i.e, having one does not imply you have the other. Although I will not discuss the syntactic reason for these patterns⁵⁵, below are examples in BP of ergative (cf. (90a) and passive (90b) constructions that involve a derived subject and they are unacceptable with arbitrary *pro*.

(90) *No verão de Salvador, derretem de calor nas ruas.

In the summer of Salvador, melt of heat on-the streets

Intended: 'In Salvador's summer, people melt on the streets from the heat.'

⁵⁵ See Spyropoulos 2002 for a derivational account of the licensing of null subject.

b. *Foram presos na demonstração.

were arrested in-the demonstration

Intended: ‘People were arrested during the demonstration.’

In (90), as well as in (87) and (89) – but crucially not in (88) – the subject is not the external argument of the predicate but an internal one, which has been syntactically promoted. This means the impersonal reading of arbitrary *pro* is syntactically constrained and cannot be associated with the internal argument, but only with the external.

In sum, this corroborates my analysis that classes B and C* subjects can’t bear an arbitrary *pro* as they don’t have an external argument, which confirms that their Subject Matter argument is indeed an internal argument that cannot be turned into a null *pro*. In contrast, class C verbs project an external argument.

3.4.3.2 Other predicates

The structure in (63) (cf. (85)) is not restricted to psych-verbs. There are other verbs that behave very similarly to class B and C* verbs:

- (91) a. A dieta emagreceu Maria. two arguments
the diet lost-weight Maria
‘Maria lost weight with the diet.’
b. Maria emagreceu. inchoative

Maria lost-weight

‘Maria has lost weight.’

c. *Maria foi emagrecida pela dieta

*Passive

Maria was lost-weight by the diet

d. *Maria se emagreceu.

*SE reflexive

Maria SE lost-weigh

‘Maria lost weight by herself.’

More examples of verbs that behave this way are: *contentar* (‘content’), *encher* (‘fill’), *amadurecer* (‘mature’), *adoecer* (‘fall-ill’), *empalidecer* (‘pale’), *engordar* (‘get-fatter’), *desnortear* (‘become-disoriented’), etc. This is further indication that there’s nothing exceptional or exclusive about psych-verbs of classes B and C*. Their properties can be derived by their syntactic structures, and these are shared among a group of verbs that extends beyond psych-verbs. I believe semantically all these verbs share some traits, such as being largely states, with a presupposed change-of-state. They can have a Subject Matter argument that is related to the event by an aboutness relation, which is much looser than a causation relation.

3.5 Conclusion: new classes of psych-verb

Cançado’s (1995 et seq) psych-verb classes seem inaccurate to explain the broader syntactic and aspectual behavior of psych-verbs. In what follows I lay out my suggested modifications of Cançado’s analyses and give a final classification of

psych-verbs in BP, which accurately captures its properties as described in the previous sections of this chapter, and summarized in table 2 below:

Classes	Class A	Class B	Class C	Class C*
Properties				
Passivization	✓	✱	✓	✱
Reflexive <i>se</i>	✓	✱	✓	✱
Inchoative <i>se</i>	✱	✓	✓ - ✱	✓
Arbitrary <i>pro</i>	✓	✱	✓	✱

Table 2

It should be noticed that the analyses in Cançado (2012), Cançado, Godoy, and Amaral (2013) and the approach developed here agree in two important points. First, in saying that psych-verbs are not a cohesive or a special class of verbs. Once studied closely, we see they share common properties of different classes of verbs. Their behavior can be explained by their syntactic and semantic properties, and they are a part of larger groups of verbs with which they share properties. I therefore use the term ‘psych-verb’ terminologically; it mainly describes verbs that have the property of expressing someone’s mental state. The psych-verbs classification developed here is a way to organize and describe information, rather than classes with unique syntactic status.

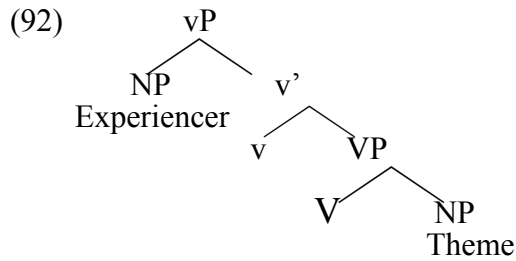
As a second point, both our analyses agree that Experiencers are direct objects of psych-verbs and that these verbs are not unaccusatives. Remember that there's a long line of accounts for psych-verbs that assumes class II verbs (or some of them) are unaccusatives (Belletti & Rizzi 1988, Landau 2010 a.o.)⁵⁶. In chapters 2 and 3, I pointed out reasons for not adopting the unaccusative hypothesis for class II psych-verbs as a cross-linguistic standard, and especially in the case of BP. In what follows, I show a summary of the ideas developed in this chapter. Note that the theta roles's names are used here for expository reasons, not theoretical ones.

3.5.1 Class A

Class A verbs are transitive stative verbs. This class is less controversial, and this type of account has been put forth since Belletti & Rizzi's (1988) class I verbs. They have an Experiencer (P-Agent) as a subject and the Theme (P-Patient) as an object. There are different ways to syntactically represent these verbs. One possibility comes from Kratzer (1998)⁵⁷ who proposes that Voice with a *holder* function introduces an external argument in transitive stative verbs. For simplicity, here I will represent external arguments in Spec-vP:

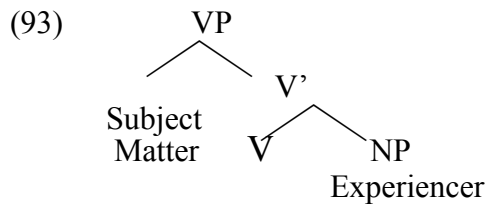
⁵⁶ Postal (1971) was to my knowledge the first to account for psych-verbs class I and II alternation pairs, such as *like* and *please*, by means of deriving transformation, i.e., both verbs corresponded to the same initial syntactic configuration.

⁵⁷ There are many other equivalent proposals, e.g. Hale & Kayser 2002, Marantz 2005.



3.5.2 Class B

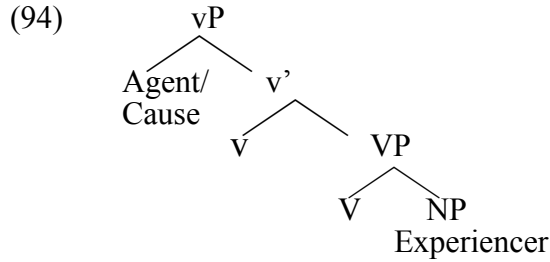
In previous sections I argued that Class B verbs are not real causatives with a change of state. I pointed out that Class B behaves like stative predicates, where the Subject Matter of the Experiencer's mental state⁵⁸ is also represented. In class B, the Experiencer and the Subject Matter can be interpreted as P-Patients.



3.5.3 Class C

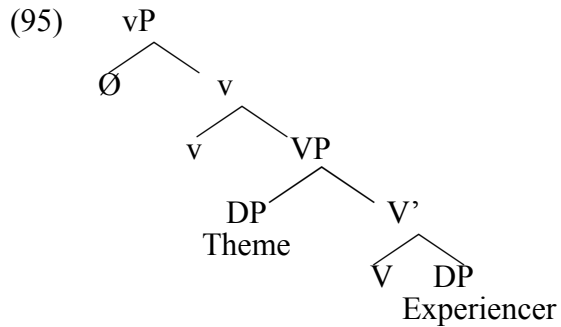
Class C verbs are syntactically causatives, they denote an accomplishment where their external argument is an Agent (P-Agent) and the Experiencer undergoes a change of state (P-Patient). The Agent is introduced separately by a causative light verb:

⁵⁸ Notice that class B verbs correspond to inherently stative class II verbs from Arad (1998) and Landau (2010). Some class B verbs may have an eventive reading, besides the stative one (Arad 1998, Landau 2010). These verbs (e.g., *frighten*, *surprise*) are part of classes C (or C*) under Cançado's (1995 et seq) and my classification.



3.5.4 Class C*

In this chapter I defended that there's a subclass of Cançado's class C verbs that behaves differently from classes B and C. This is class C*. Verbs in this class are achievements, however these verbs behave syntactically like class B verbs, and not class C. Their syntax is similar to class B verbs therefore⁵⁹.



To conclude, the new classification of Brazilian Portuguese shows that 'psych-verbs' and 'Experiencers' don't really hold any special value in the grammar. When we observe the syntactic and semantic behavior of these verbs, we find that each psych-

⁵⁹ It's possible to argue for a syntactic analysis that would capture the differences between classes B and C* in different frameworks, e.g. Distributed Morphology framework (Marantz 1993, 2005, McGinnis 1998), event structure (Rothstein 2004, a.o.), so that the different lexical aspect of each of these verbs can be accounted for syntactically.

verbs class behavior is a consequence of the verb's syntactic and semantic properties. Different expressions of psychological predicates rely on manipulations of the general syntactic representation of events. I've shown in this chapter how four classes of different expressions of psychological predicates exploit universal as well as language particular mapping between syntactic structure and meaning.

In the next Chapter, I will discuss defective intervention effects created by Experiencers in raising constructions. Those Experiencers differ syntactically and semantically from Experiencers from psych-verbs discussed in this chapter. I will provide a typology of languages regarding how they behave with respect to defective intervention, and highlight a minimality condition that can account for the observed patterns.

Chapter 4: Raising across experiencers

4.0 Introduction

In the previous chapters, I discussed how experiencers of psych-verbs behave in Brazilian Portuguese, and how to account for them. I put forth the view that experiencer is not a cohesive group, but includes arguments that may serve as P-Agent or P-Patient. In this chapter, I will discuss another argument that has been called ‘experiencer’ in the literature. They are optional arguments introduced in the matrix clause of raising verbs (1a). Notice that these experiencers interfere with raising of the embedded subject, as the contrast between (1b) and (1c) show:

- (1) a. Pareceu pro juri que o acusado estava mentindo. (BP)
seemed to-the jury that the defendant was lying
- b. *O acusado pareceu pro juri estar mentindo
the defendant seemed to-the jury be-INF lying
‘It seemed to the jury that the defendant was lying.’
- c. O acusado pareceu estar mentindo. (BP)
the defendant seemed be-INF lying
- (2) *Gianni sembra a Piero fare il suo dovere (Italian)
Gianni seems to Piero do-INF the his duty
‘Gianni seems to Piero to do his duty.’ (McGinnis 1998: 93)

The ungrammaticality of (1b) and (2) has been attributed to defective intervention (Chomsky 2000), which happens when an agree relation between a probe and a potential goal is blocked by a closer matching goal that is inactive in the derivation due to the fact that its features have already been valued. The general explanation for defective intervention can be seen as an extension of the Minimal Link Condition (Chomsky 1995) or Relativized Minimality (Rizzi 1990 et seq): an element α may enter into a relation with an element β if there is no γ that meets the requirement(s) of α and γ c-commands β . In (1b) above, the agreement between the finite verb and the embedded subject is blocked by the intervening oblique argument that is inactive.

In this chapter, I discuss dative/oblique DP/PP interveners that block subject-to-subject movement as in (1) in a variety of languages, focusing on Romance languages like Brazilian Portuguese, Spanish, and Romanian (see McGinnis 1998 for French, Torrego 1996, 1998 et seq. for Spanish, Holmberg & Hróarsdóttir 2003 for Icelandic, Boeckx 2008 for Italian, and Kitahara 1997, McGinnis 1998, Boeckx 1999, Chomsky 2000, Hartman 2013 for English).

Romance languages like Brazilian Portuguese, Romanian, and Spanish obviate defective intervention by use of oblique clitic experiencers, i.e, raising over a clitic experiencer is generally allowed in languages⁶⁰:

(3) a. Esse taxista me parece estar cansado. (BP)

this taxi-driver 1SG-DAT seems be-INF tired

⁶⁰ Romanian *să* is a subjunctive particle marker, which I gloss as *subj* for brevity. For simplicity, I use DAT(ive) in the glosses to present oblique experiencers regardless of their actual Case morphology.

b. Ese taxista me parece estar cansado. (Spanish)

That taxi-driver 1SG-DAT seems be-INF tired

c. Taximetristul acela îmi pare să fie oboist (Romanian)

Taxi-driver.the that 1SG-DAT seems subj is tired

‘That taxi-driver seems to me to be tired.’

Interestingly, defective intervention is alleviated in languages like Romanian and Spanish when experiencer DPs are clitic doubled:⁶¹

(4) ?Ion *(îi) pare Mariei să nu-l fi citit încă pe Goethe
 John 3SG-DAT seems Mary-DAT subj not-cl be read still dom Goethe
 ‘John seems to Mary not to have read Goethe.’ (Romanian)

(5) Juan *(le) parece a María no haber leído a Goethe.
 John 3SG-DAT seems to Mary not have read to Goethe
 ‘John seems to Mary not to have read Goethe.’ (Spanish)

⁶¹ Note that Romanian and Spanish native speakers showed variable preferences for such constructions. Sentences (4) and (5) were considered by some native speakers as marginally acceptable or incorrect. Moreover, differences in acceptability were observed with respect to the use of the infinitive versus the subjunctive as the former is less used in modern Romanian. A dialectal variation was observed between Peninsular and American Spanish, but also idiolectal preferences. I will return to the dialectal differences in Spanish in section 4.3.

But before examining defective intervention in more detail, in the next section, I discuss how Bruening (2014) casts doubt on the grammatical status of defective intervention. Bruening (2014) has recently argued that defective intervention is not a real syntactic phenomenon, but it is actually the effect of linear order. My goal in the next section is to show that Bruening's (2014) potential counterexamples to the existence of syntactic defective intervention are only apparent. I will provide an explanation for his data based on adverb placement and the hierarchical architecture of clauses with experiencers. I show that linear intervention cannot explain the full data range.

This chapter is organized as follows: in section 4.1, I present Bruening's (2014) counter-evidence to defective intervention and an explanation based on a fine-grained analysis of adverbs. Section 4.2 provides a survey of defective intervention in raising crosslinguistically, with summaries and generalizations. An analysis of intervention with experiencers across several Romance languages is provided in section 4.3, along with an updated theory of minimality. In section 4.4 I provide an analysis for the behavior of raised subjects over clitics in Brazilian Portuguese. Section 4.5 concludes this chapter.

4.1 Counter-evidence to Bruening (2014)

Bruening (2014) defends the idea that only 'simple' intervention, e.g., intervention of an active goal, exists in the grammar, and that defective intervention does not carry a theoretical status as a phenomenon, but it can be reduced to linear placement constraints. This is a legitimate question, since locality principles, such as the MLC,

can't straightforwardly account for defective intervention: if a goal is inactive, i.e., cannot satisfy the probe, why should it intervene in an operation in the first place?

Bruening shows that adjunct phrases in (6), which are argued not to interfere with A-movement, act just like the experiencer PPs in (1) and (2), causing unacceptability in the same position⁶²:

- (6) a. *Jean a semblé [au cours de la réunion] avoir du talent. (French)
 John has seemed during the meeting have-INF talent.
 'John seemed during the meeting to have talent.'
- b. ??Gianni sembra in alcune occasione fare il suo dovere. (Italian)
 Gianni seems on some occasions do-INF the his duty.
 'Gianni seems on some occasions to do his duty.' (Bruening 2014: 714)

Bruening (2014) claims that the unacceptability of these examples is due to the linear position of adjuncts. The author argues that adjuncts of all types are banned in the position between matrix V and the subordinate infinitive (in linear order), and although he suggests some explanations for that ban, none of them are developed into an analysis. Below I review his data and provide an account for it.

⁶² Bruening (2014) also shows that adverbials phrases (ii) pose similar intervention effects like experiencers (i) in tough-movement. I will not comment on those, as that is not the topic of this chapter. I believe tough-movement and raising involve different operations, and therefore they cannot be reduced to the same analysis.

- (i) a. It is important (to Mary) to avoid cholesterol.
 b. Cholesterol is important (*to Mary) to avoid.
- (ii) a. It is enjoyable in the summer to eat strawberries.
 b. * Strawberries are enjoyable in the summer to eat

4.1.1. Towards an explanation: linear vs. syntactic invention

I will show that the phrases (adverbials and experiencers) provided by Bruening can structurally attach to different positions in raising constructions, hence triggering different interpretations and different degrees of acceptability. In the raising structures discussed here, an experiencer is assumed to be part of the matrix VP (either introduced by an applicative head or in a PP) (cf. Anagnostopoulou 2005, Diaconescu & Rivero 2005, Marchis & Alexiadou 2013), while an adverbial phrase may be merged as the modifier either of the embedded or the matrix verb. Moreover, different types of adverbs have specific placement constraints.

With these ingredients, I argue that there is no reason to believe that the unacceptability of (6) above with phrasal adverbs and the unacceptability of (7) below with experiencers are related: they result from different constraints that can be independently accounted for.

- (7) *Jean a semblé à Marie avoir du talent. (French)
Jean seems to Marie to.have of talent
'Jean seems to Marie to have talent.' (Bruening 2014: 713)

Note, for example, that some French speakers deem (7) acceptable or only lightly deviant (?), while these same speakers judge (6a) as bad (*). This is only the first of many asymmetries I'll present between adverbs and experiencers in raising constructions.

The first problem for Bruening's claims revolves on the kind of adverb. Adverbial phrases like *in those conditions* presented in Bruening (2014) are also marginal in the same position in Spanish (Sp), Romanian (Ro), and Brazilian Portuguese (BP).

- (8) a. ?*María parece en esas condiciones no querer ir más de vacaciones.* (Sp)

Maria seems in those conditions not to want-INF go-INF more on vacation

- b. ?*Maria pare în aceste condiții să nu mai vrea să plece în concediu.* (Ro)

Mary seems in these conditions subj not want go-3PL on vacation.

- c. ?/?*Maria parece nessas condições não poder sair mais de férias.* (BP)

Maria seems in those conditions not can-INF go-INF more on vacation

'Mary seems in those conditions not to be able to go anymore on vacation.'

However, not all adverbial phrases are illicit in the position between the raising verb and the infinitive/subjunctive. In contrast to the adverbial phrases provided by Bruening (2014). As Marchis Moreno & Petersen (forthcoming a,b) show, some modal and temporal adverbials such as *today, unequivocally, now, often, recently* a.o. in (9) and (10) are quite acceptable in the position argued by Bruening to be illicit, i.e. between the raising verb and the embedded clause:

(9) Pedro pareceu ontem/ inequivocadamente não querer mais (BP)
vir pra festa.

Peter seemed yesterday/ unequivocally not want-3SG-INF more
come to-the party

‘John seemed yesterday not to want to come to the party anymore.’

(10) Ion părea adesea să aibă talent. (Romanian)⁶³

Johns seemed often subj have-3SG talent

‘John often seemed to have talent.’

Bruening’s claim that linear position could explain the unacceptability of sentences in (6) to (8) predicts that ‘adjuncts of all types are banned in the same position as experiencer PPs’ (Bruening, 2014: 715). Although not providing a full analysis of the linear intervention, Bruening argues that some speakers have a preference or requirements that the nonfinite clause immediately follows the raising predicate. Cases such as (9) and (10) contradict Bruening’s proposal.

In the next sections, I present how Marchis Moreno & Petersen (forthcoming a,b) show that the contrast between (6),(8) and (9)-(10) is due to several reasons: First, following Haider (2004), we argue that Bruening’s adverbial phrases in (6) and (8) are embedded inside the VP belonging either to the matrix or to the embedded clauses and they cannot appear in the position between the matrix verb and the embedded clause/infinitive due to placement restrictions shown in Cinque (1999) and

⁶³ I thank Ion Giurgea for drawing my attention to the different adjoined positions of adverbs in Romanian.

Ledgeway & Lombardi (2005). Interestingly, non-phrasal adverbs are acceptable in the same position that Bruening's phrasal adverbs are not, (9) and (10). Therefore, the kind of adverb will restrict the positions in which it may appear.

The second problem for Bruening's analysis comes from Brazilian Portuguese. Brazilian Portuguese allows hyper-raising. i.e., raising from a finite clause, which has all the characteristics of an A-movement (Martins & Nunes 2005, 2009). Defective intervention is equally observed in both raising (R) and hyper-raising (HR) (cf. (11) and (12)).

(11) a. *Os alunos parecem pro professor que estudaram para a prova. (BP H-R)

the students seem-3pl to the teacher that studied-PL for the exam

'The students seem to the professor that they studied for the exam.'

b. Os alunos parecem que estudaram para a prova.

the students seem-3pl that studied-PL for the exam

'The students seem to the professor that they studied for the exam.'

(12) a. *Os alunos parecem pro professor terem estudado para a prova. (BP R)

the students seem-3pl to the teacher have-3pl-INF studied-3pl for the exam

'The students seem to the professor to have studied for the exam.'

b. Os alunos parecem terem estudado para a prova.

the students seem-3pl have-3pl-INF studied-3pl for the exam

'The students seem to the professor to have studied for the exam.'

Notice, now, that the very same adverbs used by Bruening (2014) affect hyper-raising and raising differently: raising over adverbs is marginal (cf. (13)) while hyper-raising over the same adverbs is perfectly acceptable (cf. (14)).

(13) a. ?? Maria parece nessas condições não quer sair mais de férias.
Maria seem in-these conditions not want-INF leave-INF more of vacations
‘It seems that Mary doesn’t want to go on vacations anymore in these conditions.’

b. ?? Os senadores parecem em certas ocasiões fazerem as piores
escolha para a população.
the senators seem that on certain occasions make-3pl-INF the worst
choices to the population
‘The senators seem to make the worst choices for the population on some occasions.’

(14) a. Maria parece nessas condições que não vai sair mais de férias.
Maria seem in-these conditions that not will-IND leave more in vacations
‘It seems that Mary will not be going on vacations anymore in these conditions.’

b. Os senadores parecem em certas ocasiões que fazem as piores escolhas
para a população.
The senators seem in certain occasions that make-IND the worst choices
to the population

‘The senators seem to make the worst choices for the population on some occasions.’

The pattern above cannot be explained under Bruening’s assumptions: if defective intervention does not exist and it can be reduced to a linear constraint, why the contrast in acceptability with adverbial placement in (14), and with experiencers located in the same position in (12)?

In the next section, I present how Marchis Moreno & Petersen (forthcoming a,b) show that the restrictions on adverb placement across languages can explain why *some* adverbs cannot appear between the raising verb and its embedded complement. Our analysis also explains the contrast between (13) and (14), i.e., why indicative and infinitive complements behave differently regarding adverb placement. I look at the behavior of adverbs in monoclausal structures and then apply the findings to biclausal structures in section 4.1.4, where I consider both possible positions of the adverbs, i.e, adverbs may be contained in the embedded or matrix clause.

4.1.2 Two kinds of adverbs

Haider’s (2000, 2004) analysis of preverbal and postverbal adverbs can explain why simple adverbs – or ‘high’ adverbs in Cinque’s (1999) terminology, are allowed between the raising verb and the embedded domain, while Bruening’s phrasal adverbials are illicit in that same position.

In brief, Haider (2004) shows that there are roughly two kinds of adverbs in terms of how they can attach to the structure. Preverbal adverbs c-command the finite

verb and are adjoined to the VP or higher projections, these are simple adverbs like *easily* or *soon*, see (15a)⁶⁴. Postverbal adverbial phrases do not c-command the surface head position of the VP head (except for manner adverbs⁶⁵). Haider (2004), like Larson (1988) and Stroik (1990), assigns postverbal adverbials like *without any difficulties* to the most deeply embedded positions in the VP shells, in an extraposition zone⁶⁶, (15b).

- (15) a. [John₂ [XP often [XP ... [VP t₂ watches₁ [VP the news [t₁]]]]]]
 b. [TP Ana₂ [VP t₂ saw [VP Peter [V' t₁ [at the meeting]]]]]

See the contrast in English below:

- (16) He will easily/*without any difficulties find an appropriate solution

The distinction between these two kinds of adverbs is compatible with the empirical data presented earlier that show a contrast between simple adverbs such as manner and time adverbs, and phrasal adverbs that, according to Bruening (2014), intervene on a par with experiencer DPs.

Haider (2004) derives his analysis of adverbs based on two main restrictions. The first is a general projection restriction, namely that adjunction is possible only to

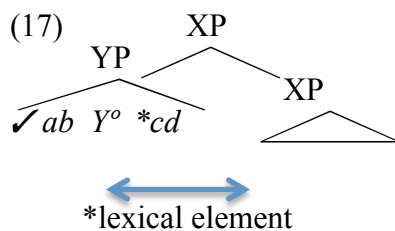
⁶⁴ See Haider (2004) for arguments against a Spec position analysis for adverbs.

⁶⁵ In VO languages like English, Romanian, and Spanish, adverbials (like manner adverbs in English and all other core adverbs in Romance) may be postverbal without being extraposed (they become postverbal through verb movement).

⁶⁶ This is in VP head-initial languages, (VO), like the ones I discuss here. The ‘extraposition zone’ is a non-compositional sub-constituent of the VP-projection (cf. also Pesetsky 1995, Phillips 2003).

the left, but not to the right. Consequently, post-head adverbials are embedded, and not right adjoined.

The second restriction, according to Haider (2004), explains the unacceptability of phrasal adverbials in the preverbal position. The edge effect, namely the reflex of a constraint against post-head material in a phrase that serves as a preverbal adverbial constituent, is the cause of this unacceptability. This is known as “head final constraint”, or “head final filter”, a ban on pre-head adjuncts that do not end in a (lexical) head (Williams 1982).



Below in (18a) is an example in English of this constraint at play when the simple adverb *often* is modified: material on the left of the adverb is allowed, but not to the right or a preverbal adverbial phrase⁶⁷. This constraint is equally observed in the nominal domain, see (18b):

⁶⁷ This restriction reflects a difference in the structural licensing of adjunct positions, i.e., whether the language is VO or OV. The *edge effect* is not a fully understood restriction, but it requires that the head of an adjoined phrase be adjacent to the node the phrase is adjoined to (see Haider 2004 for more).

- (18) a. He has [(much less) often (*than I (thought)))] rehearsed it
 (cf. *He has rehearsed it [much less often than I thought]*)
 b. a much bigger (*than I though) sum (cf. *a much bigger sum than I though*)
 (modified from Haider 2004: 782, 793)

As a consequence of the edge effect, any adverbial that c-commands the finite verb and is adjoined (somewhere to the left of) in VO languages like English, Romanian and Brazilian Portuguese must be simple, i.e., not have any post head material.

Because phrasal adverbs – the kind presented by Bruening (2014) – headed by Ps are phrasal, they are strictly VP-internal adverbials and cannot be adjoined⁶⁸.

Let's illustrate some of the properties of these types of adverbials in Romanian and Brazilian Portuguese.

⁶⁸ Larson (1988) and Stroik (1990) analyze postverbal adverbs as structural complements, and assign them to the most deeply embedded positions in the VP shells.

- (i) $[_{V_{max}} \dots [_{V_0} V Adv]$ (adapted from Haider 2004: 789)

Based on Larson's (1988) analysis of postverbal adverbs, Haider (1992, 2000, 2004) shows that postverbal adverbials are 'extraposed' and the 'extraposition zone' is a non-compositional subconstituent of the V-projection, so its order relations are not determined by the head; the order relations for adverbials in the extraposition zone are interface effects, that is, they are semantically driven. The term 'extraposition' here is used in a particularly different way than traditional extraposition, which typically implies movement to the right. Since Haider argues that adjunction takes place only to the left (Larson 1988 and Kayne 1994) extraposition has a different meaning. Because the exact analysis of the "extraposition zone" is not relevant to me, I do not discuss this point any further.

4.1.3 Romanian and Brazilian Portuguese adverbials

Simple adverbs in Romanian and BP such as *adesea* ‘often’ and *recentemente* ‘recently’ can be used both preverbally and postverbally, (19). These are the adverbs that, as discussed in the previous sections, are grammatical in the position where non-clitic doubled experiencers cause defective intervention.

- (19) a. Fata (adesea) învață (adesea) pentru examen. (Ro)
 Girls often learn-3SG sometimes for the exam
 ‘The girls often learns for the exam.’
- b. A menina (recentemente) estudou (recentemente) para o exame. (BP)
 the girl recently study-3sg recently for the exam
 ‘The girl recently studied for the exam.’

They can be postverbal presumably through verb movement, like in (20):

- (20) [TP girls₂ learn₁ [XP often [XP ... [VP t₂ t₁ [VP ... [t₁]]]]]]
 ↑ _____ •

There are good reasons to assume that these types of adverbs in Romanian are attached preverbally, e.g. they precede the auxiliary verb in (21) (unlike English):

- (21) (✓Des) a (*des) învățat pentru examen. (Ro)
 Has often/often has learned for exam
 ‘She/he has often studied for the exam.’

(cf. *John has often*/**John often has ...*)

Unlike in Romanian, these adverbs occur after the auxiliary verb in Brazilian Portuguese (22)⁶⁹:

(22) Eu (*frequentemente) tenho (✓frequentemente) estudado para o exame.

I often have often studied for the exam

‘I often studied for the exam.’

Romanian and Brazilian Portuguese simple adverbs cannot tolerate modification to the right, i.e., they show edge effects, (23a) and (24a). In Romanian, but not Brazilian Portuguese, they become much better if prosodically marked with stress. These modified adverbials can be postverbal, (23b) and (24b).

(23) a. # Eu [mai DES decât Ana] am studiat pentru examen (Ro)

I more OFTEN than Ana have studied for exam

⁶⁹ The variation in the placement of the adverbs with respect to auxiliaries between Romanian, and Brazilian Portuguese and Spanish (cf (i)) is not going to be pursued here. There is no clear evidence that the position of preverbal adverbs in Romanian is a different position than in Brazilian Portuguese and Spanish. This variation may be linked to the different degree of focus fronting across Romance in that Romanian is more permissive in fronting focused adverbs independently of their nature. Note that in (23a) the adverb is possible in that position only if it bears a strong focus.

(i) Los tratamientos de herbicida (...) (*frecuentemente) han (✓frecuentemente) matado a las hierbas (...)

the treatment of herbicide often has often killed to the grass.

‘The herbicide treatment frequently kills the grass.’

‘I have studied more often than Ana for the exam.’

b. Eu am studiat pentru examen [mai des decât Ana]

I have studied for the exam more often than Ana

‘I have studied for the exam more often than Ana.’

(24) a. *Eu [mais frequentemente que Ana] estudei para o exame (BP)

I more often than Ana studied to the exam.

‘More often than Ana, I have studied for the exam.’

b. Eu estudei para o exame [mais frequentemente que Ana]

I studied to the exam more often than Ana

‘I have studied for the exam more often than Ana.’

While simple adverbs can occur both preverbally and postverbally, phrasal adverbials can occur naturally only postverbally, as in (25).

(25) a. Maria a învățat pentru examen în această vară . (Ro)

Maria has studied for exam in this summer

‘Maria has studied for the exam in this summer.’

b. Maria estudou para o exame nesse verão. (BP)

Maria studied for the exam in-this summer

‘Maria has studied for the exam in this summer.’

Phrasal adverbials can be preposed between the subject and the verb only if they have contrastive focus (see (26)), and they bear a heavy prosodic break to mark their insertion. This indicates that we're dealing with an after-thought/parenthetical.

- (26) a. Maria ÎN ACEASTĂ VARĂ a învățat pentru exam, dar în rest nu prea.(Ro)
 Maria in this summer has studied for exam, but in rest not much
 'In this summer, Maria has studied for the exam, but not in the rest of the time.'
- b. Maria, NO VERÃO, estudou para o exame, (mas...) (BP)
 Maria in-the summer, studied for the exam but
 'In the Summer, Maria studied for the exam, but ...'

Phrasal adverbs can be topicalized. Left dislocation of phrasal adverbials is licit because they occupy Spec positions in these contexts, therefore no edge effect is raised (Haider 2004).

- (27) a. În această vară, Maria a învățat pentru exam. (Ro)
 in this summer Maria has studied for exam
 'In this summer, Maria studied for the exam.'
- b. No verão, Maria estudou para o exame. (BP)
 in-the summer, Maria studied for the exam
 'In the Summer, Maria studied for the exam.'

Moreover, phrasal adverbs are preferred between the verb and its complement, only when they are part of the background information or when the object occurs in a dislocated focus position.

(28) a. Maria citește în ora de matematică ziarul/ZIARUL, nu exercițiul.

Mary reads in the math class newspaper-the not the exercise

b. Maria lê, em aulas de matemática, jornais, não os exercícios.

Mary reads in classes of math the newspaper not the exercise

“In math classes, Mary reads the newspaper, not the exercise”

“It’s the newspaper that Mary reads in math classes.”

Note that this is not the case with simple adverbs: there is no specific pragmatic consequence when they separate the object from the verb.

(29) a. Maria citește adesea ziarul. (Ro)

Mary reads often newspaper-the

b. Maria lê frequentemente jornais. (BP)

Maria reads often newspapers

‘Maria often reads newspapers.’

In biclausal contexts, embedded phrasal adverbials can be preposed to the left periphery of the matrix domain since this is the position for topicalized phrases and focalized phrases (Rizzi 1997)⁷⁰ in Romanian and Brazilian Portuguese:

- (30) a. Săptămâna trecută e posibil să nu fi lipsit Maria de la ore (Ro)
 week last e possible subj not be missed Mary from the classes
 ‘It is possible that Mary has not missed classes last week’
- b. Na semana passada, é possível que Maria tenha faltado a aula. (BP)
 in-the week last, is possible that Maria have-SUBJ missed the class
 ‘It’s possible that Maria missed classes last week.’

Note that these same phrasal adverbials are illicit in Romance languages when preposed between the matrix verb and the embedded domain like in (31a) and (32), these instantiate the edge effect. These examples are analogous to Bruening’s (2014) with raising verbs, which is the core argument against defective intervention, as discussed in section 4.1. However, phrasal adverbials are not illicit in this position due to linear intervention, but rather because of a restriction on the placement of phrasal adverbials. Moreover, not all languages have a topic position available in the left periphery of the non-finite embedded domain.⁷¹ Note that in (31b), the phrasal

⁷⁰ Scholars share different opinions where a TopicP is available in Romanian left periphery.

See Motapanyane, 1995, Dobrovie-Sorin, 1990, 1994, and Alboiu 2000 for some views.

⁷¹ Like Alboiu, Motapanyane (2002) shows that the presence of *ca* in the *ca-să* constructions is strictly linked to the presence of a maximal projection, usually a topicalized item, which follows it. In the absence of a topicalized phrase *ca* is excluded; vice-versa, in the absence of *ca* no lexical material can appear in front of *să*:

adverbial adverb is licit in that position only if it is introduced by *ca*, which is a subjunctive complementizer. Alboiu (2000) claims that *ca* co-occurs with *să* when a topicalized element is present. In these cases, the order is *ca – topicalised phrase – să*, where *ca* must occupy the left-most position.

- (31) a. ??E posibil la întâlnire să se fi enervat Maria.

Is possible at the meeting subj reflex be angry Mary.

‘It is possible that Mary got angry at the meeting.’

- b. E posibil *ca* la întâlnire *să* se fi enervat Maria.

Is possible that at the meeting subj reflex be angry Mary .

‘It is possible that Mary got angry at the meeting.’

- (32) a. ??Eu spero durante a reunião falar com o diretor. *Embd. Adv.*

I hope during the meeting talk-INF to the director (BP)

‘I hope to talk to the director during the meeting.’

- b. ?? Eu spero nesse momento ter uma conversa com o diretor amanhã. *Adv.*

I hope in-this moment have-INF one conversation with the director tomorrow

‘In this moment, I hope to have a conversation with the director tomorrow.’

-
- (i) Zicea (*numai mâine) că/ca numai mâine să nu se ducă la câmp.
 said only tomorrow-FOC that only tomorrow-FOC să not rf go to field
 ‘She said it’s only tomorrow that he should not go to the field’ from Motapanyane (2002:6)

The contrasts shown in this section are evidence that phrasal adverbials and simple adverbs occupy different structural positions, as argued in Marchis Moreno & Petersen (forthcoming a,b). Regardless of the specific account one can give to each of them, they are governed by different requirements and restrictions, as shown by Haider (2004) a.o.. Importantly, phrasal adverbials cannot occur in the preverbal position or between the verb and its complement unless they are parentheticals, they bring pragmatic consequences, and/or they are topicalized.

4.1.4 Accounting for the data

The above discussion leads me to the conclusion that an analysis of the behavior of adverbials within a language and across languages is necessary to understand Bruening's (2014) puzzling data. We have learned so far that simple adverbs and Bruenings' phrasal adverbials are structurally different: the former are adjoined in English, Romanian and Brazilian Portuguese, while the latter are embedded within the VP across all languages (this is Haider's (2004) analysis for VO languages). Crucially, these adverbs pattern differently.

Recall that I have posited two main problems for Bruening (2014) in section 4.1.2: the embedded clause type of the complement, which can be indicative or infinitive, and the adverbial type, which can be phrasal or simple. Notice that we have many options to consider, as the adverbial may be modifying either the matrix or the embedded verb. They may be acceptable or not depending on each of these variables. For reasons of space, I will concentrate in what follows on a few options.

Let us first explore the cases when the adverb belongs to the matrix clause, i.e., the raising verb, the choice of adverbs in (33) can only modify the matrix verb because of their meaning. Bruening (2014) has shown that phrasal adverbs such as *in those conditions*, *at this meeting* are banned in the same position where experiencers show defective intervention in Romance, as shown in (33a), while simple adverbs are licit in the very same position. Notice also that these adverbs may appear left dislocated or to the right of the infinitive clause, (33b).

- (33) a. Pedro pareceu (surpreendentemente/??durante a reunião) estar querendo se mudar para o interior
- Pedro seemed surprisingly/in-the meeting be-INF want-PROGS self
move to-the countryside
- ‘Surprisingly, Pedro seemed to want to move to the countryside.’
- ‘At the meeting, Pedro seemed to want to move to the countryside.’
- b. (Surpreendentemente/Durante a reunião), Pedro pareceu estar querendo se mudar para o interior (surpreendentemente/durante a reunião)
- surprisingly/during the meeting Pedro seemed be-INF want-PROGS self move
to-the countryside surprisingly/during the meeting

Remember that the word order in (33a) with phrasal adverbials is not definitely ruled out. As shown by Marchis Moreno & Petersen (forthcoming a,b) and discussed in section 4.1.3, phrasal adverbials may occur higher than the object, however the adverb must have a pause separating it from the rest of the sentence as a parenthetical,

and that induces an additional pragmatic reading.⁷² The same is true in monoclausal sentences⁷³: phrasal adverbs cannot typically come between the object and the main verb; if possible at all, it has prosodic and pragmatic consequences (34c):

(34) a. *João tem nas reuniões observado Maria.

John has in-the meetings observed Mary

b. *João viu na reunião Maria

John saw in-the meeting Mary

c. João falou, NA REUNIÃO, com Maria

John talked in-the meeting, with Mary

‘It was in the meeting that John talked to Mary.’

The word order in (33a) with matrix phrasal adverbials could be derived in a few different ways. First, the phrasal adverbial, which is canonically to the right of

⁷² This is the reason why the sentence (33a) is mildly unacceptable (‘?’ or ‘??’) with phrasal adverbials, and not deemed fully unacceptable (like the ones with experiencers, see (7), (11), and (12), (40)). They are much better with a prosodic pause separating the adverb and the rest of the sentence, which is expected for parentheticals. Language specific constraints and prosody may also influence the acceptability of these sentences. Other syntactic constraints may be in place. For instance, how ‘heavy’ the verb complements are, and if they can be extraposed (in the traditional sense) at all. In English in (i) and in BP in (34), PP complements are better after phrasal adverbials than DP ones.

⁷³ Similar to English:

(i) a. *Jerome did on some occasions his duty. (Bruening 2014:716)

b. *John has at the meeting met Mary.

c. *John has met at the meeting Mary

d. ?John has talked at the meeting to Mary.

the object, and occurs after the infinitival complement (cf. (33b), structure in (35a)), induces edge effects if it is adjoined to the left of the infinitive clausal complement (cf. (35b)). Second, the clausal object could be extraposed to the right of the adverb phrase (cf. (35c)).

- (35) a. [Pedro₂ seem₁ [[VP [INF t₂ want₁...] t₁ in the meeting]]]
 b. * [Pedro seem₁ [VP in the meeting [VP t₁ [INF want...]]]
 c. [Pedro seem₁ [VP [~~INF want...~~] t₁ in the meeting]] [INF want...]
_____ ↑

I assume that the structure in (35c) is ruled out independently, likely due to the impossibility for the infinitive to get extraposed in this context (see Rizzi 1990, Bruening 2014)⁷⁴.

Moreover, the adverb restrictions depicted in (33a) above is not a peculiarity of raising verbs. Control structures show similar facts, i.e., a matrix phrasal adverb cannot be placed between the matrix control verb and the embedded infinitive complement, in contrast to simple adverbs:

- (36) a. Pedro tentou (ontem/??/? na reunião) convencer Maria.
 Pedro tried yesterday/in-the meeting convince-INF Maria
 ‘Pedro tried to convince Mary yesterday/in the meeting.’

⁷⁴ Specifically, because the phrasal adverbial is “extraposed” and can only attach to the sentence in this way according to Haider (2004), it’s possible that the ‘traditional’ extraposition to the right is not available. However, this point is not explored by Haider (2004) or Bruening (2014), the latter only entertaining the idea that only CPs can extrapose. Due to the lack of empirical evidence and space, I limit myself to this comment on the issue.

b. O diretor queria (inicialmente/???naquela situação) cancelar o projeto.

the director wanted initially/ in-that situation cancel-INF the project

‘The director initially wanted to cancel the project.’

‘The director wanted to cancel the project in that situation.’

Adverbs that can only modify the embedded event due to their meaning, like the phrasal adverbial *in the last week* and the simple adverb *yesterday* in (37) below, contrast in their acceptability in raising constructions. As discussed in previous sections, phrasal adverbials naturally appear at the very right of the VP like in (37a), and many simple adverbs are also allowed in that position. However, simple adverbs are acceptable in the position between the raising verb and the embedded verb, while phrasal adverbs aren’t (cf. (37b)). The phrasal adverbial *in the last week* must be preposed to a focus or topic position in the embedded clause in order to appear in the position in (37b), and that is unavailable in infinitives, I return to this below. Otherwise, if the phrasal adverbial is adjoined to the left of the verb, edge effects cause ungrammaticality.

(37) a. Pedro parece ter limpado a casa (ontem/na semana passada)

Pedro seems have-INF cleaned the house yesterday/ in-the last week

b. Pedro parece (ontem/*na semana passada) ter limpado a casa

Pedro seems yesterday/ in-the last week have-INF cleaned the house

‘Pedro seems to have cleaned the house yesterday/last week.’

When we look at hyper-raising cases in Brazilian Portuguese, it becomes clear due to the position of the complementizer *que* ('that') that adverbs that modify the embedded event cannot move to the matrix clause, see below in (38a). However, phrasal adverbials, but not some simple adverbs, can be topicalized in the embedded CP. The contrast between (38b) and (37b) indicates that a topic position is not available in raising constructions because infinitive complements of raising verbs are not full CPs. By not having a developed left periphery, they do not typically allow topics.

- (38) a. Pedro parece (*ontem/*na semana passada) que limpou a casa (H-raising)
 Pedro seemed that yesterday/ in-the last week cleaned the house
- b. Pedro parece que (??ontem/na semana passada) limpou a casa (H-raising)
 Pedro seems that yesterday/ in-the last week cleaned the house
 'Pedro seems to have cleaned the house last week/yesterday.'

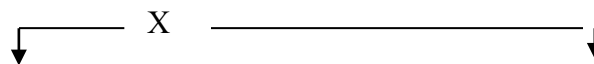
See the same contrast with topization of objects:

- (39) As crianças parecem [que brócolis₁, não querem comer t₁.] (Hyper-raising)
 the children seem that broccolis not want-IND eat-INF
- b. *As crianças parecem [brócolis₁, não querer comer t₁] (Raising)
 the children seem the broccolis not want-INF eat-INF
 'It seems that the broccolis, the children don't want to eat.'

Experiencers, on the other hand, are attached to the matrix VP (either introduced by an applicative head or in a PP) and they can induce defective intervention, which is responsible for the unacceptability of (40):

- (40) a. *Pedro parece pro professor estar cansado. (Raising)
 Pedro seems to-the professor be-INF tired
 ‘Peter seems to the professor to be tired.’
 b. *Os alunos parecem pro professor que estudaram para a prova. (H-raising)
 the students seem-3pl to-the teacher that studied- for the exam
 ‘It seems to the professor that the students studied for the exam.’

Specifically, it’s been shown that dative/oblique DPs/PPs block subject-to-subject movement (McGinnis 1998 for French, Torrego 1998, 2002 for Spanish, Holmberg & Hróarsdóttir 2004 for Icelandic, Rizzi 1982, Boeckx 2008 for Italian).



- (41) [_{TP} Pedro parece [_{PP} pro professor] [_{IP} ~~Pedro~~ estar cansado]]

I discuss defective intervention in detail in the next sections.

4.2 Cross-linguistic observations on defective intervention

Having shown that defective intervention is a real syntactic phenomenon, I now address the intervention effects that experiencers may cause in a variety of languages. Languages behave differently with respect to the defective intervention triggered by experiencers. I first look at languages that show a ban on raising across lexical experiencers, such as Brazilian Portuguese, Italian, and French. I will then examine Romanian, Greek, and Spanish, which obviate defective intervention via the clitic doubling of experiencers. I will also briefly discuss Icelandic and English.

4.2.1 Romance languages and Greek

In Brazilian and European Portuguese, as well as Italian, the A-movement of an embedded subject is not possible when there is a full experiencer DP (cf. (42a)). The sentence is fine, however, with clitic experiencers. It is well known that dative/oblique DPs/PPs block subject-to-subject movement.

- (42) a. *O aluno parece (para/ao) professor estar exausto. (BP and EP)
 the student seem-3SG to-the/to-the teacher be-INF exhausted
 ‘The student seems to the teacher to be exhausted.’
 b. O aluno me parece estar exausto.
 the student 1SG-DAT seem be-INF exhausted
 ‘The student seems to me to be exhausted.’

Romance [*a* DP] experiencers are not considered to be PPs, but rather DPs in which the preposition *a* is assumed to be a morphological realization of Case (c.f. Strozer 1976, Cuervo 2003, Torrego 2012)⁷⁵. Because of that, the experiencer in Romance c-commands the embedded infinitive clause subject and acts as an intervener to raising, blocking A-movement.

In these languages, WH-extraction of the experiencer alleviates minimality violations of raising subjects. For instance, although raising of the embedded subject across an oblique DP is impossible in Italian, if the oblique DP is WH-moved or left dislocated (cf. (43b) and (43c) respectively), raising is possible:

- (43) a. *Gianni_i sembra a Maria [t_i essere stanco]. (Italian)
- Gianni seems to Maria be ill
- 'Gianni seems to Maria to be ill.'
- b. A chi sembra Gianni_i [t_i essere stanco]?
- to whom seems Gianni be ill
- 'To whom does Gianni seem to be ill?'
- c. A Maria, Gianni_i gli sembra [t_i essere stanco]?
- To Maria Gianni her seems be ill
- 'To Maria, Gianni seems to be ill.' (Boeckx 2009, (3, 4))

⁷⁵ In European Portuguese, the preposition *a* is used to introduce the Experiencer, like in other Romance languages. Brazilian Portuguese is losing the preposition *a* and replacing it with the preposition *para* in this case, which is commonly shortened to *pra/pro* (to-the.fem/to-the.mas). This phenomenon is discussed by Figueredo & Silva 2007 and Oliveira 2003. I assume that *para* works just like the preposition *a* in other Romance languages, being an inherent Case marker.

Brazilian Portuguese, although similar to Italian in the raising pattern with declaratives, doesn't allow raising over a WH-trace, see below in (44a). Raising over a left dislocated experiencer as in (44b) is acceptable:

- (44) a. ??Pra quem Maria parece estar doente? BP
 [to-the whom] Maria seem-3SG be-INF ill
 'To whom does Maria seem to be ill?'
 b. Pro Pedro, Maria parece estar doente.
 to Pedro, Maria seem-3SG be-INF ill
 'To Pedro, Maria seems to be ill.'

The sentence in (44a) is acceptable in European Portuguese⁷⁶. So A'-movement of the intervening experiencer obviates minimality in some languages, but not others. I will return to this point in section 4.4.

French poses a different pattern, depending on the source of the data. McGinnis (1998), Torrego (2002), and Bruening (2014) gave (45b) bad ratings (two question marks and * respectively), while the French speakers that I consulted found (45b) only mildly degraded ('?'). Rouveret & Vergnaud (1980) cited a similar example as fully grammatical. Raising across clitics is okay (cf. (45c)). Below I report the judgments solicited by me.

⁷⁶ In European Portuguese, as noted in fn. 75, the preposition *a* is used to introduce the experiencer, not *para*.

(45) a. Il a semblé à Marie que Jean avait du talent.

it has seemed to Marie that Jean had of talent

‘It seemed to Marie that Jean had talent.’

b. ? Jean a semblé à Marie avoir du talent.

Jean has seemed to Marie to-have of talent

‘Jean seemed to Marie to have talent.’

c. Jean lui a semblé avoir du talent.

Jean her-DAT has seemed to-have of talent

‘Jean seemed to her to have talent.’

When the experiencer is WH-moved, raising is acceptable, (46a). Left dislocation of the experiencer argument does not help the sentence as much, (46b)⁷⁷:

(46) a. À qui Jean a-t-il semblé avoir du talent?

to whom Jean has seemed to-have of talent

‘To whom has Jean seemed to have talent?’

b. ?? À Marie, Jean a semblé avoir du talent.

to Marie Jean has seemed to-have of talent

‘To Marie, Jean seemed to have talent.’

⁷⁷ It is not clear why (46b) isn’t well-formed, but (46a) is. It was pointed out to me that this sentence improves once there’s a contrastive context. I will consider in the remainder of this chapter that raising over an A’- trace is acceptable in French.

Other languages, like Spanish 1, Romanian, and Greek behave differently.

Interestingly, defective intervention is alleviated in these languages when the experiencer is a clitic, or a DP doubled by a clitic⁷⁸:

- (47) Ion îi pare să nu-l fi citit încă pe Goethe
 John 3SG-DAT seems subj not-cl be read still on Goethe
 ‘John seems to him/her not to have read Goethe.’ (Romanian)

- (48) Juan le parece no haber leído a Goethe.
 John 3SG-DAT seems not have read to Goethe
 ‘John seems to him/her not to have read Goethe.’ (Spanish)

- (49) Ion *(îi) pare Mariei să nu-l fi citit încă pe Goethe
 John 3SG-DATseems Mary-DAT subj not-CL be read still on Goethe
 ‘John seems to Mary not to have read Goethe.’ (Romanian)

- (50) Juan *(le) parece a María no haber leído a Goethe.
 John 3SG-DAT seems to Mary not have read to Goethe

⁷⁸ Clausal complements of raising verbs are either subjunctives or indicatives in Romanian and Greek. Greek completely lost its infinitive paradigm and uses subjunctives in the contexts where infinitives would be used in languages like English and Romance languages (cf. Iatridou 1993, Terzi 1992, 1997, Alexiadou et al 2012 a.o). Romanian retains some infinitives, however the subjunctive seems to be favored in the raising context discussed here. Moreover, no contrast was noticed in the behavior of infinitives and subjunctives in these cases.

‘John seems to Mary not to have read Goethe.’

(Spanish)

Greek behaves the same way: raising over the an experiencer is grammatical when the experiencer surfaces as a clitic alone or when it’s doubled by a clitic⁷⁹:

(51) a. I mathites tu fenonde tu kathigiti na ine kurasmeni.

the students 3SG.m-DAT seem the-DAT professor-DAT subj are tired.

‘The students seem to the professor to be tired.’

b. I mathites tu fenonde na ine kurasmeni.

the students 3SG.m-DAT seem subj are tired.

‘The students seem to him to be tired.’

Clitic doubling of (most) dative experiencers is obligatory in these languages, and it is certainly obligatory in the context of raising. Compare (51a) above with (52) below:

(52) *I mathites fenonde tu kathigiti na ine kurasmeni.

the students seem the-DAT professor-DAT subj are tired.

‘The students seem to the professor to be tired.’

⁷⁹*Na* is a subjunctive (subj) marker in Greek and is considered an Infl element in the earlier literature (Rivero 1994, Terzi 1992, 1997). In a more recent and articulated view of left periphery, it is associated with C-Fin/C-M(ood) (Roussou 2000).

This can be confirmed when the embedded subject is not raised and *seem* takes an embedded indicative clause, the matrix experiencer must still be doubled:

(53) A Pedro *(le) parece que María es bella.

to Pedro 3SG-DAT seem that María is beautiful

‘It seems to Pedro that María is beautiful.’

(adapted from Campos-Dintrans, Pires, Rothman 2014)

Romanian, Spanish 1 and Greek allow subject raising over experiencers WH-traces only if the experiencer WH-phrase is clitic doubled:

(54) Cui *(îi) par elevii să studieze ? (Romanian)

whom 3SG-DAT seem students subj_{PTC} study-3pl

‘To whom do the students seem to study?’

(55) A quién *(le) parecen los alumnos estudiar ? (Spanish)

to whom 3SG-DAT seem-3pl the students study-INF the students?

‘To whom do the students seem to study?’

(56) Pju tu fenonde i mathites na ine kurasmeni? (Greek)

who-DAT he-CL-DAT seem the students-DAT subj are tired

‘To whom do the students seem to be tired?’

I assume that clitic doubling obviates minimality and allows raising, based on other contexts when clitic doubling clearly obviates minimality in these languages (Agnostopoulou 2003). I will discuss this point further in section 4.3.2.

Spanish speakers show a good amount of variation. There's a variety of Spanish (which I will call Spanish 2) that doesn't allow raising over any kind of experiencers: DPs, clitics, or Wh-traces (see Torrego 1998, et seq, Ausín & Depiante 2000). This also seems to be the case in Catalan:

- (57) a. *Ese taxista les parece a esa gente estar cansado. (Spanish)
 that taxi-driver them-DAT seem to these people be-INF tired
 'That taxi driver seems to these people to be tired.'
- b. *Ese taxista les parece estar cansado.
 that taxi-driver them-DAT seem be-INF tired
 'That taxi driver seems to these people to be tired.'
- c. *A quién los alumnos le parecen estudiar?
 to whom the students 3SG-CL-DAT study
 'To whom do the student seem to study?'
- d. *Aquest conductor em sembla estar cansat. (Catalan)
 that driver to-me-CL seem be-INF tired (Gallego 2010:183)
 'That driver seems to me to be tired.'

Notice that Spanish (both 1 and 2) cannot license a subject in situ in a raising infinitival⁸⁰:

(58) a. * Me parece Maria estar cansada.

1SG-DAT seem Maria be-INF tired

b. * Parece Maria estar cansada.

seem Maria be-INF tired

c. Maria parece estar cansada.

Maria seem be-INF tired

‘Maria seems to be tired’

This means that long distance agreement is not an option in Spanish (1 and 2), i.e., long distance agreement cannot satisfy the EPP requirement of the matrix T, and/or it cannot assign Case to the embedded subject. This is also true for other *pro*-drop Romance languages I discuss here, like Romanian and Italian. Assuming that in these languages EPP may be checked by the clitic (cf. (58a), Torrego 1998) or by an expletive *pro*, it must be that the presence of the experiencer blocks agreement between matrix T and embedded subject *Maria*, which is left Caseless.

⁸⁰ Some speakers of Spanish 1 found patterns of LDA like in (i) acceptable but unusual. This is more evidence for variation among speakers of Spanish.

(i) a. Le parece a María gustarle mucho a Juan ella.

3SG-DAT seems A María like-INF-him much Juan she

‘It seems to María that she likes Juan very much.’

b. Parecen estar (los niños) enfermos (los niños)

seem be-INF the boys sick the boys

‘It seems that the boys are sick.’

4.2.2 Icelandic

In Icelandic, an intervening dative experiencer in raising verb constructions blocks agreement between the matrix clause T and the embedded subject of the infinitival clause. The raising verb must appear with a default 3SG form (59a). Dative experiencers also block raising of the embedded subject (59b) (see Holmberg and Hróarsdóttir (2003)). My Icelandic informant, however, deemed (59b) to be grammatical, even with a non-pronominal experiencer like *manni* ‘man-DAT’.

- (59) a. Það virðist/*virðast einhverjum manni [hestarnir vera seinir]

EXpl seems/seem some man-DAT the-horses-NOM be slow

- b. *Hestarnir virðast mér [t DP vera seinir]

the-horses-NOM seem me-DAT be slow

‘It seems to some man that the horses are slow.’

(Holmberg & Hróarsdóttir 2003: (2), (4))

However, agreement of matrix T with embedded clause is possible if the experiencer moves to the subject position:

- (60) Mér virðast [hestarnir vera seinir]

me-DAT seem the-horses-NOM be slow

(Holmberg & Hróarsdóttir 2003: (1))

Moreover, agreement with the embedded subject across a WH-trace is impossible, (61), but movement of the embedded subject across the WH-trace is possible, (62).

- (61) Hvaða manni veist þú að virðist/*virðast t_{wh} [hestarnir vera seinir]
 which man-DAT know you that seems/seem the-horses-NOM be slow
 ‘To which man do you know that the horses seem to be slow.’

- (62) Hverjum hafa hestarnir virst t_{wh} [t_{DP} vera seinir]?
 who-DAT have the-horses-NOM seemed be slow

(Holmberg & Hróarsdóttir 2003: (3), (5))

There’s space for potential interesting speaker variation in this point, however. Raising over a WH-trace doesn't always seem to be excluded. Notice that my informant accepted simple cases of raising over the experiencer’s WH-trace such as below in (63), and (61) has to have the opposite agreement pattern, only plural agreement is possible, as shown in (64).

- (63) a. [Hvaða manni]_{WH} virðast t_{WH} [hestarnir vera seinir]?
 which man-DAT seem-PL the-horses-NOM be slow
 ‘To which man do the horses seem to be slow?’
 b. [Hverjum]_{WH} virðast t_{WH} [hestarnir vera seinir]?
 who-DAT seem-PL the-horses-NOM be slow
 ‘To whom do the horses seem to be slow?’

- (64) Hvaða manni veist þú að *virðist/virðast t_{wh} [hestarnir vera seinir]
 which man-DAT know you that seems/seem the-horses-NOM be slow
 ‘To which man do you know that the horses seem to be slow.’

The generalization for Icelandic reached by Holmberg & Hróarsdóttir (2003) is that a WH-trace blocks agreement, but an NP-trace does not. Furthermore, while agreement with the embedded subject across a WH-trace is impossible according to the authors, movement of the embedded subject across the WH-trace is possible. This can be explained by a property of Icelandic language, which allows elements that don’t agree with the verb to check EPP (Stylistic Fronting, Holmberg 2000). The acceptability of (63) and (64) indicates that there is variation among speakers with respect to raising over WH-traces. As will be discussed below, languages that allow raising over WH-traces also allows raising over DP-traces. Therefore, the unacceptability of agreement over a WH-trace in (61) is puzzling. I will return to that briefly in section 4.3.1.

From the languages discussed in this section, I can extract the table below with a summary of facts. The interveners on table 3 are always for movement, except as noted in Icelandic, where LDA may occur.

Language/ Intervener	BP	Italian	French1	French/ English	Sp1, Ro, Gr	Spanish2 Catalan	Icelandic
DP	✗	✗	✗	✓	✓	✗	✗ (move & agree)
Clitic/ A-mov (Icel)	✓	✓	✓	✓	✓	✗	✓ (agree) ✗ (move)
WH-trace	✗	✓	✓	✓	✓	✗	✗/✓(agree)

Table 3

There are three main clusters of languages from the table 3.

4.2.3 Language groups and Minimality

Group 1

In the first group are languages that disallow agreement over lexical experiencers.

Italian, French 1, and Brazilian Portuguese behave this way: they allow raising over clitics and WH-traces, but not over lexical DPs. This pattern of language is expected if it's assumed that traces don't have blocking effects (Uriagereka 1988, Lasnik 1999, Chomsky 2001). Raising across A-traces (i.e., deleted copies; I will call them 'traces' hereafter for convenience) patterns very consistently across all languages. However raising across WH-traces doesn't: the main exceptions are that raising over WH-experiencers in Brazilian Portuguese is blocked and agreement of the embedded subject and matrix T over a WH-trace in Icelandic is blocked. I return to this point below in section 4.3.1.

Group 2

The second group of languages allows any movement over experiencers.

French 2, like English, allows subject raising in any context.

(65) The man seems to the clerk to be lying.

English raising doesn't show defective intervention effects, as it allows raising over a full PP experiencer (see Kitahara (1997) for detailed discussion). In a nutshell, English experiencers behave like full PPs and therefore do not cause intervention effects as the DP experiencer doesn't c-command the embedded subjects⁸¹. I will assume here that French 2 fits the same pattern; in languages of group 2 the lexical experiencer has been analyzed as a PP. Notice that in Greek, an experiencer can also be realized as a 'true' PP (as opposed to an inherently Case-marked dative). In this case, raising over the experiencer is largely acceptable, I presume for the same reasons as raising over Experiencers in group 2 is.

⁸¹ Experiencer PPs behave differently in English *tough*-constructions, see Hartman 2012 for an overview. There are other constructions in English in which no preposition introduces the experiencer DP, however no minimality is observed. These are potential counterexamples for Kitahara's 1997 account that the PP status of the experiencer phrase circumvents intervention. There is conflicting evidence that raising is involved in these structures (cf. (ii). This is a promising comparison that I will not get into here. I thank Howard Lasnik for pointing this out to me.

(i) John strikes Mary as stupid.

(ii) a. # The cat strikes me as out of the bag. (no idiomatic reading)

b. ? There strikes me as being no solution to this problem. (expletive constructions)

(66) ✓/? I mathites fenonde ston kathigiti na ine kurasmeni.

the students seem to-the-acc professor-acc sub are tired

‘The students seems to the professor to be tired.’

Group 3

The third group of language disallows any grammatical relation over experiencers. In languages of the third group, like Spanish 2 and Catalan, the embedded subject cannot raise over a WH-trace, a clitic or a lexical experiencer. The most natural way to insert an experiencer in languages like Spanish 2 is using an embedded finite clause, which can meet the requirements of the embedded subject thus its raising is not required.

(67) a. Le parece a Juan que Maria está cansada. (Spanish)

3SG-DAT to Juan seems that Maria is tired

‘It seems to Juan that Maria is tired.’

b. [TP [seem-T-CL]_[φ-default] [vApplP [DP a Juan] vAppl [VP V [CP that [TP Maria ...]]]]]

It is not obvious why languages would behave this way. It should be expected that circumventing defective intervention is possible in the circumstances described for group 1 above, i.e., when the experiencer is a trace. The impossibility of moving over a clitic in Spanish 2 and Catalan, therefore, is surprising. Torrego (1996, et seq) and Gallego (2010) argue that Spanish and Catalan have obligatory clitic doubling; clitics

are always doubling a *pro* DP argument and it is the *pro* that intervenes on raising of the embedded subject. Languages like Italian and French, on the other hand, don't have clitic doubling and clitics aren't doubled by a *pro* argument, and that is why raising over clitics is fine in those languages. There are a few problems with this account. First, as shown in section 4.2.1, Romanian, Spanish 2, and Greek all have clitic doubled experiencers, in which the DP Experiencer can be lexically expressed, and in those languages raising over the doubled experiencer is acceptable by some speakers. So it can't be that the *pro* argument is responsible for this contrast. I return to clitic doubling in section 4.3.

It's more reasonable that something else excludes these structures (raising over experiencers) in Spanish 2. It could be that stylistically those sentences are not well-formed, and the impersonal structure as in (66) above is overwhelmingly preferred. Because there's really only one predicate (*parecer*) we can test to make conclusions about a set of grammatical relations, it is difficult to find evidence for or against this option⁸². I leave the explanation for why languages of group 3 can't obviate defective intervention through movement to future work.

The outliers

It's possible that Spanish 1, Romanian, and Greek belong to either group 1 or 2.

Because they have obligatory clitic doubling of experiencers, it is unclear from the

⁸² Notice that my survey in BP indicated that people also have preferences. Some people dislike raising overall, and some people have preferences about the choice of embedded clause: either they prefer infinitives or indicatives. Because I can really only test defective intervention effect in raising with one verb *parecer* ('seem'), idiolectal preferences should be expected.

data presented in section 4.2.1 whether the clitic actually obviates defective intervention or whether these languages simply don't show minimality effects. I will show in the next section that Spanish 1, Romanian, and Greek fit better with group 1 based on other facts about these languages, and that minimality is indeed avoided by clitic doubling.

The discussion in this section led to the conclusion that that languages behave predictively regarding minimality effects caused by defective intervention overall, despite the variation. In the next section, I will go over each language group in more detail and attempt to explain why languages display the patterns they do, with the exception of group 3 (Spanish 2).

4.3 Is your experiencer intervening?

The generalizations observed from section 3 show that languages have different patterns with respect to raising over experiencers, even given the small sample of languages presented here. Movement over A-traces seems to be the most permissible crosslinguistically. If a language doesn't have that, it won't allow any other type of movement (or agreement) over experiencers. The variation observed is not arbitrary, but predictive once a few assumptions are made for each language group in the face of a minimality condition. I turn next to some options of how to account for this variation. Specifically, what some possible conceptions of minimality are and how they work in our given case, and what exactly the best definition of minimality is such that it best captures our descriptive generalizations.

4.3.1 A strictly derivational approach

A few derivational approaches tried to capture defective intervention, and they result in insufficient explanation for some language pattern or another, as we will see.

Departing from the observation that clitics obviate defective intervention, the general claim is that movement of the embedded subject to TP is legitimate because the trace of the clitic does not count (A-trace), and the higher copy of the clitic is not an intervener. There are different ways to posit how that is so, which we will explore in the follow sections.

Notice there's a split in behavior in the Icelandic and Brazilian Portuguese data discussed here regarding the generalization pointed out for group 1: although grammatical relations can take place across A-traces (or an A-chain copy) i.e., they don't create minimality issues, this is not always the case with WH-traces. (A dialect of) Icelandic treats agreement and movement over WH-traces differently. Movement over WH-traces is okay, but not agreement.

A suggestion on how to understand this contrast is in order. In the cases of A-trace, when T is probing, Holmberg & Hróarsdóttir (2003) argue that the timing of the operations is important. Because the WH-movement occurs in a later stage in the derivation, after C is merged, by then all relevant computations relevant to T have already taken place. The WH-phrase is still *situ* at the point in the derivation when T probes down to find a matching goal; at that point, as expected, and the WH interferes with the agreement of T and the embedded subject, see (68b). At the point in the derivation when the WH-phrase no longer intervenes, the agree operation of T can no longer take place, it's too late, see (68c). On the other hand, movement of the

embedded subject over the WH-experiencer can take place through stylistic fronting. In Icelandic, elements that don't agree with T can raise to check the EPP feature, and this indeed happens when embedded subjects move over WH-traces to Spec-TP of the matrix clause even when they don't agree with matrix T (as stylistic fronting, Holmberg & Hróarsdóttir 2003), see (61) and (62).

Holmberg & Hróarsdóttir (2003) argue that Spec-T in Icelandic can be filled by either a standard subject raising or by stylistic fronting. Standard rising is blocked by a minimality violation (cf. (68c)), while stylistic fronting is not affected by the presence of covert categories, including WH-traces. Through stylistic fronting, an independent phenomenon of Icelandic that also targets Spec-TP, movement in (68d) is possible.

- (68) a, Hvaða manni veist þú að virðist/*virðast t_{wh} [hestarnir vera seinir]
 which man-DAT know you that seems/seem the-horses-NOM be slow
 'To which man do you know that the horses seem to be slow.'

Probe →

- b. [TP [seem-T]_[u:φfeatures] [vP [DP whom] v [vP V [TP the children study [vP the children ...]]]]

- c. [CP [DP whom]_i C [TP [seem-T]_[u:φfeatures?] [vP [~~DP whom~~]_i v [vP V [TP the children study
- _____ * _____ ↑

d. [CP [DP whom]_i C [TP [the children] [seem-T]_[u:φfeatures?] [VP ~~[DP whom]_i~~ V [VP V
[TP ~~[the children]~~ study

In the cases that the experiencer dative moves to Spec-TP, both probing of T into the embedded clause and the movement of the experiencer take place at the same time, such that the A-trace won't cause intervention. Notice that by assuming this view of defective intervention, Holmberg & Hróarsdóttir (2003) leave out an explanation for why a WH-trace doesn't block movement in most languages.

I assume that Icelandic and Brazilian Portuguese pose only apparent cases of WH-experiencer intervention, such that across languages that allow raising over an A-trace, raising over an WH-trace is also possible. Traces, i.e., copies, don't constitute interveners, as I discuss in the next section. The unacceptability of these sentences (BP and Icelandic) should be derived from another source. In section 4.4, I argue that the ungrammaticality of (44a) (raising over WH-experiencers in BP) is due to a different reason, so Brazilian Portuguese no longer constitutes a 'deviant' case of group 1 languages or a counterexample for the reviewed version of intervention explored here. The Icelandic case is trickier, and I will leave it aside for the remainder of this dissertation⁸³.

⁸³ The lack of access to native speakers of that specific dialect of Icelandic makes it difficult to probe this point any further. It was pointed out to me that there are degrees of formality at stake in the acceptability of these sentences (Sigríður Björnsdóttir p.c.). It's possible that the explanation for Icelandic cases is related to the same effect I will argue for in Brazilian Portuguese in section 4.4.

4.3.2 The definition of minimality

There have been many attempts to account for minimality and intervention in general. Here I consider two main views on minimality, the Minimal Link Condition (MLC) and Relativized Minimality (RM).

Chomsky's (1995) MLC and definition of 'closeness' is below in (69) and the view of economy of derivation applied to the operations Attract/Move is in (70). Important for us here, if the target position of the movement and the potential intervener position are equidistant from the goal (moving element) by (69a), no intervention arises. By (69b), if the two potential goals are equidistant from the probe, then movement for either position will be considered the 'shortest move'.

(69) γ is closer to α than β if γ c-commands β in $[\alpha P [\dots \gamma \dots \beta \dots]]$ unless:

- (a) γ is in the same minimal domain as α , or
- (b) γ is in the same minimal domain as β .

(adapted from Chomsky 1995: 356)

Minimal Link Condition (applies to 'checking' relations')

(70) K attracts α only if there is no β , closer to K than α , such that K attracts β .

(Chomsky 1995: 311)

Chomsky's (1995) MLC is an economy condition that was designed as a derivational condition. MLC takes a representational flavor in Chomsky (2001), when the MLC is to take place at the end of each phase together with Spell-Out. So the PIC limits the

search domain of a probe. Since Chomsky (1995), and reinstated later in Chomsky (2001 et seq), traces are not visible to the MLC. This so far comes as a stipulation in the theory. In Chomsky (2001), only XPs with phonological content, i.e., non-traces – the heads of chain, are visible to Match and can intervene to prevent agreement or movement.

Besides the c-command requirement, the calculation of equidistance is also part of Chomsky's (1995) computation of minimality. It will become important to us that under Chomsky's system (but not Rizzi's RM), an element that is either in the Spec-XP position or adjoined to the head probe X is in the 'neighborhood' (minimal domain) of the head X, and due to (69a), it is ignored by the probe when searching for an element to attract/agree.

The other widely accepted view of minimality is Relativized Minimality (Rizzi 1990, 2001, 2013).

(71) Y is in a Minimal Configuration (MC) with X iff there is no Z such that

- (i) Z is of the same structural type as X, and
- (ii) Z intervenes between X and Y.

(72) "same structural type" = (i) head or Spec and, in the latter class, (ii) A or A'

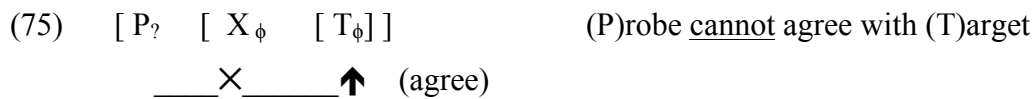
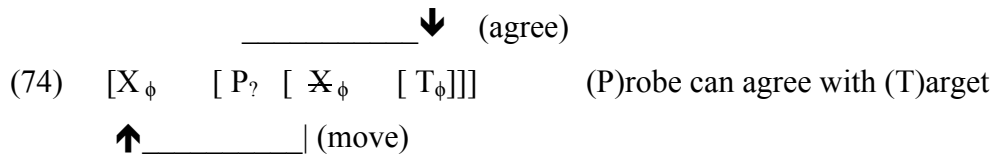
(73) Z intervenes between X and Y iff Z c-commands Y and Z does not c-command X

So both in MLC and in Rizzi's RM, c-command is the relevant hierarchical concept that directly defines intervention. However, Rizzi's RM builds on Minimal Configuration and the notion of 'structural type', which are not alluded to by the MLC directly. On the other hand, the MLC cares for equidistance between positions. Moreover, Rizzi's RM is a representational principle, a principle which must hold of chains at LF. Because RM holds for chains, traces again fall into a constituent of a chain, which presumably doesn't intervene.

The generalizations I reached on defective intervention in previous sections are that 1) lexical DPs are interveners, 2) clitics and clitic doubled DPs aren't interveners, 3) A-traces (copies) aren't interveners; and 4) A'-traces aren't interveners. Given these generalizations, which theory of minimality best captures them? To put in another perspective, what do the data discussed in this chapter tell us about (the concept) minimality in languages?

More recently, Chomsky (2013) argued that only syntactic objects, i.e., chains (with all copies) count as interveners to movement, but copies do not, as they are part of a discontinuous element (see also Rizzi 2001, Collins & Stabler 2013, and Krapova & Cinque 2008). This claim distinguishes syntactic object from syntactic occurrences and it can help understand the patterns described above in raising cases. If minimality is defined as targeting syntactic objects, when the head of the experiencer chain is moved, the experiencer syntactic object will no longer intervene and grammatical relations can happen between the probe and the embedded goal. Specifically, if the experiencer is moved to either an A- or A'- position, the embedded

subject is allowed to raise to matrix Spec-TP and agree with T. Copies are never interveners.



Defective intervention facts addressed in this chapter are further evidence that intervention should then be redefined in such a way that captures this nuance, i.e., the crucial difference between syntactic occurrences and objects (the chain or its head). So here's the condition for the "intervening" element when minimality is at stake in a probe-goal relation, either in The Minimal Link/Shortest Move Condition in Chomsky (1995), or under Relativized Minimality (Rizzi 1990 et seq.).

(76) An intervener α to a syntactic relation R must be a syntactic object.

If intervention tracks down syntactic objects and not occurrences, it is not surprising that traces don't intervene. Only syntactic objects or heads of chains are visible to probes. Therefore, we can derive that locality is blind to traces, i.e., occurrences, without any further stipulation. Let's look at the case of well-formed raising over WH-experiencers:

(77) A chi sembra Gianni_i [t_i essere stanco]? (Italian)

to whom seems Gianni be ill

'To whom does Gianni seem to be ill?'

b. [CP [DP whom]₁ C [TP [seem-T]_[u:φfeatures?] [vP ~~[DP whom]₁~~ v [VP V [TP Gianni ...

_____ ✓ _____ ↑

In (77b), when T probes down, the first syntactic object found in its domain is the embedded subject *Gianni* (and its copies). The Wh-experiencer chain is outside the domain of the probe, therefore the WH-copy inside vP won't block agreement between T and embedded the subject.

Notice that in the WH-trace cases as (77), also discussed in section 4.3.1, it becomes necessary that this definition of intervener requires a representational view of minimality in order to avoid a look ahead problem; Minimality is applied at the end of the derivation, i.e., it is an output condition. This definition is also compatible with the recent derivational approach that all operations apply at once at the phase level (Chomsky 2008 et seq). Under this assumption, minimality applies at the end of each phase, and by then all movement and agreement relations are defined, such that computing syntactic objects and occurrences, 'traces', isn't 'looking ahead'.

The WH-case discussed above doesn't distinguish between the MLC and RM. In what follows, I assume that the notion of minimality is best expressed by MLC, and I will demonstrate in the next sections why the MLC is superior to RM, at least in

the cases of defective intervention. There's however, one point in the MLC that is 'outdated' after this reviewed version of what constitutes an intervener. α and β in (78) below should now be seen as syntactic objects. It is natural to assume that if only syntactic objects can intervene in syntactic operations, this is because syntactic objects, and not occurrences, are the targets of those operations. In other words, only syntactic object are visible to 'checking relations'.

'New' Minimal Link Condition

(78) K attracts α only if there is no β , closer to K than α , such that K attracts β , **and α and β are syntactic objects.**

Let's apply this revised definition of minimality to explain the cases of clitic and clitic doubled experiencers.

4.3.2.1 On minimal domain and chains

The definition of minimality brings a question about the relevance and concept of minimal domain and chains. According to Chomsky (1995), the notion of minimal domain is needed for operation relations due to their local character:

“Domain: Take the domain of a head α to be the set of nodes contained in $\text{Max}(\alpha)$ [where $\text{Max}(\alpha)$ is the least full-category maximal projection dominating α] that are distinct from and do not contain α . [...]
Minimal Domain: For any set S of categories, [where S is the domain of a head α ,] let us take $\text{Min}(S)$ (minimal S) to be the smallest subset K of S such that for any $\gamma \in S$, some $\beta \in K$ reflexively dominates γ .” Chomsky (1995:178)

As a result, we get that the Minimal Domain of a head X is the set of nodes which are sisters to X and its non-maximal projections: the specifier, complement, and adjuncts

of XP, but not the nodes contained inside these nodes. Note that a minimal domain is a set, and thus seem to be operated representationally. Chomsky (1995) however, argues that minimal domains must be defined derivationally, they should be defined for chains, and not lexical items.

In the next sections, I rely on the use of minimal domain as applied in the MLC to account for why some experiencers aren't interveners, specifically moved clitics. But why should minimal domains be relevant at all? Do we need it, and why?

The intuition I gather from minimal domain is that of an element is 'too local' to another one to engage in a syntactic relation. This is indeed similar to Chomsky's view that elements in the same minimal domain are in the same neighborhood, and are equidistant and may be ignored for purpose of computing minimality. Take, for instance, the case of a head and its specifier. The main idea is that whatever operations that can be established between a head and its specifier should be done so by the insertion of the specifier itself. Later in the derivation, if the head needs to check another set of features, then possibly it's because these features couldn't be satisfied in the first place by that specifier, since they already have established a very local relation. In other words, they missed their opportunity.

This concept is close to the one of anti-locality (Abels 2003) and that of prolific domains (Grohmann 2003), which impose a similar kind of constraint that operates over movement. Therefore the concept that elements are 'too close' to be in a syntactic relation is used by the grammar in other contexts, such as the ones discussed by Abels (2003) and Grohmann (2003).

Although the intuition behind minimal domain seems to be on the right track, there's a question whether we need it or not as an independent locality tool for computing minimality, or whether such a constraint should be expressed independently, perhaps in a more general manner as part of the grammar.

The next point I will discuss is about the relevance of chains in the syntactic system, and not occurrences. What are chains and why are they the syntactic object manipulated by operations? Chains, as I intend to talk about them here, are exhaustive sequences of copies of an element. In this chapter, I argue that in order to explain the generalizations of defective intervention, the minimality condition must be applied to chains, not to copies. Chomsky (2013) argues similarly:

“The standard convention has been to take each of the copies to be an independent element. Adopting that convention, it may seem stipulative to take the whole chain to be the relevant SO [syntactic object]. But the convention has no particular merit. It is quite reasonable to take α to be ‘in the domain of D’ if and only if every occurrence of α is a term of D. That yields the intended result for intervention and for labeling of dynamic antisymmetry.” (Chomsky 2013: 44)

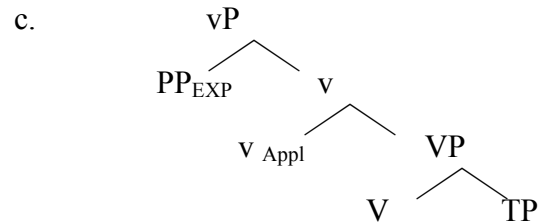
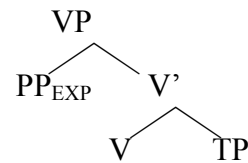
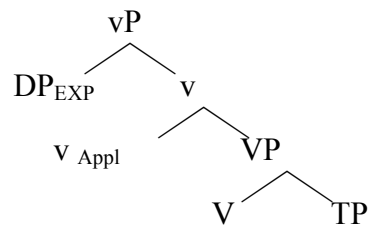
Only chains can be manipulated by the syntactic computation and it seems that copies, i.e., occurrences of a chain, cannot. There's an interesting question as to why this is so. We can imagine that one copy, or occurrence, isn't a syntactic object because it is only a part of one, i.e., it's one link of a chain and doesn't constitute an entity by itself.

4.3.3 Group 1 vs. Group 2

First, I will clarify the difference between languages of group 1, like Italian, and group 2, like English. Following Anagnostopoulou (2005), Diaconescu & Rivero

(2005), Marchis & Alexiadou (2013) among many others, I assume that a dative DP/PP in Romance is introduced by an applicative head, v_{appl} , and it c-commands the Theme (the embedded clause). Because c-command is met, a minimality effect is expected in Romance languages⁸⁴. The main structural distinction between Romance and English experiencers is that the latter is merged in a PP and presumably does not c-command the embedded clause. Whether this PP is introduced by an applicative head like in Romance or is attached directly to VP won't be relevant for me here.

(79) a. (Romance) vs. b. (English)



Chomsky (1981) noticed that the experiencer actually has a c-command effect on the entire rest of the clause (see also Epstein & Seely 2006):

⁸⁴ Constructions with oblique arguments are regarded on a par with Double Object Constructions (DOC) while the ones with prepositional experiencers like in English are similar to Prepositional Construction (PC) in Larson's (1988) terms.

- (80) a. *It seems to her₁ that Mary₁ is smart.
 b. *Bill seems to her₁ to like Mary₁.

The sentences in (80b) show a Principle C violation, which indicates that *her* c-commands *Mary*. However, examples below seem to point to the contrary (Epstein & Seely 2006)⁸⁵:

- (81) *? It appears to the artists that each other's paintings got the most attention.

The example in (81) can be seen as a Principle A violation, suggesting that *the artist* does not c-command *each other*. There is, thus conflicting evidence regarding the c-command requirements of experiencers. Kitahara (1997) and Epstein & Seely (2006) argue that this conflict can be explained by assuming that different points in the derivation will yield different c-command relations that can explain the data. I will not go over the details of this account here but the main point I should take is that English allows raising over experiencers because at the relevant point in the derivation the experiencer DP is in fact inside a PP and does not c-command the embedded TP⁸⁶.

In sum, languages of the first group, like BP and Italian, have Romance [*a* DP] experiencers that are not PPs but are DPs with a morphological realization of inherent Case, and such experiencers DPs should block A-movement as they c-

⁸⁵ A potential interfering factor for the unacceptability of the sentence in (81) is that long distance binding has been argued to happen only with subject antecedents (see Chomsky 1981:78).

⁸⁶ For different accounts for English case, see McGinnis (1998), Collins (2005), and Preminger (2010).

command the embedded clausal complement. The dative experiencer DP is syntactically active and visible to T, but it cannot value T's ϕ -features; somehow this is prevented by the dative Case (see Preminger 2015, chp. 8)⁸⁷. This is what Chomsky (2000) refers to as defective intervention: even though the intervening NP cannot itself value T, it can prevent a lower NP from valuing T.

It's been assumed in the literature that because clitics head move and adjoin to T, they won't c-command the target of the movement and the blocking effects will disappear (cf. Torrego 2002, Marchis to appear). Notice there's a potential problem for this account. If it's assumed that the clitic in T cannot c-command outside T, and the trace of a head must be c-commanded by its antecedent (see e.g. Travis 1984, Baker 1988), how is the clitic in T able to c-command its trace? I suggest there's a better way to explain why clitic experiencers don't raise intervention effects, and that is based on the revised requirement for interveners to be syntactic objects, and not

⁸⁷ According to Preminger (2015), languages typologically like French 1 and Italian require arguments that are target of ϕ -agreement to move to Spec-TP (aka Movement to canonical subject position). Because agreement with the oblique experiencer is unsuccessful, no argument will move to Spec-TP and that is the cause of ungrammaticality for sentences such as below in (i). In Preminger's account, crucially, the lack of agreement or nominative Case assignment to the embedded subject is not the cause of ungrammaticality, as the agree operation is amenable to failure and that yields default agreement on the verb. This is precisely what happens in Icelandic, a language that doesn't require the target of ϕ -agreement to move to Spec-TP (cf. (ii)). The embedded subject in those languages can stay in situ and an expletive may occupy the matrix subject position. The embedded subject receives nominative Case despite the lack of agreement with the matrix T.

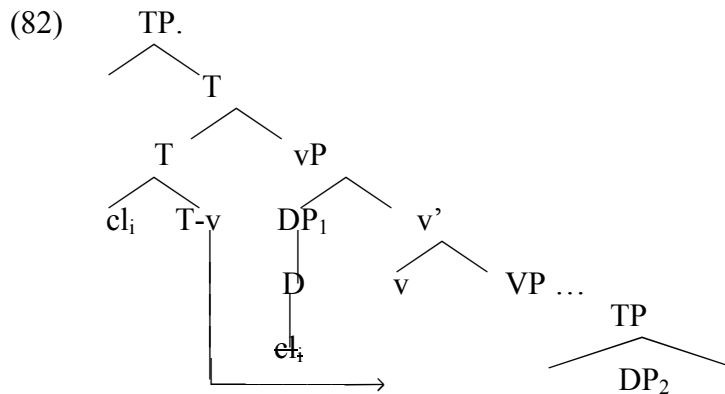
(i) * (Gli) sembra [Gianni essere stanco]. (ungrammatical with or without the clitic)

him seems Gianni be tired (Holmberg & Hróarsdóttir 2003: (44))

(ii) Það virðist einhverjum manni [hestarnir vera seinir]

EXpl seems some man-DAT the-horses-NOM be slow (Holmberg & Hróarsdóttir 2003: (12))

occurrences, as stated in (76) and considering the MLC in (78). When the clitic moves to the T-v head for whatever reason clitics move, the clitic is as local as possible to T, the clitic in T's minimal domain. According to the computation of equidistance in (69a), now the higher copy of clitic and the probe are equidistant from DP₂, and can't be an intervener. See the sketch below⁸⁸:



Notice now the clitic is a discontinuous syntactic object, and the head of the chain, the clitic in T, is inaccessible to T. Remember that by the definition in (78), the clitic trace is not an intervener. When T probes in (82), the first syntactic object in its search domain is DP₂, the embedded subject. Agreement between T and the embedded subject may happen, as well as movement of the subject to the matrix

⁸⁸ For reasons of simplicity, I will assume here that (non-doubling) clitics are D's and DPs, they are maximal and minimal projections (as in bare phrase structure), or essentially that they are heads that are thematic argument of the verb (see Rizzi 1993). Another possible position is that clitics and clitic doubled NPs share the same general analysis, that the clitics are D's in nominal phrases, and they take as complements either a lexical NP or a null (*pro*); in a different analysis, clitics always take a null *pro* and may take a specifier lexical NP (the double) (see Anagnostopoulou 2005 for an overview). If this alternative account holds to be true, the explanation for the lack of intervention effects will be essentially the same for both clitics and clitic doubling experiencers. I will discuss clitic doubled experiencers in section 4.3.2.

clause⁸⁹.

The measuring of equidistance is what makes it possible to compute that the clitic movement causes the syntactic object ‘clitic’ not to be attracted by the probe. Rizzi’s RM doesn’t capture this nuance. The clitic in T will still be c-commanded by T so RM incur in the danger of allowing the clitic chain (syntactic object), in the case discussed above, to be an intervener. In the next section I discuss how clitic doubling has a similar effect on obviating minimality.

4.3.4 Group 1 vs. The outliers

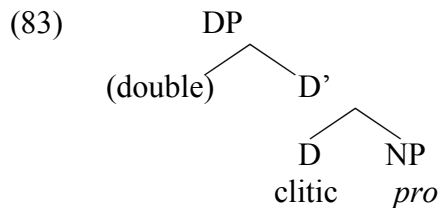
Although group 1 languages and Romanian, Spanish 1, and Greek seem to have different defective intervention effects (cf. table 3), I will show that all these languages are part of the same group 1. The apparent different behavior with respect to defective intervention can be explained by assuming that the clitic doubling of the dative experiencers renders Romanian, Spanish 1, and Greek sentences grammatical,

⁸⁹ Clitics in BP don’t overtly raise up to T, they are typically enclitic to a lower position in the inflectional domain. This is illustrated in (i) below, where the clitic is attached to the gerund (Jairo Nunes, p.c.).

- (i) a. Pedro tá me parecendo estar doente.
Pedro is 1SG-DAT seeming be sick ‘Pedro seems to me to be sick.’
b. ??Pedro me tá parecendo estar doente.
Pedro is 1SG-DAT seeming be sick ‘Pedro seems to me to be sick.’

This fact pose a problem to the account developed here, in which I argue that the clitic in T is part of the mechanism in which the clitic syntactic object won’t intervene, i.e., because the clitic is in the same minimal domain as T it cannot constitute an intervener. One way to explain this is to assume that the clitic will move to T syntactically, however the clitic isn’t pronounced there but lower due to some prosodic/PF constraint or requirement. Due to space limitations, I leave this point for future investigation.

specifically, the clitic doubling removes the intervening ϕ -features of the dative (Anagnostopoulou 2003, 2005). Importantly, for Anagnostopoulou, the clitic spells out nominal D/ ϕ -features of the DP, following the tradition that assumes that clitics are determiner, i.e., heads of the extended projection of N (Postal 1969, Uriagereka 1995 a.o.).



However, because experiencer clitics are obligatory in languages like Romanian, Spanish 1, and Greek in raising⁹⁰, I will discuss an analogous case from which I can infer that clitic doubling facilitates subject raising or agreement over experiencers. It will become clear that those languages don't belong to group 2, in which raising over any experiencer is okay, but to group 1, in which raising over an experiencer can occur only if the experiencer is a trace.

The prominent literature on the topic is Anagnostopoulou (2003), whose primary concern is contexts in which A-movement is not allowed over Dative/Genitive DPs. While clitic doubling of genitives in Greek is optional in active sentences, genitives must undergo doubling obligatorily in constructions where the theme undergoes A-movement. Doubling of a goal or experiencer is obligatory in

⁹⁰ Hence, *seem* + experiencers is similar to the quirky constructions of the type *gustar* “like” in Romance, where the dative clitics are obligatory and the experiencer has structural quirky case (Rivero 2004).

unaccusatives, and passives of double object constructions such as the following:

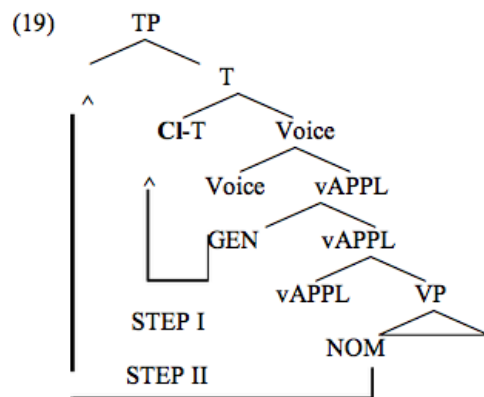
- (84) a. */?? To vivlio dothike tu Petru apo tin Maria
 the book-NOM given the Peter-GEN by the Mary
 "The book was given to Peter by Mary"
- b. To vivlio tu dothike tu Petru apo tin Maria
 the book-NOM cl-GEN given the Peter-GEN by the Mary
 "The book was given to Peter by Mary" (Anagnostopoulou 2001: (50))

Sentences such as (84a) above are unacceptable because the indirect objects are introduced by an applicative *v* head which combines with the VP, with the consequence that DP movement of the theme argument to T is blocked due to minimality conditions relativized to features (Chomsky 1995 et seq.).

Anagnostopoulou assumes that Genitive arguments are DPs and c-command the theme, as confirmed by Barss & Lasnik's (1986) tests. Hence, in Greek, where goals are inherently Case-marked, A-movement of the theme in passives is blocked by the categorical D-feature of the goal (Anagnostopoulou 2003: 81). The author assumes that clitic doubling chains qualify as A-chains, following Sportiche (1998) a.o. When the goal is clitic doubled as in (84b), the clitic moves those features to T and removes the intervening ϕ -features of the dative, leading to an obviation of defective intervention (Anagnostopoulou 2003, 2005, Marchis to appear). Movement of the embedded subject to TP is then legitimate because the trace of the clitic does not count, and the higher copy of the clitic is not an intervener: the clitic on T and the

landing-site Spec, TP are equidistant from the object's extraction site, based on Chomsky's (1995) definition of 'closeness' (cf. (68)).

(85)



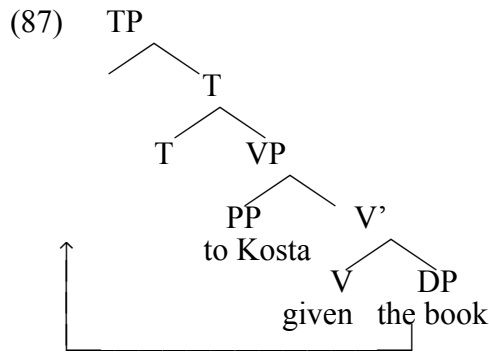
(Anagnostopoulou 2015:6)

Note that when the indirect argument is introduced by a PP, passivizing the direct object is entirely grammatical, see (86). Anagnostopoulou (2003:166) show that unlike English, prepositional ditransitives in Greek permit both DP>PP and PP>DP orders, and in each of these, the linear order establishes the asymmetrical c-command relation between DP and PP.

- (86) To vivlio dothike ston Kosta.
 the book- NOM given to-the-ACC Kostas-ACC
 'The book was given to Kostas.'

The contrast between (84) and (86) arises, according to Anagnostopoulou (2003: 83), because the PP that introduces the indirect object is in the same minimal domain as

the theme, as there's no applicative head introducing the PP. This way, although the PP c-commands the DP, no minimality arises in the DP-movement of *the book* (contrast (85) and (87))⁹¹.



⁹¹ I argued in section 4.3.1 that a DP experiencer inside a PP doesn't cause defective intervention. I have illustrated that in Greek, experiencer PPs allow raising, i.e., they don't induce defective intervention (cf. (51), repeated here in (i)). Anagnostopoulou (2003:172), on the other hand, deems these sentences unacceptable, (ii):

- (i) ✓/? *I mathite fenonde ston kathigiti na ine kurasmeni.*
 the students seem to-the-acc professor-acc sub are tired
 'The students seems to the professor to be tired.'

- (ii) *ta pedhia dhen fenonte (?*s-tin Maria) na meletun*
 the children-NOM not seem-3pl to-the Maria subj study-3pl
 'The children do not seem to Mary to study.' (Anagnostopoulou 2003:(53b))

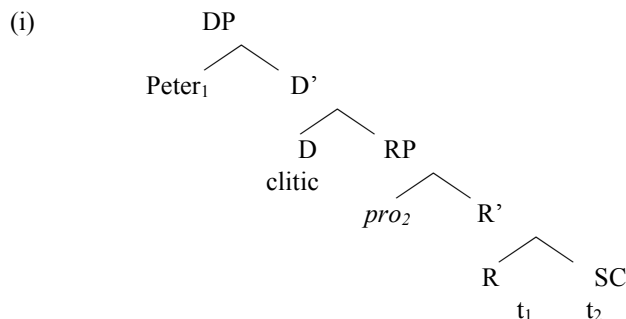
Anagnostopoulou argues that in (ii), unlike in double object passives like in (86), the PP is in a different minimal domain than the embedded subject, since the experiencer is merged with the raising verb. Thus the experiencer PP is closer to T, blocking movement of the subject to matrix T.

It's possible that we are dealing with different dialects, one that recognizes the PPs '*s(e)* NP' as the same both in raising and double object constructions, in which their NP is always able to c-command outside the PP, constituting a potential intervener to A-movement. Another dialect may have different structures for goals and experiencer PPs, and therefore c-command out of the PP may only be an option in the cases of ditransitive goals. In any case, there are at least two ways to explain ways sentences in (86) are good, i.e., why no intervention is observed.

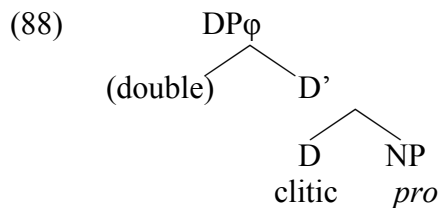
Although I agree that the general approach to explain obviation of intervention through cliticization by Anagnostopoulou (2003) and Marchis (to appear) is on the right track, one main question remains. How exactly does the movement of the clitic to T make the ϕ -features of the clitic and of the doubled DP ‘invisible’? Anagnostopoulou’s (2003) answer for that question so far has to take three assumptions: 1) clitics and their double DPs form A-chains, 2) clitics are the hosts of the DP ϕ -features, and 3) traces are invisible for A-movement.

Let’s reevaluate this case now assuming the view on intervention as discussed in section 4.3.3. I provide a simpler explanation for the clitic doubling obviating effect in a similar manner to the explanation given for simple clitic experiencers in section 4.3.3, and without the additional assumptions 2 and 3 above. The only additional assumption here is that the clitic and its doubled DP are part of one and the same A-chain (Sportiche 1992, 1998, Alexiadou & Anagnostopoulou 1997). The clitic and the oblique DP are part of the same DP, they form one argument with one theta-role. A way to stipulate this is to assume that the clitic doubling structure in (83), repeated below in (88), only shares one set of ϕ -features⁹². Therefore, once an

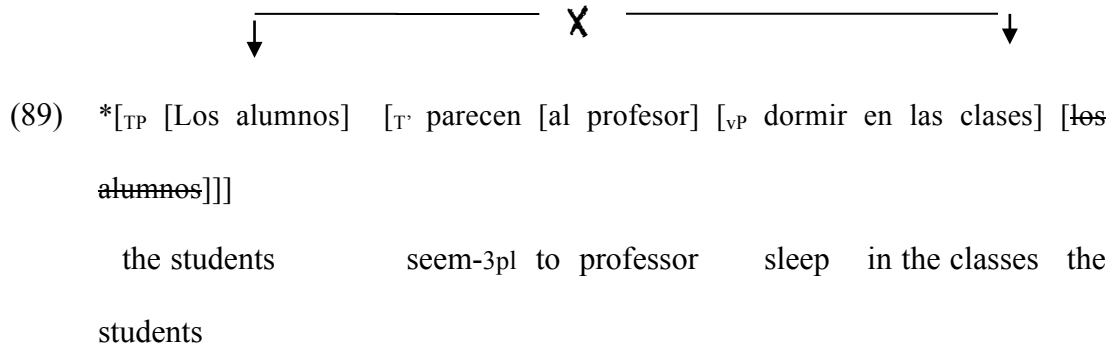
⁹² This concept may be better seen if the clitic doubling structure is not as first thought in (88), but actually involves more structure, as a referential phrase *RP* (Szabolcsi 1983). It has been argued that in clitic doubling, the clitic is part of an integral relation holding between its NP complement (which can be viewed as a null classifier) and the associate DP (Uriagereka 2002, 2005).



element from that chain moves, say, the clitic, the left behind DP and *pro* behave like copies as much as the copy of the actual moved clitic: they are all occurrences of that A-chain.

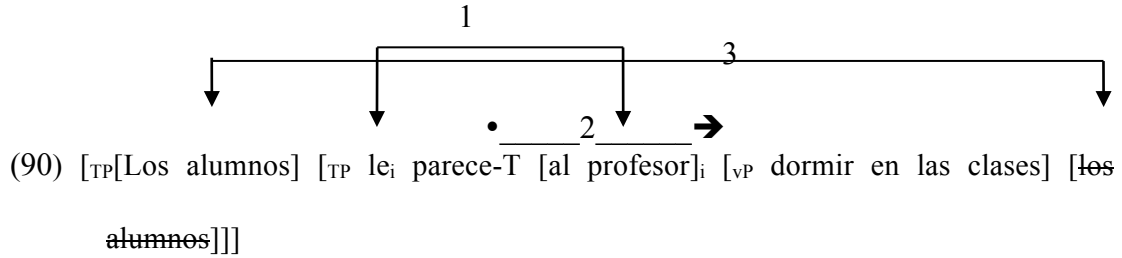


Let's look at two possible derivations of raising over experiencers for the outliers:



‘The students seem to the professor to sleep in classes.’

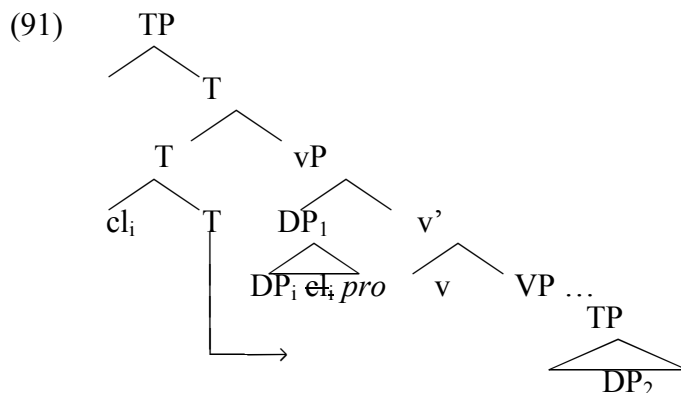
The existence of a referential projection captures the view that reference comes as a consequence of a syntactic transformation involving movement to the R domain. In this view, *pro*, the DP and the clitic are all part of one referring expression that gives referential character of the DP headed by the clitic. It's not inconceivable to assume that these elements share one set of ϕ -features, forming an A-chain. I leave it to future research to pinpoint exactly how this falls into place.



the students him-DAT seem-3pl to-the professor sleep in the classes the students

‘The students seem to the professor to sleep in class.’

The derivation in (89), with a non-doubled Experiencer, crashes because the embedded subject DP cannot agree with matrix T and receive Case since the dative experiencer intervenes, according to MLC. In contrast, the derivation in (90) is saved because the experiencer is doubled by a clitic. In the derivation of the sentence in (90), once the clitic is adjoined to T (step 1) is in the same minimal domain of the probe T, and according to the MLC and the closeness definition, it is not an intervener.



In step 2 in (90), T probes its domain for a possible match, as sketched in (91). Similarly to what was argued for (non-doubling) clitics, the A-chain formed by the clitic, the clitic trace and its doubled DP + *pro* are not considered as interveners because the syntactic object they are part of (the A-chain) doesn't intervene. Under the definition in (78), only the DP₂ in (91) is visible to the probe as it's the first syntactic object encountered. Agreement between T and embedded subject can happen and the consequent subject-to-subject movement (step 3 in (90)).

Alternatively, we can assume that neither the double DP nor *pro* are interveners because they do not c-command the embedded DP₂⁹³. Notice that in (88), the DP and *pro* are embedded inside a bigger DP, and that complex structure saves these arguments from being interveners. In that case, the clitic movement suffices to create a chain with the higher DP, obviating intervention effects for it in the way explained above. Then nothing else must be added about the double DP and *pro*, since they are not considered interveners at all for the lack of c-command relation between them and the moving goal (embedded DP₂).

In the next section, I discuss cases of raising over WH-traces in BP and why they are unacceptable in this language, despite the fact that other group 1 languages allow subject raising in the same scenario (see table 3).

⁹³ This alternative was pointed out to me by Jairo Nunes.

4.4 Raising over experiencers and Point of View

4.4.1 Brazilian Portuguese Hyper-raising

I start this discussion by noting hyper-raising in Brazilian Portuguese. This is important since I compare raising, (92), and hyper-raising, (93), in the following sections. This type of long DP movement is typically illicit across languages.⁹⁴

(92) John₁ seems [t₁ to be a good cook]

(93) *John₁ seems [that t₁ is a good cook]

Sentences such as (94) below, in which the subject has moved out of an indicative clause, are – unexpectedly – acceptable in BP.

(94) Os alunos parecem que estão cansados
the students seem-3pl that are tired
'The students seem to be tired.'

The matrix subject in (94) is in an A-position (Martins & Nunes 2005, 2009), and there are convincing reasons to argue for this: a number of elements can only be A-subjects in BP, hence the unacceptability of (95a)-(97a). By contrast, the (b) parts of

⁹⁴ I will get back to the discussion of “hyper-raising” in Brazilian Portuguese and Greek in chapter 5.

the paradigm below, in which the matrix predicate is *seem*, are acceptable, indicating that the matrix DPs occupy an A-position.

Weak Pronouns

- (95) a. *Cê_{s_i}, Pedro disse que t_i vão sentar na primeira fila
 you-pl_{wp} Pedro said that go-3pl sit in-the first row
 ‘Peter said that you will sit in the first row.’
- b. Cê_{s_i} parecem que t_i estão muito estressados.
 you-pl_{wp} seem-3pl that be-3pl too stressed
 ‘It seems that you are too stressed out.’

Idiom Chunks

- (96) a. A vaca, Pedro disse que t_i foi pro brejo
 the cow, Pedro said that went-3SG to-the swamp
 ‘As for the cow, Pedro said it went to the swamp.’
 Idiomatic reading: #‘Pedro said that things went bad’
- b. A vaca_i parece que t_i foi pro brejo
 the cow seem-3SG that went-3SG to-the swamp
 ‘The cow seems to have gone to the swamp.’
 Idiomatic reading: ‘It seems that things went bad.’

Quantifiers

- (97) a. *Ninguém, Maria disse que t_i vai alugar o apartamento esse mês

nobody, Maria said that go-3SG rent the apartment this month

‘Maria said that nobody will rent the apartment this month.’

b. Ninguém_i parece que t_i vai alugar o apartamento esse mês

nobody seem-3SG that go-3SG rent the apartment this month

‘It seems that nobody will rent the apartment this month.’

Let us recall at this point that BP does not license a referential *pro* (Duarte 1995, Ferreira 2000, 2009, Galves 2001, Modesto 2000, Rodrigues 2004, Martins & Nunes 2005, 2009, Nunes 2008). Yet, (98a) contains a null subject (NS).

(98) a. João disse que NS vai viajar

João said-3SG that go-3SG travel

‘John₁ said he_{1/*2} is going to travel.’

b. [TP [João]_i T ϕ -complete [vP t_i disse [CP que [TP t_i T ϕ -incomplete
[vP t_i vai viajar]]]]]

Much work has investigated such null arguments in Brazilian Portuguese, and the accepted story has it that the verbal paradigm of the modern language is considerably simplified when compared to that of earlier stages. It is precisely changes of the verbal paradigm along these lines that are held responsible for restricting the possibility of null subjects in BP finite clauses (Duarte 1995, Nunes 2011). As a

result, BP differs from both its Romance *pro*-drop siblings (like Spanish and Italian), but also from non *pro*-drop languages, like English.

Ferreira (2000, 2009) and Rodrigues (2004) observed that null subjects of embedded finite clauses mimic the behavior of obligatorily controlled PRO. They argue that these null subjects are traces of A-movement⁹⁵, just like controlled PRO is, according to the Movement Theory of Control (Hornstein 1999 et seq.). Assuming that Case freezes DPs for purposes of A-movement (Chomsky 2000, 2001), and that the subject of a clause remains Caseless when a ϕ -incomplete T is selected, the subject of an indicative embedded clause can undergo A-movement to the matrix subject position in order to receive Case. Hence, sentences such as (98a) are derived along the lines of (98b), where the embedded T is ϕ -incomplete and the matrix T is ϕ -complete. The embedded subject DP *João* in (98b) moves from the embedded clause to the vP of the matrix clause and enters into a thematic relation with its predicate, later on moving to Spec-TP of the matrix clause where it receives Case.

Coming back to (94)-(97), for Ferreira (2000, 2009) and Martins & Nunes (2005, 2009) they are instances of hyper-raising. In particular, these accounts argue that BP allows not only for finite control (cf. (98)), but also for hyper-raising (cf. (99)), which differs from finite control in that it lacks an additional theta-role checked by the matrix verb.⁹⁶

⁹⁵ It's been assumed that indicative T's are ambiguous between complete and incomplete ϕ -feature versions, and the agreement seen in the verbs result from a morphologic default assignment in the latter cases, see Nunes 2011 for a detailed analysis.

⁹⁶ It should be noted that BP has a strong EPP feature for T agreement/Case. At least in the cases of hyper-raising and finite control, the embedded subject DP must move to matrix Spec-T, as there is no long distance agreement between matrix verb and embedded subject. If, on the other hand, the

(99) a. Os alunos parecem que estão cansados.

b. [_{TP} [Os alunos]_i T_{φ-complete} [_{VP} t_i parecem [_{CP} que [_{TP} t_i T_{φ-incomplete}
[_{VP} t_i estão cansados]]]]]]

Although I agree with the assessment of the preverbal DP being in an A-position in (95b)-(97b) and (99), I am opposed to calling these cases “hyper-raising”, as this term then loses its primordial meaning that is attached to ungrammatical sentences like English (93). Instead, I consider them as instances of standard raising: A-movement from the embedded indicative clause is possible because of the embedded ϕ -incomplete T, which cannot check the Case of its subject DP, much like in the English raising constructions, but also like the obligatory control constructions according to the Movement Theory of Control (Hornstein 1999 et seq.). On a different take, I understand that “hyper-raising” is a term that has also been used to describe A-movement out of a finite clause (Ura 1994), and therefore its use has a terminological importance (differentiate those from movement out of an infinite clause) rather than a theoretical one. I will use the term *finite-raising* to refer to raising from embedded indicatives in the remaining of this dissertation as a tool to differentiate it from *raising* from infinitives.

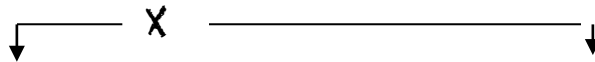
embedded subject is Case marked in the embedded domain, the matrix clause verb must bear 3rd person singular (default agreement) and it’s assumed to have an expletive null subject.

4.4.2 Raising over Experiencers in Brazilian Portuguese

We saw in previous sections that raising the subject over an experiencer DP is not acceptable, but raising is okay over clitic experiencers. The same is true for finite-raising:

- (100) a. * Os alunos parecem pro professor que estudaram para a prova.
 the students seem-3pl to-the professor that studied-3pl to the exam
 ‘The students seem to the professor to have studied to the exam.’
 b. Os alunos me parecem que estudaram para a prova.
 the students to-me.cl seem-3pl that studied-3pl to the exam
 ‘The students seem to me to have studied to the exam.’

As shown in section 4.3, the explanation given for the unacceptability of (80a) is defective intervention, Relativized Minimality violation (Rizzi 1990 et seq), Minimal Link Condition violation (Chomsky 1995). And in (100b), the clitic adjoins to V-T complex, obviating minimality. Specifically, I argued that because the clitic after cliticization is ‘too close’ the probe T, it does not count as an intervener, and neither does its trace.



- (101) [TP the students seem [DP to-the teacher] [CP that [TP ~~the students~~ studied to the test]

WH-experiencers

Raising across a moved WH-experiencer is typically acceptable in languages. Languages of group 1, group 2, and the outliers allow this kind of movement, as discussed in section 4.3. Spanish 1 allows raising over WH-traces of experiencers:

- (102) A chi sembra Gianni essere stanco? (Italian)
to who seem Gianni be-INF tired
'To whom Gianni seem to be tired?'

We saw that defective intervention applies to syntactic objects, and not occurrences. Traces of the WH-experiencer therefore are not expected to intervene in the raising of an embedded subject.

In BP, however, subject raising over a WH-trace of an experiencer is not acceptable in either raising or finite-raising constructions:

- (103) a. ??Pra quem os alunos parecem que estudaram pra prova? (IND)
to-the whom the students seem-3PL that studied-3PL to-the test
b. ??Pra quem os alunos parecem ter estudado para a prova? (INF)
to-the whom the students seem-3PL have-INF studied to the test
'To whom the students seem to have studied to the test?'

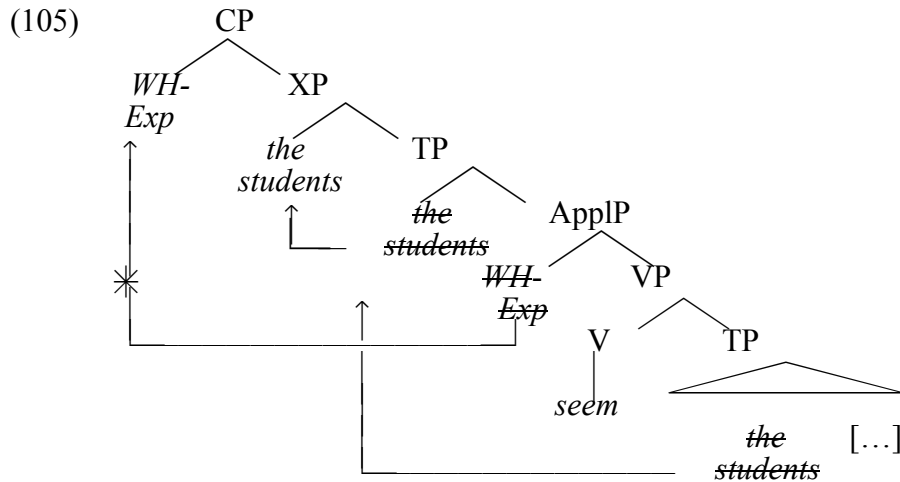
BP's facts above seem to be a typical minimality issue, i.e., unlike languages like Spanish 1 in (100), in BP WH-experiencer traces intervene on the movement of the embedded subject. Under a strict derivational view, that would be indeed expected.

Probe →

(104) [TP [seem-T]_[u:φfeatures] [VP [DP whom _[iφ]] [TP study [VP the students _[iφ] ...]]]]

However, as discussed in section 4.3, we have reasons to believe that is not the case. Moreover, if that was the explanation for the unacceptability of (103), I would not be able to account for the acceptability of languages like Spanish 1 unless the terms for intervention were changed. In any way we see it, we can't account for both Spanish 1-like languages and BP-like languages patterns by using only defective intervention. That is an undesired position since we don't want to have such big exceptions to the theory of minimality.

I will show in the next sections that indeed, the unacceptability of (103) can be explained on independent grounds. The intervention in (103) is not due to the A-movement of the embedded subject (i.e. defective intervention), but to an A'-movement that the subject takes place after being raised to the matrix subject position (Spec-TP):



4.4.3 Point of View: left dislocated subjects in BP

I will show that in BP, raising verbs with experiencers, the embedded subject moves to the matrix TP subject (an A-position) and then to an A'- (Left Dislocated) position. In that sense, (103) is excluded by a minimality violation related to A'-movement, and not because of A-movement defective intervention.

4.4.3.1 Evidence

Raising over experiencers contrasts with raising without experiencers. The same effect is obtained both in raising and finite-raising, which is expected if they share similar derivations, as assumed above in section 4.4.1.1. Observe the contrast below, when the same tests as presented above in (96) and (97) that are diagnostics of A-movement are applied (Martins & Nunes 2005, 2009). Once an experiencer is

present in the structure, the idiomatic reading is lost (cf. (106)), and raising of quantifiers is no longer acceptable (cf. (107))⁹⁷:

- (106) a. [A vaca]_i (# **me**) parece que t_i foi pro brejo. (IND)

the cow 1SG-DAT seem that went to-the swamp

Idiomatic reading: ‘It seems that things went bad.’

- b. [A vaca]_i (# **me**) parece ter ido pro brejo (INF)

the cow 1SG-DAT seems have-INF gone to-the swamp

Idiomatic reading: ‘It seems that things went bad.’

- (107) a. Algum aluno (??/***me**) parece que gabaritou a prova. (IND)

some student 1SG-DAT seems that aced-IND the exam

- b. Algum aluno (??/***me**) parece ter gabaritado o teste. (INF)

some student 1SG-DAT seems have-INF aced the test

‘Some student, it seems to me, have aced the exam.’

We know that raising over clitics is acceptable in BP (cf. (100b)), so (106) and (107) can’t be explained by defective intervention. Instead, the data above show that the preverbal DP subject in experiencer raising structures is not in an A-position, but rather in an A’- position, in contrast to non-experiencer ones. The unacceptability of the idiomatic reading and of quantified elements in the preverbal position is

⁹⁷ This effect should be carried out with any Experiencer, not only with clitics. Because BP (and most languages) disallows raising over lexical DPs, I will only be able to test the effects of PoVP with clitic experiencers. Spoken BP has lost most of its 3p clitics, thus here I use only 1p and 2p clitics.

diagnostic that this is not a subject (A-) position, but a left dislocated one in BP (which I call XP). The behaviour of these raising structures when subjected to WH-extractions from the embedded clause provides further evidence for this conclusion. I predict that WH-extractions out of the embedded clause are also incompatible with *raising* + *experiencers*, but fine with *raising without experiencers*. That is indeed borne out:

- (108) a. O que o prefeito (*te) parece [que quer construir na orla] ? (IND)
 what the mayor 2SG-DAT seem that want to build in-the coast
 b. O que o prefeito (*te) parece [querer construir na orla] ? (INF)
 what the mayor 2SG-DAT seem want-INF build-INF in-the coast
 ‘What does the mayor seem to you to want to build in the cost?’

The above restriction can be traced to a WH-island constraint (Chomsky 1964). The sketch below shows how this resembles a WH-island. The A'-bar movement of the subject creates an A'-chain that blocks the embedded WH-phase movement in (108):

- (109) [CP WH [XP the mayor ...[TP ~~the mayor~~... Cl-V [TP ... [V WH]]]
 ↑ _____ × _____]

4.4.3.2 The Point-Of-View projection

I suggest that raising experiencer constructions obligatorily project a Point Of View (PoV) projection above the T domain, in the spirit of Torrego's (2002) *P* projection.

Before discussing what I believe PoV is, let's first look at Torrego's motivation for assuming a similar projection.

Boeckx (2009) argues that the experiencer argument checks Case with the preposition P and that renders the person feature of the experiencer transparent. Inspired by this Case-assigning P, Torrego (2002) argues that the head P, which checks person feature of the experiencer and Case marks it, is located above T. The P projection reflects the semantic association of this argument with *point of view*, however these claims are not well explained by Torrego. Torrego (2002) and Boeckx (2009) were inspired by the work of Uriagereka (1995) about the F projection, which was posited in the context of clitic placement (of mainly null subject languages) to host the clitic + verb complex. Uriagereka (1995) argues that the Spec-FP is a functional projection in the left periphery (higher than TP) and it hosts non-contrastive focus, emphasis phrases, and even some WH-phrases. The F projection encodes the speaker-related or embedded subject point of view in the discourse. For example, Spec-F may never host indefinite elements since elements move there to receive indexical information. Subjects may move to Spec-FP, which is a left periphery and above Spec-IP. If a clitic is in F as in (110a), as expected, an indefinite subject *uno* cannot appear in Spec-FP. The ordering in (110b) allows an indefinite when no clitic is present, presumably because *uno* may now sit in Spec-IP.

(110) a. *A Juan uno lo atacó la noche pasada, no saben quien.

to Juan one him attacked the night past not know-they who

b. Uno ataco a Juan la noche pasada, no saben quien.

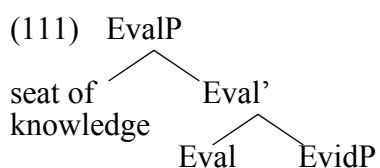
one attacked to Juan the night past not know-they who

'Someone attacked Juan last night-they don't know who.'

(Uriagereka 1995: (10))

FP may or may not be present in languages, and may or may not be active prior to LF. Although the spirit of FP and its effects are similar to the point of view contribution to the clause that we see in raising verbs with experiencers, the motivation and function of FP as proposed by Uriagereka (1988, 1995) differ significantly. Although it is possible to reconcile the FP projection – proposed to account for languages with a clitic paradigm – with the experiencer effect shown in this section, in what follows I will explore a different approach.

Tenny (2006) and Tenny & Speas (2003) develop another interesting analysis of point-of-view which I believe is closer to the function of the Point of View projection that I want to describe for experiencers in raising constructions. Tenny argues in favor of evidentiality projections related to pragmatic interpretations that are syntactically represented. Speech Act projections defines *speaker* and *hearer*, for example. Tenny & Speas (2003) argue that the evidentiality projections in (111) below are represented in the syntax and project similar functions to theta-roles, they are ‘grammatically relevant’ pragmatic roles.



Evidentiality projections relate the proposition in the clause with some sentient mind that evaluates the truth of the proposition based on some knowledge. The point of view or sentience domain is the one that interests me here. This domain is generally used for constructions in which the grammatical form depends in some way on the sentient individual whose point of view is reflected in the sentence, such as long-distance binding and logophoric pronouns. These are cases where someone's point of view is being reflected in the sentence besides the speaker and hearer. Only one 'sentient mind' is grammaticalized, which is the seat of knowledge.

The seat of knowledge in an unmarked statement is the speaker. However in sentences containing experiencers of the kind in (112) below, I believe that the experiencers are able to take the seat of knowledge as they are the sentient/evaluator. This is indeed what (112) means, that according to John, the experiencer, a certain situation appears to be true, namely, that his brother is lying.

(112) It seems to John that his brother is lying.

Assuming a similar intuition as Tenny (2006) and Tenny & Speas (2003) and applying it to raising structures, as Torrego (2002) and Boeckx (2009), I'd like to propose a point-of-view projection in which the seat of knowledge is taken by the experiencer. The experiencer must agree and/or move to Spec-PoVP. As a consequence, the matrix subject must be left dislocated in languages like BP⁹⁸. The matrix subject must move to a left dislocated position (which here I will call XP)

⁹⁸ I will discuss the consequences of this proposal for other languages in section 4.4.4.1 and 4.4.4.2.

above PoV to allow agreement between PoV and the experiencer (with possible clitic head-movement to PoV°).

(113) a. Os alunos me parecem estar cansados.

the students 1SG-DAT seem be tired

‘The students seem to me to be tired.’

↓ Agree ↓

b. [XP [the students] X [PoVP PoV°_{[u person] [+ experiencer]} [TP ~~the students~~ T to-me_{CL}-seem
[VP seem [TP ~~the students~~ be ...]]]]]

In detail, raising in BP sentences such as (113) above proceeds as follows. First, the embedded subject moves to Spec-T for agreement, EPP, and Case⁹⁹, as an instance of A-movement. In the subject position, the DP *os alunos* will intervene in the

⁹⁹ Also, it should be noted that Brazilian Portuguese has a strong EPP feature for T agreement/Case. At least in those cases, the embedded subject DP must move to matrix Spec-T. Evidence for that is given below: in infinitive complements, the subject cannot stay in the embedded TP (ia), there’s no long distance agreement between matrix verb and embedded subject. If the embedded subject is Case marked in the embedded domain, the matrix clause verb must bear 3p singular default agreement (cf. (ib)); once the embedded subject cannot be Case-marked by embedded T, it must raise to matrix T (cannot stop at vP) (cf. (ic)).

- (i) a. *Parecem [os alunos estar cansados]
seem-PL the students be-INF tired
- b. *Parecem [que os alunos estão cansados]
seem-PL that the students are- IND tired
- c. * Parecem os alunos [que estão cansados]
seem-3pl the students that are-IND tired

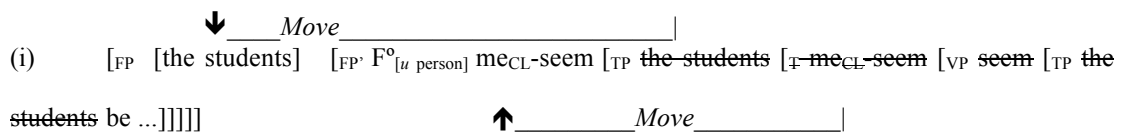
agreement between the experiencer *me* and the PoV^o. This derivation cannot succeed unless the subject moves to a topic position above PoVP, an A'-position. Assuming that the subject's trace won't induce minimality, the PoV requirements can be satisfied thorough agreement between the clitic experiencer and the PoV head. Once the subject has been A'-moved, it causes a minimality violation when in the same derivation a WH-element is moved to matrix Spec-C¹⁰⁰, like in (109) above¹⁰¹.

4.4.3.3 More minimality violations

The movement of the matrix subject to a topic position causes minimality effects when any WH-phrase is moved to matrix Spec-C. Therefore, I expect that other A'-

¹⁰⁰ Alternatively, it is possible that in BP outer topics and WH-elements are competing for the same position in the structure (outer CP spec). Here both MLC and RM are able to account for the data.

¹⁰¹ In (i) below is the representation of (113), assuming that Uriaguereka's (1995) FP is the relevant left periphery head responsible for checking the experiencer's point of view role, which causes the A'-status of the subject.



Notice that the exact way to reconcile FP with the facts observed here is not in the scope of this dissertation. An initial problem will be to explain the function of FP in a non-null subject language like BP, which also has very limited cliticization and overall subjects are argued to be in Spec-TP, even with object clitics. Notice that in (ii), WH-movement and indefinites are okay with preverbal clitics:

- (ii) a. O que Maria te disse? b. Alguém me atacou ontem.
 the what Marua 2SG-DAT told? someone 1SG-ACC attacked yesterday
 ‘What did Maria tell you?’ ‘Someone attacked me yesterday.’

movement to the matrix left periphery will cause minimality violation when raising verbs take experiencers, but NOT when raising verbs don't take experiencers.

Matrix Topics

Simultaneous WH-movement and moved topics are disallowed in BP (cf. (114)). Likewise, topics are also impossible when a subject is raised over an experiencer in BP (cf. (115) and (116)):

(114) *Pra quem o presente, Pedro mandou?

to whom [the present]_{topic} Pedro sent?

(115) ??/* Pedro, Ana **me** parece [que convidou pra festa] (IND)

[Peter]_{topic} Ana 1SG-DAT seem that invited to-the party

(116) ??/* Pedro, Ana **me** parece [ter convidado pra festa] (INF)

[Peter]_{topic} Ana 1SG-DAT seem have-INF invited to-the party

‘Peter, it seems to me that Ana invited to the party.’

In contrast, topics are fine over a non-experiencer raised subject:

(117) a. Pedro, Ana parece que convidou pra festa (IND)

[Peter]_{topic} Ana seem that invited to-the party

b. Pedro, Ana parece [ter convidado pra festa] (INF)

[Peter]_{topic} Ana seem have-INF invited to-the party

‘Peter, it seems that Ana invited to the party.’

Embedded Topics

Topics cannot be embedded under an indirect question in BP¹⁰².

(118) ??/* Eu me pergunto se Maria, Pedro viu.

I 1SG-DAT ask if Mary, Peter saw

‘I wonder if Mary, Peter saw.’

A raising structure cannot be embedded under an indirect interrogative verb when there’s an experiencer present.

(119) a. ??/* Ana me perguntou se Pedro te parece que quer viajar (IND)

Ana 1SG-DAT ask if Peter 2SG-DAT seem that wants to travel

b. ??/* Ana me pergunto se Pedro te parece querer viajar (INF)

Ana 1SG-DAT ask if Peter 2SG-DAT seem want-INF travel-INF

‘Ana asked me whether it seems to you that Peter wants to travel.’

¹⁰² Topics are disallowed in this structure presumably because in BP, topics and WH-elements are competing for the same position (outer CP projection). Thanks to Norbert Hornstein (p.c.) for bringing this to my attention. Notice that in English, topics are good when embedded under an interrogative verb (see English version of (118) below). English differs though from BP in that their topics are stacked at TP, not CP. Therefore, there’s no intervention or competition between [+wh] C and the topic in English (Boskovic 1997).

(i) I wonder if Mary, Peter saw.

However, these sentences are fine when there's no experiencer.

- (120) a. Ana me perguntou se Pedro parece que quer viajar (IND)

Ana 1SG-DAT ask if Peter seem that wants to travel

- b. Ana me pergunto se Pedro parece querer viajar. (INF)

Ana 1SG-DAT ask if Peter seem want-INF travel-INF

‘Ana asked me whether it seems that Peter wants to travel.’

Similarly, raising clauses embedded under bridge verbs provide additional evidence that the embedded domain becomes an island for A'-movement once an experiencer is projected. Bridge verbs like *say* allow WH-extraction from their complement CPs. However, if the embedded CP has an A'-element, such as a topic, WH-extraction is unsuccessful:

- (121) a. Onde você disse que Pedro viu Maria?

where you said that Pedro saw Mary

‘Where did you say that Pedro saw Mary?’

- b. * Onde você disse que Maria, Pedro viu ?

where you said that Mary Pedro saw

‘Where did you say that Pedro saw Mary?’

Back to raising, an embedded raising construction is an island to WH-extraction only if it has a clitic experiencer, (122). This can be explained if raised subjects in structures with experiencers are in an A'-position.

- (122) a. Quem₁ você disse que [Maria (??te) parece que está namorando]?(IND)
 who you said that Maria 2SG-DAT seem that is dating
 b. Quem você disse que Maria (??te) parece estar namorando? (INF)
 who you said that Maria 2SG-DAT seem be-INF dating
 ‘Who did you say that Mary seems to be going out with?’

Where’s the clitic?

I believe that there’s some evidence to assume that the oblique experiencer clitic moves and adjoins to PoV in BP. Clitics typically cannot be focalized/stressed in this language (Cardinalletti & Starke 1999, Petersen 2008).

- (123) a. ?? Pedro ME deu o chocolate (e não pra você)
 Peter 1SG-DAT give the chocolate (and not to you)
 ‘Peter gave the chocolate to ME, and not to you.’
 (cf. Pedro deu o chocolate PRA MIM, *Pedro gave the chocolate TO ME.*)
 b. ?? Eu TE ajudaria (, mas não ao Luiz).
 I 2SG-DAT help-IMP (but not to-the Luiz)
 ‘I would help YOU, but not Luiz.’
 (cf. Eu ajudaria a VOCÊ, *I would-help to YOU.*)

But notice that experiencers in raising constructions can be stressed:

(124) Maria TE parece que não veio por estar doente, (mas pra mim é preguiça mesmo!)

Maria 2SG-DAT seem that not come for be sick (but to me is laziness really)

‘It seems to YOU that Mary didn’t come because she was sick (but to me she’s just being lazy.’

A way to account for the contrast between (123) and (124) is to say that the dative clitic can cliticize to PoV^o, and in that position, a clitic will allow for an independent pattern of stress, which is disallowed when clitics are attached to verbs in T.

Although PoV is part of the structure of every language structure, effects such as the ones seen in BP are expected to be observed particularly in non null subject languages that have strong EPP that have subjects in pre-verbal A-position.

4.4.4 Point-of-View in other languages

In principle, PoVP should be universal. Therefore, I expect to see effect of the PoV in raising structures in other languages, however the effects of this projection may be diverse across languages. PoVP may also be a trait of some languages that choose to express evidentiality and sentience syntactically in this fashion. This chapter is far

from an exhaustive investigation on PoV, or discourse-related projections in syntax, but rather an attempt to account for the observations I reached in the context of raising over Experiencers.

In section 4.4.2, I showed that any A'-movement is blocked due to the agreement requirement of PoV° and the Experiencer in Brazilian Portuguese. In languages like English, it's conceivable the PoVP is associated with the experiencer in a different way. Having the experiencer merged as a PP could potentially not only alleviate minimality regarding raising of the embedded subject, but also regarding the agreement relation between experiencer and PoV°. If PoV° is looking for a prepositional feature, for example, the raised subject shouldn't cause minimality. That is why raising and WH-questions are not incompatible in English.

(125) To whom did John seem to be sick?

(126) What does John seem to you to have bought at the mall?

In null subject languages, like Spanish and European Portuguese, PoVP effect is uncertain as the subject position status of these languages is a topic of constant debate in the literature (see e.g. Barbosa 1995, Alexiadou & Anagnostopoulou 1998, Holmberg 2005 a.o.), one that I will not get into in this dissertation. Whether a preverbal subject is in Spec-IP or a left-dislocated element could affect what to expect in the raising contexts discussed here, specifically how the subject interacts with the PoV phrase and the experiencer.

I won't offer in this dissertation specific predictions or analysis of PoVP in other languages. Below, however, I will show how some languages behave when there's A'-movement involved in raising structures, with and without experiencers as an attempt to illustrate the effects of PoVP in other languages.

4.4.4.1 Spanish and European Portuguese

In Spanish 1, raising over a WH-experiencer trace is acceptable, as long as the experiencer is doubled by a clitic:

- (127) A quién le parecen los alumnos estudiar?
to who 3SG-DAT seem the students study
'To whom the students seem to study?'

Although raising combined with an A'-movement doesn't seem to be fully acceptable in Spanish 1, it's possible to observe a contrast between A'-movement in the presence or not of an experiencer. Sentences in (128) were given a 3 in a 1-5 scale by the informants I consulted, while sentences in (129) were given a 1.

- (128) a. ? María le preguntó a Juan si Ana parece estar embarazada.

María 3SG-DAT asked to Juan if Ana seem be-INF pregnant

'Maria asked Juan if Ana seems to be pregnant.' (embedded WH)

b. ? María, Juan parece haberla invitado a la fiesta.

María, Juan seem have-her asked to the party

‘María, Juan seems to have invited her to the party.’ (topicalization)

(129) a. *María le preguntó a Juan si Ana **me** parece estar embarazada.

María 3SG-DAT asked to Juan if Ana 1SG-DAT seem be-INF pregnant

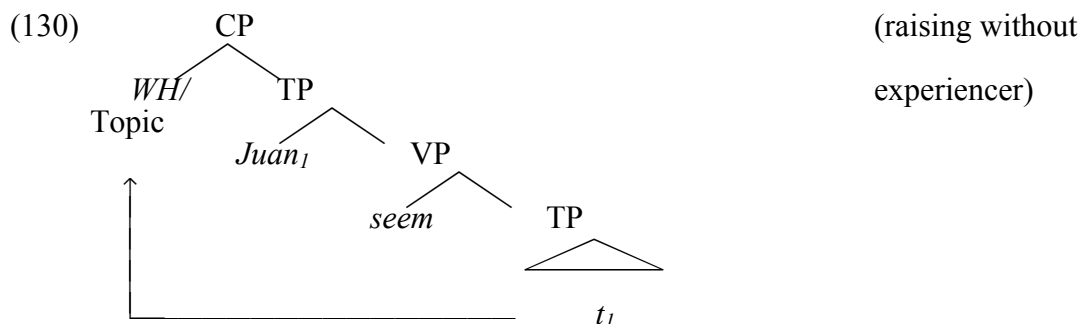
‘Maria asked Juan if Ana seems to me to be pregnant.’ (embedded WH)

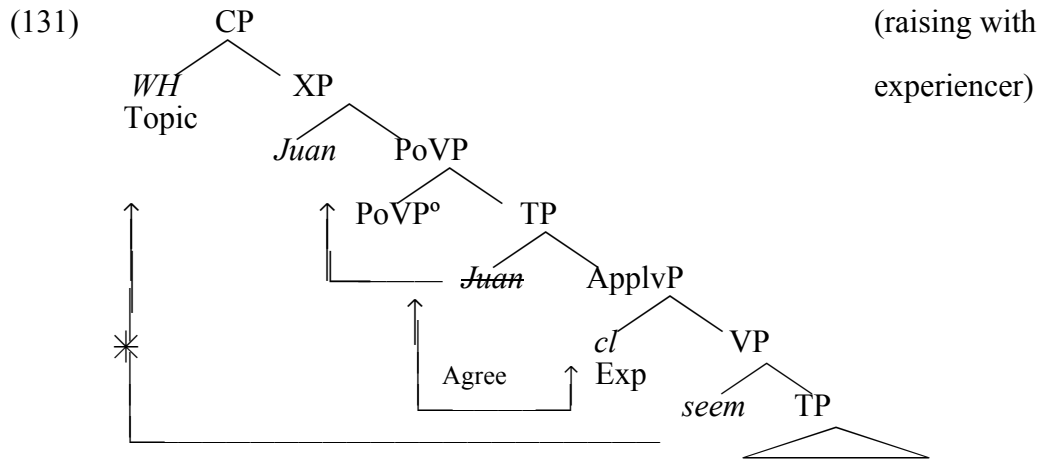
b. *A María, Juan **me** parece haberla invitado a la fiesta.

María, Juan 1SG-DAT seem have-her asked to the party

‘María, Juan seems to have invited her to the party.’ (topicalization)

Thus Spanish 1 shows an effect that resembles the clear cases of Brazilian Portuguese. That is, one can interpret the contrast between raising with and without experiencer as minimality effect: the subject must be left dislocated only when the experiencer is present, therefore other A'-relations, such as topicalization and questions, are ruled out in the raising clause.





Note that Spanish 2 doesn't allow any movement over experiencers, and, as predicted, (128) and (129) were judged unacceptable.

In European Portuguese, although raising over a WH-experiencer trace is acceptable (cf. (132)), further A' - movements over raised subjects were not, regardless of the presence of an experiencer (cf. (133)).

- (132) A quem o aluno parece estar doente?
 to who the student seem be-INF sick
 'To whom the student seem to be sick?'

- (133) *Quem Maria (te) parece ter convidado para a festa?
 who Maria 2SG-DAT seem have-INF invited to the party
 'Who does Maria seem to you to have invited to the party?'

4.4.4.2 *French and Italian*

French and Italian have a clearer pattern that shows the contrast between raising with experiencer and raising without experiencer, similarly to Brazilian Portuguese.

French and Italian allow raising over WH-traces of experiencers¹⁰³:

(134) a. ? Jean a semblé à Marie avoir du talent. (French)

Jean has seemed to Marie have-INF of talent

‘Jean seemed to Marie to have talent.’

b. A chi sembra Gianni essere stanco? (Italian)

to who seem Gianni be-INF tired

‘To whom Gianni seem to be tired?’

However, in both languages, WH-movement from the embedded clause is not acceptable when the raising structure has an experiencer. If no experiencer is inserted, the sentences are fine:

¹⁰³ Languages with PoV requirements similar to BP are expected to disallow raising over a WH-experiencer due to minimality reasons discussed in sections above. It is obscure to me at this point why minimality in such cases is not observed in languages like French and Italian. It’s conceivable that these languages allow their experiencer to check both WH and the PoV features once it moves to Spec-CP.

- (135) a. Qu'est-ce que Jean semble-t-il avoir acheté hier? (French)

what-is-this that Jean seemed-have have-INF bought yesterday?

‘What did John seem to have bought yesterday?’

- b. *Qu'est-ce que Jean **te** semble-t-il avoir acheté hier?

what-is-this that Jean 2SG-DAT seemed-have have-INF bought yesterday?

‘What did John seem to have bought yesterday?’

- (136) a. Che cosa sembra Maria voler comprare per la festa? (Italian)

Which thing seem Maria have-INF bought to the party?

‘What does Maria seem to have bought to the party?’

- b. *Che cosa **ti** sembra Maria voler comprare per la festa?

Which thing 2pSG-DAT seem Maria have-INF bought to the party?

‘What does Maria seem to you to have bought to the party?’

In French, an indirect question is only well formed when there isn’t an experiencer:

- (137) a. Marie a demandé à Anne si Pierre semblait vouloir voyager.

Marie asked to Anne if Pierre seemed-IMPF want-INF travel

‘Marie asked Anne if Pierre seemed to want to travel.’

- b. *Marie a demandé à Anne si Pierre **lui** semblait vouloir voyager.

Marie asked to Anne if Pierre 3SG-DAT seemed-IMPF want-INF travel

‘Marie asked Anne if Pierre seemed to her to want to travel.’

In Italian, similar contrast between raising with and without experiencers arises in relative clauses. Notice that a raising construction as relative clause is well formed without an experiencer, but unacceptable with the experiencer:

- (138) a. ? la persona che Maria sembra aver invitato alla festa
 the person that Maria seems have-INF invited to-the party
 ‘the person who Maria seems to have invited to the party’
 a. * la persona che Maria **ti** sembra aver invitato alla festa
 the person that Maria 2SG-DAT seem have-INF invited to-the party
 ‘the person who Maria seems to you to have invited to the party’

This kind of behavior can be explained by the interaction between PoVP and the raising subject. More specifically, it shows that in Italian and French, while the raised subject likely sits in the subject position (i.e., Spec-IP/TP) when experiencers are not projected, raised subject do not occupy this same position when experiencers are projected in the structure. Subjects in raising structures must move to a left dislocated position once experiencers are projected, just like in BP, and they cause minimality violations when other A’- movement targets the matrix clause (cf. (130) and (131)). As argued in section 4.4.2, this minimality is a consequence of the PoV^o requirement to agree with the experiencer, which requires the raised subject to be moved farther in the clausal left periphery, at least in some languages.

4.5 Conclusion

In this chapter, I discussed the phenomenon of defective intervention. Bruening (2014) has recently challenged the status of defective intervention as a real syntactic phenomenon, arguing that it is actually the effect of linear order. I showed that Bruening's (2014) potential counterexamples to the existence of syntactic defective intervention are only apparent, and provided an explanation for his data based on adverb placement and the hierarchical architecture of clauses with experiencers. Defective intervention has different effects across languages, and I was able to classify languages in 3 main groups: the first group only allows raising over (A or A') traces of experiencers; the second group that allows raising over any experiencers; the third group disallows any movement over experiencers. It's been argued in the literature that citicization obviates minimality in those circumstances, but a specific account of how was in order. I revised the definition of minimality, specifically, the Minimal Link Condition (1995), to include that only syntactic objects, and not occurrences (copies) are target of syntactic operations (Agree). With that, we can derive the language patterns observed in this study. Lastly, I explored the minimality effects on A'-movements triggered by the introduction of an experiencer to a raising structure. It was suggested that a functional projection that relates the experiencer to the point of view of the clause (PoVP) is responsible for the left dislocation of the raised subject, and the subject, in turn, interferes with A'-elements.

In the next chapter, I will discuss cases of apparent hyper-raising in Greek. I show that they can be reduced to cases of finite control and cases of topic-agreement.

Chapter 5

Hyper-raising and locality in Brazilian Portuguese and Greek

5.1 Introduction

In this chapter, I will discuss some other issues related to raising verbs. Long NP/DP movement and the locality constraints to which it is subject have preoccupied syntactic theory from its early days (Chomsky 1973, 1981, and see Lasnik & Boeckx 2006 for an overview). The type of (illicit) long NP movement with which this chapter is concerned is hyper-raising (hyper-raising), an example of which is (1).

- (1) *John₁ seems [that t₁ is a good cook].

Under minimalism, (1) is excluded by economy principles (Chomsky 1995), the failure to feature-check Case or ϕ -features of the matrix or embedded finite clauses, or Case freezing effects (Chomsky 1995, 2001 et seq., Ura 1996). Nevertheless, Ura (1996), Ouhalla (1994), Nunes (2008), Zeller (2006), Carstens & Dierks (2013) claim that hyper-raising is present in some languages¹⁰⁴.

Here I focus on putative instances of hyper-raising from indicative and subjunctive complements of *seem* in Greek (Gr) as in (2) and (3) below, and demonstrate that they are not genuine instances of hyper-raising.

¹⁰⁴See, however, Dailey-McCartney et al. (1999) for criticisms of Ura (1996), and Carsten & Diercks (2013) for criticisms of Zeller (2006).

(2) Ta pedia fenonde na meletun
 the children seem-3PL subj study-3PL
 ‘The children seem to study.’

(3) Ta pedia fenonde oti meletun
 the children seem-3PL that study-3PL
 ‘The children seem to study.’

In Petersen & Terzi (to appear), we show that the grammaticality of each of the above types of sentences is due to a constellation of different factors. Furthermore, we uncover a new pattern of Long Distance Agreement (henceforth LDA, see Polinsky & Potsdam 2008, Boeckx 2010) in Greek and some properties of subjects worth further investigation.

This chapter is organized as follows: In section 5.2, I will quickly review hyper-raising in languages (Zeller 2006, Carstens and Diercks 2009), focusing on Brazilian Portuguese (Ferreira 2000, Nunes 2008, Martins and Nunes 2005, 2009). In sections 5.3 and 5.4, I will then turn to Greek subjunctive and indicative complements of raising verb *fenete* (‘seem’) and analyze what looks like hyper-raising in Greek as either instances of finite-raising (subjunctives) or Left Dislocation (indicatives). Finally, in section 5.4, I will look at agreeing patterns of raising verb *fenete* (‘seem’) with indicative complements and compare them with copy raising constructions. I will show that these structures are dissimilar in many respects, and that the former are better analyzed as topic-agree structures. I make an observation about Greek subjects

in section 5.6 and I conclude the chapter in section 5.7.

5.2 Hyper-raising and finite-raising

I start with the discussion of apparent hyper-raising cases, which, as will be demonstrated, constitute instances of finite-raising, rather than hyper-raising. These involve BP indicative and Greek subjunctive complements of *seem*. But before that, a quick background on finite-raising and hyper-raising is in order.

Hyper-raising has been reported in many languages, however this term and description is mostly used for raising from a finite context that, in that particular construction, lacks the ability to attribute Case to the embedded subject (Ura 1994). In these cases, the embedded subject is not Case-marked in the embedded domain due to lack of Tense or agreement features, be it an embedded subjunctive as in Nguni (Zellar 2006), or indicative as in Brazilian Portuguese (Nunes 2008). This contrasts with instances of ‘real’ hyper-raising, in which we find subject movement from a finite complement that can attribute Case to its subject (cf. (1)).

Carstens (2009) and Carstens & Diercks (2010) however claim that some Bantu languages allow for ‘true’ hyper-raising. For example, Carstens & Diercks (2010) show that in Luyia (a subgroup of Bantu languages), hyper-raising constructions exhibit a full range of tense and agreement possibilities

- (4) a. Efula e-lolekhana e-kw-ile (FP = Far past) [Lubukusu]

9rain 9SA-seem 9SA-rain-FP

‘It seems to have rained’

[Lit: Rain seems that has fallen]

b. Efula e-lolekhana y-a-kw-ile (RP = Recent past) [Lubukusu]

9rain 9SA-seem 9SA.RP-fall-PST

‘It seems to have rained’

[Lit: Rain seems that has fallen]

(Carstens & Diercks (2010):(5))

The analysis of Luyia hyper-raising constructions therefore cannot appeal to defective properties of T in the embedded clause. Instead Carstens & Diercks argue for a movement derived hyper-raising and the availability of hyper-raising is related to other features of the language indicating that Case and “Activity” in A-relations in these languages is different in many respects (see Carstens & Diercks 2010 for more on this). These would be instances of ‘true’ hyper-raising, where a structure corresponding to (1) is actually allowed because of the properties of the Luyia languages. Below I discuss a case when the term *hyper-raising* has been used to describe *finite-raising*.

5.2.1 Brazilian Portuguese

Sentences such as (5) below, in which the subject has moved out of an indicative clause, are – unexpectedly – acceptable in BP.

- (5) Os alunos parecem que estão cansados
the students seem-3PL that are tired
‘The students seem to be tired.’

I noted in chapter 4 section 4.4.1 that Brazilian Portuguese has been argued to have hyper-raising and that sentences like (2) show all the diagnostics of A-movement of the matrix subject. Thus it's safe to assume that the matrix subject in (2) is in an A-position (Martins & Nunes 2005, 2009, Nunes 2008).

Ferreira (2000, 2009) and Martins & Nunes (2005, 2009) argue they are instances of hyper-raising; they are construed via A-movement from an embedded indicative to the matrix subject position. It's argued that A-movement is allowed due to the lack of complete ϕ -features of the embedded indicative domain, which fails to assign Case to *os alunos* 'the students' in (6)¹⁰⁵. Recall that BP is a non *pro*-drop language and disallows long distance agreement, cf. (7)), BP typically requires Spec-head relation between subjects and Ts.

(6) a. Os alunos parecem que estão cansados.

the students seem-3PL that are tired

b. $[_{TP} [OS \text{ alunos}]_i \ T_{\phi\text{-complete}} [_{VP} \ t_i \text{parecem} \ [_{CP} \text{que} \ [_{TP} \ t_i \ T_{\phi\text{-incomplete}} \ [_{VP} \ t_i \text{estão} \text{cansados}]]]]]$

¹⁰⁵ Ferreira 2000, 2009 proposes that finite Ts in BP are ambiguous in being associated with either a complete or an incomplete set of ϕ -features. An incomplete set of ϕ -features won't be able to assign Case to the embedded subject, allowing its movement to the matrix clause (see (7)). Nunes 2008 implements Ferreira's proposal regarding the ambiguity of finite T in BP with respect to ϕ -completeness in terms of the presence or absence of the feature [person]. See Nunes 2008 for detailed analysis.

(7) *Parecem que os estudantes estão cansados.

seem-3PL that the students are tired

In chapter 4, I pointed out that I opted for keeping the term *hyper-raising* for cases of ‘true’ hyper-raising like in English (1) and in the Lyuia languages. Instead, I consider BP sentences like (6) as instances of finite-raising: A-movement from the embedded indicative clause is available because of the embedded ϕ -incomplete T, which cannot check the Case of its subject DP, much like in the English raising constructions, but also like the obligatory control constructions according to the Movement Theory of Control (Hornstein 1999 et seq.).

5.2.2 Greek

There are two environments in which the subject of a sentential complement of *seem* may be found in the matrix clause in Greek. The first involves subjunctive complements, (8), and the second indicatives, (9).

(8) Ta pedia fenonde na meletun
the children seem-3PL subj study-3PL
‘The children seem to study.’

(9) Ta pedia fenonde oti meletun
the children seem-3PL that study-3PL
‘The children seem to study.’

5.2.2.1 Greek subjunctives

Some Greek subjunctive complements lack independent temporal reference, a state of affairs that has been characterized as *deficient Tense*. Such are obligatory control structures as in (10). Deficient Tense (or else, *anaphoric Tense* in Landau 2004 and Alboiu 2007) reflects either the lack of morphological Tense, namely, limited alternations of Tense morphology on the subjunctive verb (e.g., Iatridou 1993, Terzi 1992, 1997), or the absence of *semantic Tense* (Varlokosta 1994, Landau 2004), as illustrated below.

- (10) Tora o Yanis kseri na kolibai/kolibisi (*avrio)
 now the John know-3SG subj swim-imp-3SG/swim-perf-3SG tomorrow
 ‘Now John knows-how to swim tomorrow.’ (Varlokosta 1994)

Alexiadou et al. (2012) study aspectual raising verbs, (11), which select for subjunctive complements only, and notice lack of independent temporal reference of the embedded clause. This for them explains the obligatory agreement between embedded subject and matrix T and the lack of nominative Case in the embedded clause. The embedded subject may raise, (11a), or stay embedded as instances of Long Distance Agreement (LDA), (11b).

- (11) a. O Janis arhizi na kolibai/*kolibisi avrio
 the John begin-3SG subj swim-imp-3SG/swim-perf-3SG tomorrow
 ‘John begins to swim tomorrow.’ (Alexiadou et al. 2012)

b. Arhizi na kolibai/*kolibisi avrio o Janis
 begin-3SG subj swim-imp-3SG/swim-perf-3SG tomorrow the John
 ‘John begins to swim tomorrow.’

LDA is pervasive in null subject languages like Greek and Romanian, (Alexiadou et al 2012), where agreement is established in the absence of movement. In (11b), a finite verb in a superordinate clause bears agreement morphology that co-varies with the ϕ -feature values of a nominal element in a subordinate clause. Notice that raising verb *fenete* also allows LDA, compare (12) and (8):

(12) Fenonde na meletun ta pedia.
 seem-3PL subj study-3PL the children
 ‘The children seem to study.’

The sentence in (13) below demonstrates that subjunctive complements of *seem* lack semantic Tense as well. Moreover, given that *seem*, in contrast to aspectual verbs, also admits indicative complements in Greek as in (9), notice the contrast between (13) and (14) in this respect.

(13) Tora ta pedia fenonde na kolibane/*kolibisun avrio
 now the children seem-3PL subj swim-imp-3PL/swim-perf-3PL tomorrow
 ‘Now the children seem to swim tomorrow.’

(14) Tora ta pedia fenonde oti th kolibane/kolibisun (avrio)
 the children seem-3PL that will swim-imp-3PL/swim-perf-3PL tomorrow
 ‘It seems now that the children will swim tomorrow.’

Embedded indicatives have independent tense, while subjunctives don’t. Therefore, in Petersen & Terzi (to appear), we concluded that since subjunctive complements of *fenete* ‘seem’ lack independent temporal reference, no constraints are imposed on their subjects in terms of moving to what presumably is the matrix subject position. Assuming structural Case assignment is a reflex of an agreement relation involving a probe with a complete ϕ -set (Chomsky 2000, 2001 et seq.), subjunctive subjects must agree with the matrix T so they can receive Case. Movement of the subject to the matrix clause is optional, (15). I will get back to this point in section 5.6.

(15) Tora fenonde na kolibane ta pedia
 now seem-3PL subj swim-imp-3PL the children
 ‘It seems now that the children swim.’

To sum up, we have no evidence for hyper-raising in the context of BP indicative complements and of Greek subjunctive complements of *seem*. Both are

instances of finite-raising (A-movement), although due to different reasons: an incomplete ϕ -feature set of T in BP and deficient Tense in Greek, either one of which, nevertheless, leaves the embedded subject without Case.¹⁰⁶

5.3 Hyper-raising as A'-Movement: Greek Indicatives

This section discusses structures in which *seem* takes an indicative complement in Greek, namely, sentences such as (9), repeated as (16). I have just shown in (14) that these sentential complements are not in any way Tense deficient, nor is there any indication that they involve a ϕ -incomplete T (Petersen & Terzi (to appear)). Nevertheless, although the embedded subject is expected to freeze in the embedded clause where it receives Case, it is found in the matrix clause in agreement with T in (16).

- (16) Ta pedia fenonde oti meletun.
 the children seem-3PL that study-3PL
 ‘The children seem to study.’

I demonstrate in what follows that the matrix DP in (15) is different from the matrix DP with subjunctive complements of *seem*, e.g. (8), in a number of ways.

¹⁰⁶ See also Landau (2004) and Boeckx et al. (2010) for analyses that consider the same factors as crucially implicated in finite control.

5.3.1 WH-movement

Wh-movement over the matrix DP *i Maria* is well-formed when *seem* takes a subjunctive complement, (17), but less so when the sentential complement is indicative, (18).

(17) Pjon fenete i Maria na theli (na kalesi) sto parti?

whom seem-3SG the Mary subj want-3SG subj invite-3SG to-the party

‘Who does Mary seem to want to invite to the party?’

‘Who does Mary seem to want in the party?’

(18) ?*Pjon fenete i Maria oti theli (na kalesi) sto parti?

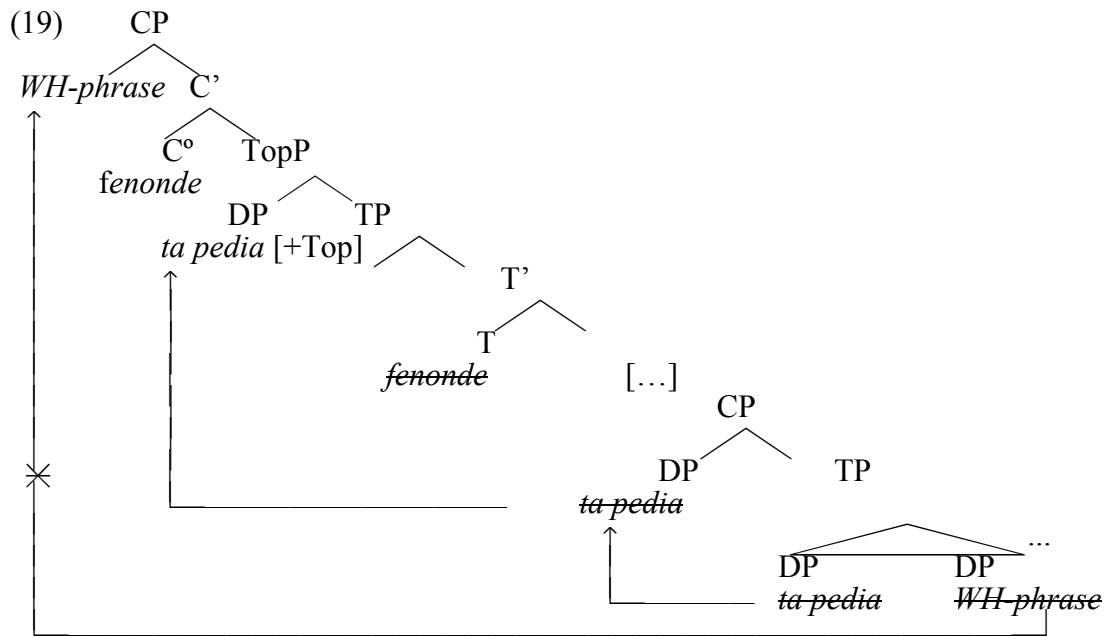
whom seem-3SG the Mary that want-3SG subj invite-3SG to-the party?

‘Who does Mary seem to want to invite to the party?’

‘Who does Mary seem to want in the party?’

The unacceptability of (18) can be attributed to a WH-island violation (Chomsky 1964 a.o.). If the embedded DP A’- moves to a matrix A’-position in (17), it has to stop at the embedded CP phase edge (Chomsky 2001), see (19). Because there is presumably only one Spec-CP in Greek, a language with no multiple WH-fronting, the embedded WH-phrase is trapped and cannot move to the matrix CP. No ungrammaticality arises in (17), since the matrix DP is an A-subject¹⁰⁷.

¹⁰⁷ I assume that Greek displays T-to-C movement in WH-questions. There is some controversy on this issue. Despite (obligatory) adjacency between the *wh*-element and the verb, Kotzoglou 2006 argues that the verb is not necessarily situated in C. Rather, it remains in T and the postverbal subject



5.3.2 Idioms

The idea that the matrix DP occupies an A'-position when *seem* has an indicative complement is also supported by the contrast below. When the subject of an idiomatic expression moves out of a sentential complement of *seem*, the idiomatic meaning is kept when the complement is a subjunctive (cf. (20)), but not when it is an

in Spec-vP. Even if we adopt these views, however, the ungrammaticality of (18) is still explained: a) (18) falls out as a case of improper movement of the subject, through Spec-CP and, presumably, to Spec-vP again (hence its postverbal position in the matrix clause). Notice that if the subject remains embedded, the sentence is acceptable:

- (i) Pjon fenete oti theli (na kalesi) i Maria sto parti?
 whom seem.3s that want-3SG subj invite-3SG the Mary to-the party?
 'Who does Mary seem to want (to invite) to the party?

b) If the embedded subject is moving successive cyclically from Spec-CP to vP edge, then (18) fails either for lack of [+Topic] feature checking of the moved DP, or for RM (WH-movement crosses DP A'-movement).

indicative, (cf. (21)). Since (parts of) an idiom may not carry discourse effects, their movement to an A'-position renders an idiomatic interpretation infelicitous¹⁰⁸.

(20) O kombos fenete na exi ftasi sto xteni

the knot seem-3SG subj have-3SG reached to-the comb

'The knot seems to have reached the comb.'

Idiomatic reading: 'Things seem to have come to an end.'

(21) O kombos fenete oti exi ftasi sto xteni

the knot seem-3SG that have-3SG reached to-the comb

'The knot seems to have reached the comb.'

Idiomatic reading: #'Things seem to have come to an end.'

5.3.3 Scope

That the matrix DPs having moved out of an indicative complement of *seem* occupy an A'-position is further supported by their scope properties, which contrast with those of subjunctive subjects. Let us recall here that Alexiadou & Anagnostopoulou (1998), henceforth, A&A (1998), have argued that postverbal subjects, e.g., *enas oreos andras* 'a handsome man' in (22), are true subjects in Spec-vP in Greek, and

¹⁰⁸ Note that the idiomatic reading is kept if the DP *o kombos* remains in the embedded clause:

(i) fenete oti o kombos tha ftasi sto xteni

the knot seem-3SG that FUT reached to-the comb

'The knot seems that has reached the comb.'

Idiomatic reading: #'Things seem to have come to an end.' (Perlmutter & Soames, 1979)

thus may take narrow scope (in addition to wide) with respect to *every colleague of mine*. By contrast, scope properties of preverbal subjects are not preserved, (23), what is known to hold for quantifiers that move to A'-positions (Cinque 1982 a.o.). This supports A&A's (1998) claim that preverbal subjects are A'- topics in Greek, and they cannot have narrow scope, with the consequence that sentences such as (23) have an awkward interpretation (in a monogamous society).

(22) Persi pandreftike enas oreos andras kathe sinadelfo mu
 last-year married-3SG a handsome man every colleague mine
 'Last year, each colleague of mine married a handsome man.'

(23) #Enas oreos andras pandreftike kathe sinadelfo mu persi.
 a handsome man married-SG every colleague mine last-year
 *'Last year, each colleague of mine married a handsome man.'
 'Last year, a handsome man is such that he married every colleague of mine.'

The above contrast is replicated by English subjects, (24a), vs. topics (24b).

(24) a. At least two movies were watched by every college student. (every > two)
 b. At least two movies, every college student watched. (*every > two)

Petersen & Terzi (to appear) have shown that the contrast is also replicated by the raised subjects of subjunctive vs. indicative complements of *fenete* 'seem',

respectively. Hence, narrow scope of the DP *enas oreos andras* ‘a handsome man’ is available in (25), but not in (26), presumably because the matrix DP is in an A’-position.

- (25) Enas oreos andras fenete na pandreftike kathe sinadelfo mu
a handsome man seem-3SG subj married-3SG every colleague mine
(every colleague > a handsome man)

‘Every colleague of mine is such that each seems to have married a handsome man.’

- (26) #Enas oreos andras fenete oti pandreftike kathe sinadelfo mu
a handsome man seem-3SG that married-3SG every colleague mine

*‘Every colleague of mine is such that each seems to have married a handsome man.’

‘A handsome man is such that he seems to have married every colleague of mine.’

(*every colleague > a handsome man)

Petersen & Terzi (to appear) conclude from the above discussion that in sentences such as in (16), where *seem* takes an indicative sentential complement in Greek, the subject of this complement moves to a topic position in the matrix clause. This means that we are not dealing with an instance of hyper-raising in this context either. This is an expected outcome, given the tense and ϕ -feature completeness of the indicative complement. A true matrix subject in this case would be derived via

improper movement (see Obata & Epstein 2008 a. o.) and other consequences pointed out in section 5.1.

To summarize, our findings regarding the sentential complements of *seem* and their subjects that move to the matrix clause areas follows:

Subjunctive complements – Gk	No NOM Case / A-movement
Indicative complements – BP	No NOM Case / A-movement
Indicative complements – Gk	NOM Case / A'-movement

Table 4

If this is on the right track, there is at least one issue I need to address: if the matrix DP in (27) = (16) is indeed in an A'-position, why is there (number) agreement between it and the matrix verb?

- (27) Ta pedia fenonde oti meletun
the children seem-3PL that study-3PL
‘The children seem to study.’

Note, nevertheless, that the agreement in (27) is optional (see Zaenen & al. 1985, Ussery 2012 for related cases in Icelandic), and default agreement is also possible, (28).

- (28) Ta pedia fenete oti meletun
the children seem-3SG that study-3PL

‘The children seem to study.’

Notice that if the subject is not raised, agreement with matrix T is no longer available, (29). I will explain this asymmetry in the next section.

- (29) Fenete/*Fenonde oti meletun ta pedia
seem-3SG/ seem-3PL that study-3PL the children
‘The children seem to study.’

5.4 Agreement with matrix DPs: indicative complements

In this section I look into some of the issues raised by my proposals so far, starting with the agreement pattern in (27). After presenting our proposal (Petersen & Terzi (to appear)), I compare these structures with copy raising.

5.4.1 The derivations

Basing what follows on Petersen & Terzi (to appear), there are a number of assumptions I make here when examining the agreement pattern in (27)-(29). First, I depart from the standard assumption that agreement of ϕ -features takes place (only) as a reflex of structural Case (Chomsky 1995, 2001 a.o.)¹⁰⁹. Instead, I consider that ϕ -agreement can hold independently of Case, and as a consequence DPs may agree in

¹⁰⁹ I leave aside agreement within nominals, as in DP concord. In these cases, it's standard to assume Case is not involved.

ϕ -features with more than one probe¹¹⁰. In other words, agreement is necessary for Case, but not vice-versa. That agreement doesn't imply Case assignment can be observed in many cases, for example in the Greek Tense deficient subjunctives earlier in section 5.2.2.1, where the embedded T agrees with its subject DP, but cannot Case-mark it; with the embedded inflected infinitives in BP (Petersen 2011, 2012) like in (30) and (31) below, where agreement with the plural subject is possible, but no Case can be assigned to the DP, as observed by the impossibility for the embedded subject to be licensed in situ:

(30) a. Os participantes reconheceram estarem errados. (Control)

the participants recognized-3PL be-INF-3PL wrong

'The participants recognized being wrong.'

b. *O organizador reconheceu os participantes estarem errados.

the organizer recognized-3PL the participants be-INF-3PL wrong

'The organizer recognized that the participants were wrong.'

(31) a. Os meninos parecem estarem cansados.

¹¹⁰The multiple agreement operation challenges the activation conditions and freezing effect of a DP (Chomsky 2000 et seq). Here I assume that the [+interpretable] ϕ -features of the DP are sufficient for it to be visible and be probed by the matrix T. Moreover, the DP moving has a [+topic] feature that needs to be checked against a relevant head in the CP domain, so the movement is triggered for reasons not related to agreement. In languages where agreement occurs independently of Case, something along these lines needs to be assumed (see also Alboiu & Hill 2013). However, I maintain the assumption that in Greek Case checking of a D-like element (DP, AGR) only takes place when there is agreement with a T with a complete set of formal features (e. g. ϕ and Tense). See also Martins and Nunes (2010) for cases where embedded topics agree with matrix raising verbs in Brazilian Portuguese.

the boys seem-3PL be-3PL tired

b. * Parece/*Parecem os meninos estarem cansados.

seem-3SG/seem-3PL the boys be-3PL tired

‘The boys seem to be tired.’

This is not a new observation. Ussery (2011) assumes that Case and ϕ -features on T probe independently (see also Nevins 2004, Bobaljik 2008 a.o.). Furthermore, I assume that A-bar positions can feed agreement (cf. Kayne 1984, Polinsky & Potsdam 2001, van Urk 2015).

In Tsez, verbs agree with the absolutive argument in noun class. A'-movement in Tsez is clause-bound, and LDA may happen between an embedded topic and a matrix T. Below is the structure of the clausal left periphery in Tsez (Polinsky & Potsdam 2001):

(32) [_{CP} specifier [_C C° [_{TopP} specifier [_{Top} Top° [_{IP} S O V]]]]]

Polinsky & Potsdam (2001) show that Long-Distance Agreement in Tsez can arise when the absolutive argument of a predicate is expressed as a sentential complement. Agreement can happen with the sentential complement, which yields a single class IV abstract nominal agreement in the verb, as a sort of ‘default’ agreement’.

(33) eni-r [už-ā magalu b-āc'-ru-li] r-iy-xo

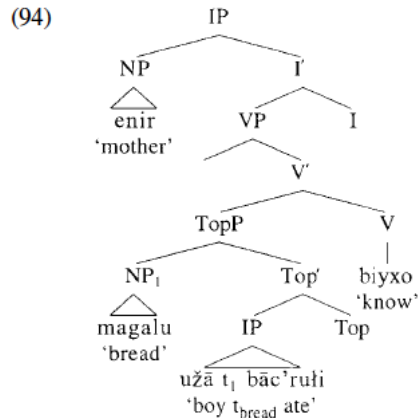
mother-DAT [boy-ERG bread.III.ABS III-eat-PSTPRT-NMLZ].IV IV-know-PRES

‘The mother knows the boy ate the bread.’

Polinsky & Potsdam (2001) also show that the trigger of agreement can also be an absolutive argument that is in the topic position of the complement clause. They show that the absolutive argument undergoes covert movement to a peripheral A'-topic position in its own clause (cf. (34)) and in this A'-position¹¹¹, the absolutive is in a local configuration with the verb, triggering LDA.

- (33) enir [už-ā magalu-n/magalu-gon b-āc'-ru-li] b-iy-xo
 mother [boy-ERG bread.III.ABS-TOP eat-PSTPRT-NMLZ] III-know-PRES
 'The mother knows that the bread, the boy ate.'

(34)

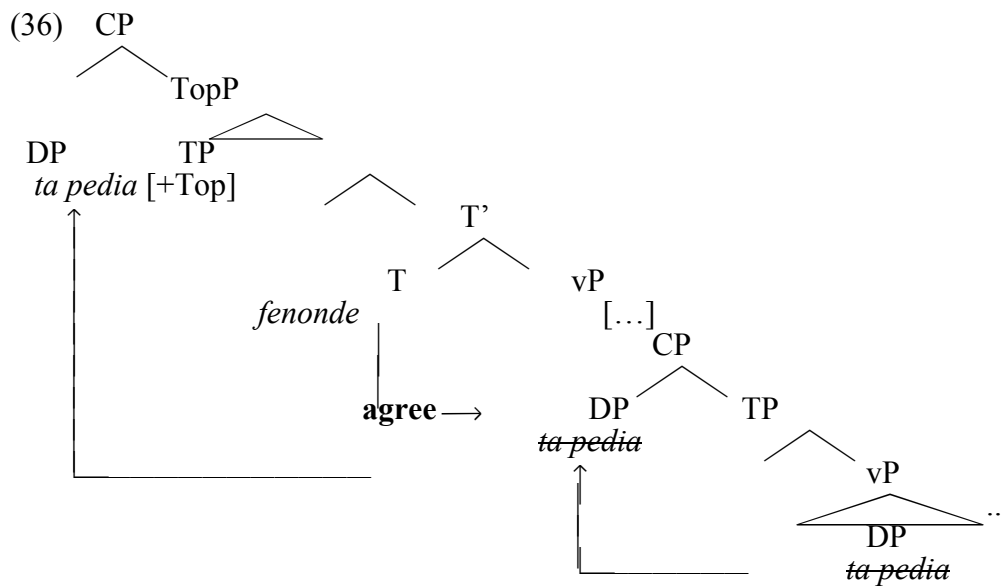


(Polinsky and Potsdam (2001): (57b), (94))

¹¹¹ I do not commit to the precise matrix A-bar position the embedded DPs move to in the Greek cases, and what kind of pragmatic features are involved. Here I call it 'topic', however it may very well be a different left dislocated position, such as focus. I leave this issue to a future investigation.

With these assumptions, Petersen & Terzi (to appear) analyze the structure for the sentence in (35) as the one in (36):

- (35) Ta pedia fenonde oti meletun
the children seem-3PL that study-3PL
‘The children seem to study.’



There is indeed evidence that the structure in (36) is on the right track, and it comes from two sources.

- a) The DP in (35) can be in Spec-CP or Spec, vP

The low adverb *sixna* ‘often’ is left adjoined to the vP. It can precede, (cf. (37)), but cannot follow the embedded subject DP, (cf. (38)), indicating that the DP is not

higher than Spec-vP of the matrix clause. In the sentence in (37), *ta pedia* ‘the children’ may be either in Spec-vP or Spec-CP.

- (37) Fenonde [_{VP} sixna [_{CP/VP} ta pedia oti meletun]]
 seem-3PL often the children that study-3PL
 ‘The children often seem to study.’

- (38) *Fenonde [_{VP} ta pedia sixna [_{CP} oti meletun]].
 seem-3PL the children often that study-3PL
 ‘The children often seem to study.’

Alboiu & Hill (to appear) argue that *sixna* ‘often’ is right-adjoined to vP, since a moved subject can be found between it and the matrix verb in the Greek counterparts of the Raising to Object structures, investigated in Romanian, (cf. (39)). Following the account the authors offer for Romanian, *sixna* is in between the CP and the (accusative) DP *ton Jani* in (39) because the subject has raised to Spec-vP of the matrix clause.

- (39) Ton exo katalavi [_{VP} ton Jani sixna [_{CP} oti distazi na psifisi]
 him have-1SG understood the John often that hesitates subj votes
 ‘I have often understood that John is hesitant to vote.’

Notice however that if *sixna* is right adjoined to vP in (39), the embedded CP must be extraposed. As discussed in chapter 4 section 4.1, simple adverbs like *sixna* are

assumed to be left-adjoined to some verbal category (Haider 2004). That together with the unacceptability of (38) may indicate that *sixna* is indeed the left-most element in vP, and *ton Jani* in (39) may be sitting in a higher inflectional position in the clause. Although this is an interesting point, I leave it open which exact position *sixta* takes in (37)-(39). It follows from the above that *ta pedia* ‘the children’ is either in Spec-vP (matrix) or Spec-CP (embedded) in (35)¹¹².

b) There is independent evidence for LDA in Greek (Alexiadou et al. 2012). More precisely, LDA between matrix T and the embedded Nominative DP (*pola lathi* ‘many mistakes’, in (40) below), has been noted in the context of aspectual raising verbs¹¹³:

- (40) Arxisan na tis ksefevgun tis Marias pola lathi
 started-3PL subj her escape-3PL the Mary many mistakes
 ‘Mary started to miss many mistakes.’ (Alexiadou et al. 2012: 71)

¹¹² It’s possible to claim that unacceptability of (38) is due to the lack of a position for the moved subject in the vP projection, and assume that in (37) *ta pedia* is in Spec-CP. *Ta pedia* cannot sit in an argumental position, like Spec-vP, as it is not an argument of V, nor is it merged by an applicative head, like experiencers (see chapter 4). The only remaining alternative is that *ta pedia* is in an escape-hatch position in Spec-vP. But raising vPs aren’t typically phasal and don’t project that position (Chomsky 2001, a.o.), excluding then a possible landing site for a moving topic.

¹¹³ Alexiadou et al 2012 discuss evidence for LDA by comparing aspectual raising verbs with obligatory control verbs. The study shows that control verbs agree in person and number with the embedded quirky dative subject, (i), while raising aspectual verbs agree in person and number with the embedded nominative theme, as in (38).

- (i) Epitides arxise na min tis ksefevgun tis Marias polla lathi
 on purpose started-3SG subj not her-gen escape-3PL the Mary-gen many mistakes
 ‘Mary deliberately started not to miss so many mistakes’

The LDA pattern of aspectual verbs is replicated when *seems* takes a subjunctive complement, (41). However, it does not hold when it takes an indicative, (42) (see also (27), (29)) above.

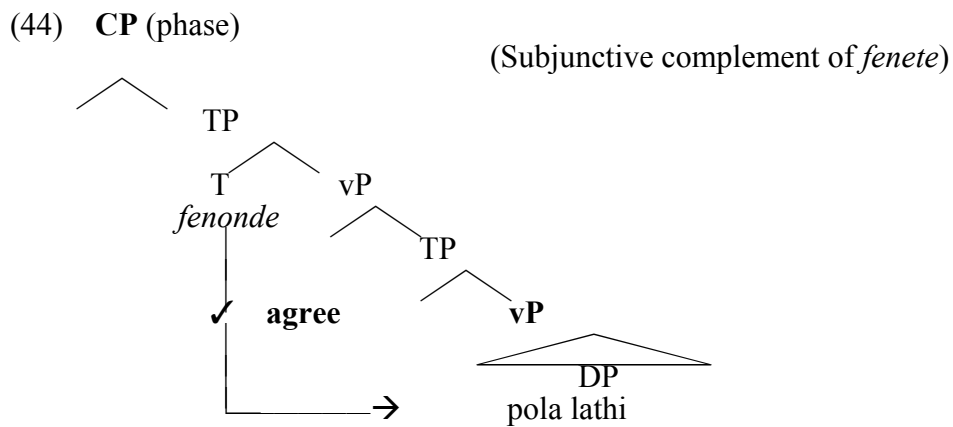
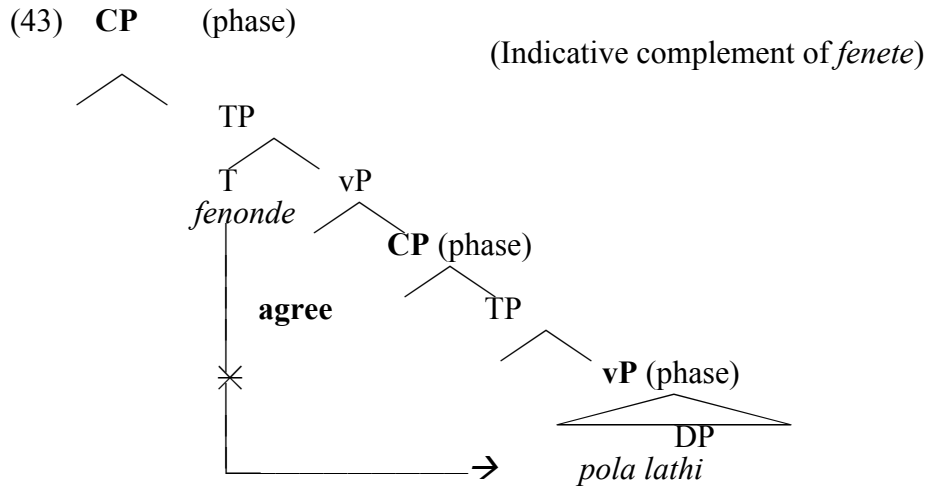
(41) Fenonde na tis ksefevgun tis Marias pola lathi
 seem-3PL subj her escape-3PL the Mary many mistakes
 ‘Mary seems to miss many mistakes.’

(42) ?*Fenonde oti tis ksefevgun tis Marias pola lathi
 seem-3PL that her escape-3PL the Mary many mistakes
 ‘Mary seems to miss many mistakes.’

The contrast is expected if subjunctive complements of *fenete* ‘seem’ are not phasal, in contrast to indicatives. Alboiu (2007) proposed a very similar account for Romanian, and Alexiadou et al. (2012) and Anagnostopoulou, Alexiadou, and Wurmbrand (2014) for Greek among other languages, claim that the subjunctive complement clauses in raising contexts (cf. (40), (41)) are non-phasal, while indicatives are phasal CP domains, where nominative Case is assigned independently. The matrix T probe and the embedded nominative goal are two phase heads apart (embedded C, embedded v)¹¹⁴ in (42), and this makes it impossible for them to agree

¹¹⁴ The phasehood of raising verbs is a topic of debate in the literature, see e.g. Legate 2003, 2005, Sauerland 2003. See fn. 112. Here I assume that raising verbs are non-phasal, based on LDA in Spanish such as (i) and due to the acceptability of (41) in Greek:

under current locality/phase theory, Chomsky's (2001) Phase Impenetrability Condition, for example.



-
- (i) a. Le parece a María gustarle mucho a Juan ella.
 3SG-DAT seems A María like-INF-him much Juan she
 'It seems to María that she likes Juan very much.'
- b. Parecen estar (los niños) enfermos (los niños)
 seem be-INF the boys sick the boys
 'It seems that the boys are sick.'

Notice that (42) becomes acceptable after A-bar movement of the subject to matrix clause, see (45).

- (45) Pola orthografika lathi fenonde oti tis ksefevgun tis Marias
 many spelling errors seem-3PL that her escape-3PL the Mary
 <pola orthografika lathi>
 <many spelling errors>
 ‘Mary seems to miss many spelling errors.’

The contrast between (42) and (45) is explained if the agreement mechanism proposed in (36) by Petersen & Terzi (to appear) is at play. Assuming cyclic movement, there is a point in the derivation where the nominative DP *pola lathi* is visible for the matrix head T to trigger agree only in (45), presumably when it’s in Spec-CP of the embedded clause, such that matrix T can agree with the DP. By contrast, in (42), there is no point in the derivation when *pola lathi* is in the search domain of the matrix T.

Notice that no ungrammaticality arises when the embedded subject remains in the embedded clause but does not agree with *fenete*, namely, when there is no LDA:

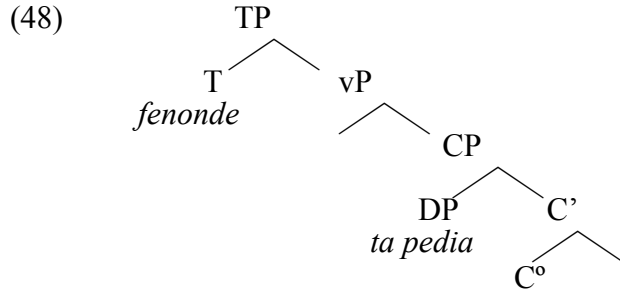
- (46) Fenete oti tis ksefevgun tis Marias pola lathi
 seem-3SG that her escape-3PL the Mary many mistakes
 ‘Mary seems to miss many mistakes.’

This is so because the embedded indicative clause is phasal and can attribute Case to *pola lathi*. The matrix T receives a default 3sg agreement. With this, Petersen & Terzi (to appear) have shown that indicative hyper-raising in Greek is not real hyper-raising either. These are better described as ‘topic-agree *seem*’, which is how I will refer to this structures from now on.

Let’s now turn to the last issue on the analysis provided in this section for topic-agree *seem* in Greek. The agreement described above is optional. The left dislocated DP that moves from an embedded subject position may or may not agree with the matrix T.

- (47) Ta pedia fenete/fenonde oti meletun.
 the children seem-3SG/ seem-3PL that study-3PL
 ‘The children seem to study.’

I suggest each possible outcome can be derived from its own independent successful derivation. There are two equally available derivations in the structure in (48). By the point that matrix T probes down the structure, it can agree either with the embedded subject DP that has at that point moved to Spec-CP, or with C°. Assuming that C° has ϕ -features (see e.g. Chomsky 2008, Haegeman & van Koppen 2012), both that both the DP and C° can satisfy the T probe and because they are in the same minimal domain – they are equidistant from T.



In (48), if T agrees with the DP, it will receive plural agreement, and if it agrees with C°, T will receive a third person singular agreement¹¹⁵. Further A'-movement of the DP *ta pedia* to a left dislocated position in the matrix clause may take place later in the derivation.

Another way to solve the optionality problem is to assume that the agreeing and non-agreeing derivations involve different featural requirements. Different requirements of the matrix probe T and/or other functional projections, for example, could lead to different outcomes. If that is the case, it's likely that these derivations would have different semantic and/or pragmatic properties. In the next section I discuss a case in which the agreeing and non-agreeing indicative hyper-raising differ. Because of the difficulties to pin down exactly those differences in a predictive manner, I leave open the precise role of the agreement optionality in these constructions.

¹¹⁵ Notice that clauses typically trigger third person singular agreement in languages, even when their subject is plural. This is an interesting point and raises question on Chomsky's (2008 et seq) assumption that the C° is the final host of the ϕ -features in T°, see Fuß 2013. In other words, why don't clauses trigger identical agreement of that of their subject if they presumably share their features?

- (i) That your neighbors are noisy is/*are not big news.
- (ii) That I am tall is/*am obvious.

5.4.2 Is it copy raising?

The discussion of *fenete* brings an interesting question regarding verb kinds, which consequently can tell us more about the clausal structure it is in. It is known that a verb like *seem* can take different types of complements. Besides participating in raising constructions, it may work as a perceptual verb, and take an adjectival complement like in (49). In English and other languages, raising verbs, together with some perception verbs, participate in copy raising constructions as in (50). A copy raising construction typically features a matrix perception verb that has a DP subject and a CP complement that has a pronoun coindexed with the matrix subject (see Heycock 1994, Potsdam & Runner 2001, Asudeh & Toivonen 2006, Landau 2011).

- (49) a. John seems tired.
b. O Yianis fenete eksipnos
the John seem-3SG intelligent
John seems intelligent.'

- (50) a. Peter_i seems like he_i's cooking dinner.
b. The problem_i sounds like it could be difficult to solve it_i.

There is a vast literature on copy raising's semantic and syntactic properties. There are many disputes, including whether the matrix DP is thematic or not and if copy raising structures are derived via movement and resumption (see Fujii 2007) or base generation of the matrix DP. Different proposals argue that the copy raising subject

may be interpreted as a perceptual source (P-source) (see Rogers 1972, Heycock 1994, Landau 2011, and Asudeh & Toivonen 2006 et seq.).

The topic-agree *seem* sentences in Greek I discuss in this chapter, like the sentence in (51) below, are similar and possibly comparable to copy raising (cf. (50)). Notice that Greek is a null subject language. If (51) were a copy raising construction, the lack of an overt pronominal subject (the ‘copy’) in its embedded clause is not surprising since Greek is a null subject language. Therefore a comparison of these is in order.

- (51) Ta pedia fenonde oti meletun.
the children seem-3p that study-3p
‘The children seem to study.’

I show in what follows that Greek sentences in (51) are not copy raising, although both constructions share some properties. Let us start with a similarity between the topic raising construction in Greek and the copy raising ones (illustrated in English). As presented in Terzi (2014), sentences with an agreeing subject like in (51) have a special interpretation and cannot appear in ‘out of the blue’ contexts. Note that this pragmatic consequence can be derived by the status of the left dislocated DP. Copy-raising contrasts with raising in that it requires the matrix subject to be interpreted in the raised matrix position, rather than in the embedded one, in contrast to standard raising, which allows reconstruction, so the subject may be interpreted in the embedded clause (see Potsdam & Runner, 2001). This contrast can be observed in

how well raising and copy raising are accepted in ‘out-of-the-blue’ context: raising, (52a)-(53a), is fine, but copy raising is not, (52b)-(53b). For some (Asudeh & Toivonen 2006; Carstens & Diercks, 2013), the effects seen below are related to the need for copy-raising to be generated in contexts of direct perception. Here I just want to show how raising and copy-raising differ, and how Greek topic-agree sentences behave in the same contexts.

Context: Returning home late at night, and finding it very quiet

- (52) a. The children seem to be sleeping.
 b. *The children seem like they’re sleeping.

Context: Returning home late at night, and looking at the refrigerator for something to eat.

- (53) a. The children seem to have eaten all the sandwiches.
 b. *The children seem like they have eaten all the sandwiches.

Transposing these sentences to Greek, Terzi (2014) found a contrast between complements of subjunctive and indicative¹¹⁶.

¹¹⁶ The results are different for non-agreeing *fenete*. Although this is a very interesting contrast, I do not offer any account for it here.

- (i) a. Ta pedia fenete na kimunde. (cf. (54))
 the children seem.3s subj. sleep.3s
 b. Ta pedia fenete oti kimunde.

(54) a. Ta pedia fenonde na kimunde.

the children seem.3-PL subj sleep-3PL

b. *Ta pedia fenonde oti kimunde.

the children seem-3PL that sleep-3PL

(55) a. ?Ta pedia fenonde na exun fai ola ta sandwich

the children seem-3PL subj have-3PL eaten all the sandwiches

b. *Ta pedia fenonde oti exun fai ola ta sandwich

the children seem-3PL that have-3PL eaten all the sandwiches

(Terzi 2014)

Movement of the DP from the embedded clause to the matrix subject position (i.e., to an A-position) explains the interpretation under the scope of *fenonde* in (54a) and (55a). No reconstruction can take place in (54b)-(55b), and this result is consistent with a copy raising account (see (52) and (53)), regardless of the precise analysis of copy raising. However, the lack of reconstruction observed is also consistent with an analysis where the subject DP is base generated in the embedded clause and it moves to an A'-position in the matrix clause, which is the approach given in this chapter for Greek topic-agree sentences as in (54b)-(55b). Either way, the interpretation under

the children seem.3s that sleep.3p

(ii) a. Ta pedia fenete na exun fai ola ta sandwich. (cf. (55))

the children seem.3s subj. have.3p eaten all the sandwiches

b. Ta pedia fenete oti exun fai ola ta sandwich.

the children seem.3s that have.3p eaten all the sandwiches

(Terzi 2014)

the scope of *seem* is predicted to fail. Moreover, the ‘novelty’ of the information expressed by the complement CP of the sentences in (54b) and (55b) when used in those contexts clashes with the pragmatic requirements of such constructions, which is yet another reason for why they are infelicitous.

Now let’s look at some evidence in favor of the second option, namely, that copy raising and the Greek topic-agree *seem* differ, i.e., the latter are not copy raising constructions. Specifically, I do not commit here to one absolute analysis of copy raising, but whatever steps are involved in copy raising, they must be different in some respect(s) to Greek sentences like (51), (54b) and (55b). A first piece of evidence in this direction is the lack of a prepositional/comparative expression preceding the CP, equivalent to English and other languages’ counterparts (e.g. *seems like/as if*, *verkar som om*, ‘seem as if’ in Swedish)¹¹⁷. Moreover, notice that Greek topic-agree differs from English copy raising constructions in that the latter is compatible with idiom chunks (56), while Greek topic-agree isn’t, see example (21) repeated here in (57) below.

(56) a. The cat looks like it’s been let out of the bag. (from Rogers 1971)

b. The shit seemed like it hit the fan. (from Asudeh & Toivonen 2012)

¹¹⁷ Greek may have a closer counterpart to copy raising, that is construed with *fenete* + *san*, as in (i) below. In these, the matrix subject agrees with the matrix T, and only subjunctive clauses are possible. I leave it to future work to further probe the properties of this structure.

(i) Kapii fenondan san na/*oti itan kurasmeni
 some-ones seemed-3PL-PST as subj/ that be-3PL-PST tired-3PL
 ‘Some people seemed as if they were tired.’

(57) O kombos fenete oti exi ftasi sto xteni

the knot seem-3SG that have-3SG reached to-the comb

‘The knot seems to have reached the comb.’

Idiomatic reading: #‘Things seem to have come to an end.’

Copy raising allows embedded subjects as the ‘copies’. In a non-null subject language like English, these copies are overt pronouns, (58), while in null subject languages like Greek and Hebrew, one can expect that null pronouns are preferred in this context (cf. Avoid Pronoun Principle (Chomsky 1981 a.o.). Hebrew is a partial null subject language that allows null referential subject in a restricted set of contexts (see Shlonsky 2009 for an overview). If the circumstances in the embedded clause are ones that independently allow *pro* drop in Hebrew – this means roughly 1st/2nd person in the past or future tenses – an overt pronoun is slightly dispreferred when compared to a null one (cf. (59)).

(58) John seemed as if he was tired.

(59) ata nir'e ke'ilu (?ata) lo yaSan-ta bixlal

you.sgM look as.if (?you.sgM) NEG sleep-2sgM at.all

"You look like you haven't slept at all." (Omer Preminger, p.c.)

In Greek, an overt pronoun isn't accepted at all. Despite the difference between true copy raising in Hebrew and topic-agree in Greek, I can't conclude much about the

example in (60) because it remains ambiguous between having an embedded null copy (*pro*) or an embedded A'-trace.

- (60) Kapii fenondan oti (*afti) itan kurasmeni
 some-one seem-3PL-PST that (they) be-3PL-PST tired
 ‘Some people seem to be tired.’

However, possessive pronouns are also used as a ‘copy’ in copy raising. Those show up as overt pronouns and are good in English and Hebrew (cf. (61) and (62))). In contrast, Greek disallows similar examples, (63):

- (61) Mary appears as if her job is going well.

- (62) Gil nir'e ke'ilu (še-)lo mil'u et ha-hora'ot šelo.
 Gil looks as.if (that-)not followed.3pAl CC the.instruction.his
 'Gil looks like they didn't follow his instructions.' (Landau 2011: (15b))

- (63) a. ?*Ta koritsia fenonde oti pigeni kala i dulia tus.
the girls seem-3PL that go-3PL well the job theirs
Intended: ‘The girls appear as if their jobs are going well.’
b. *Ta pedia fenonde oti i agapimeni tus sinavlia exi mateothi.

the children seem-3PL that the favorite their show has been-cancelled

Intended: ‘The children look as if their favorite show has been cancelled.’

The unacceptability of Greek examples in (60) (with the overt pronoun) and (63) may have a deeper reason, namely the unavailability for these structures to allow an embedded lexical subject at all. Copy raising is possible when there is no embedded copy (Rogers 1974, Landau 2011, a.o.). Landau (2011) argues this is possible when the copy raising subject is a perceptual source; when the copy raising subject doesn’t function as a perceptual source, it needs a ‘copy’ in the embedded clause. In other words, “only copy raising examples whose subject cannot be construed as a P-source require a copy in their complement” (Landau 2011:787)¹¹⁸.

Examples of copyless copy raising are below (64) and (65), for English and Hebrew respectively.

(64) a. John looks like the party ended early.

b. Richard smells like the Gonzo has been baking. (Asudeh 2002)

¹¹⁸ Landau 2011 argues that the matrix DP can either a) be thematically related to the copy raising predicate (*seem, look, smell*), in the cases where it functions as a P-source and a copy is not needed; b) or, in the cases where the matrix DP is not a P-source and a copy is necessary, the matrix DP is semantically related to a predicate in a similar fashion as of topics of the type in (i) below. Notice that this line of account doesn’t conflict with the idiomatic reading available in copy raising (see (56)) because those cases always involve lower copies, which indicate that the matrix DPs aren’t thematic/P-sources.

(i) John, I like his style. (Landau 2011: (42))

(65) Gil nir'a ke'ilu mašehu nora kara.

Gil looked as.if something terrible happened

'Gil looked like something terrible had happened.' (Landau 2010: (64a))

In contrast, Greek topic-agree doesn't allow an embedded lexical subject.

(66) *O Yianis fenete oti teliose noris to parti.

the John seem-3sg that the party ended early

Intended: 'John seems like the party ended early'

These results indicate that Greek 'indicative hyper-raising' – as I first called it in the beginning of this chapter – is not an instance of copy raising. I showed in section 5.4.1 that this Greek construction is better analyzed as an agreeing topic, i.e., an embedded subject DP that moves to a matrix A'-position and, in the process, may agree with the matrix T of the verb *fenete* (Petersen & Terzi to appear). The unacceptability of an embedded subject, as shown in (60), (64) and (66) is expected under this analysis, and is further support for Petersen & Terzi's (to appear) claims. There isn't any argumental position in the embedded clause because these have been filled; specifically the embedded subjects in these sentences are copies of the DPs that were moved to the matrix clause.

5.5 Non-agreement with matrix subjects: subjunctive complements

The issue addressed in this section is the fact that, when the complement of *fenete* ‘seem’ is a subjunctive, non-agreement of the raised subject is also possible, as shown in (67). This is not expected if subjects that are raised out of subjunctive complements of *seem* end up in an A-position, as I have argued.

- (67) Ta pedia fenete na meletun.
the children seem-3SG subj study-3PL
‘The students seem to study.’

In Petersen & Terzi (to appear), we claimed that the matrix DP of (67) is in fact in an A’-position, as also held by Anagnostopoulou (2003), precisely on the basis of the (non)-agreement pattern.

The new evidence we contributed is showing the contrast manifested by agreeing vs. non-agreeing subjunctive complements of *fenete*, in terms of minimality effects. In particular, the contrast between indicatives vs. agreeing subjunctive complements in section 3, e.g., (17) vs. (18), is replicated by agreeing vs. non-agreeing subjunctive complements, e.g., (68) vs. (69), respectively.

- (68) Pjon fenonde ta pedia na thelun (na kalesun) sto parti?
whom seem-3PL the children subj want-3PL subj invite-3PL to-the party
‘Who do the children seem to want (to invite) to the party?’

- (69) ??Pjon fenete ta pedia na thelun (na kalesun) sto parti?
 whom seem-3SG the children subj want-3PL subj invite-3PL to-the party
 ‘Who do the children seem to want (to invite) to the party?’

As expected, embedded subjects can also stay in situ when no LDA holds.

- (70) Fenete na meletun ta pedia
 seem-3SG subj study-3PL the children
 ‘The students seem to study.’

When it comes to (70) and (67), one wonders how the embedded subject receives Case, given the deficient Tense of subjunctives that we already pointed out in section 3.2.1. Surprisingly, the Tense of subjunctives – now captured in terms of limited Tense morphology alternations on the subjunctive verb – is not deficient in the non-agreeing cases of *seem* and this contrasts with agreeing *seem*, see respectively in (71) and (72) (see also Anagnostopoulou (2003) for the same observation). This suggests that (nominative) Case is available for the embedded subject in the non-agreeing subjunctive complements of *seem*.

- (71) Ta pedia fenete na meletun/meletusan
 the children seem-3SG subj study-PRES-3PL/study-PAST-3PL
 ‘The children seem to study/have studied.’

- (72) Ta pedia fenonde na meletun/?*meletusan
the children seem-3PL subj study-PRES-3PL/study-PAST-3PL
‘The children seem to study.’

Summing up this subsection, I draw attention to the fact that raising predicates may select either for Tense deficient or Tense non-deficient subjunctives in Greek, with the consequences just pointed out. All in all, we end up with the following picture concerning instances of sentential complements of *seem*.

Agreeing (DP)	Indicative	A'-position/topic
	Subjunctive	A-position/subject
Non-agreeing (DP)	Indicative	A'-position/topic
	Subjunctive	A'-position/topic

Table 5

5.6 A note on the position of subjects

A last issue that arises from our proposals so far concerns the status of subjects in Greek. Recall that according to A&A (1998) preverbal DPs are A'-topics (Clitic left dislocated elements), while true subjects, occupying an A-position, are the postverbal ones.

In this chapter, I claimed that the moved subjects of agreeing subjunctive complements of *seem* occupy an A-position in the matrix clause, contrasting in this respect with the corresponding subjects of indicative complements on the basis of a

number of criteria. This challenges the claims of A&A with respect to Greek subjects. An important difference that holds between the ‘subjects’ A&A (1998) discuss, however, and the ones that constitute the focus of the present work is that theirs are found within the same, mono-clausal structure (VS), while they are derived subjects in the current work.

This is not the only occasion in which the claim that only the postverbal position is a true subject position in Greek (while preverbal subjects are dislocated A’-elements) has been contested. Roussou & Tsimpli (2006) notice that some subjects are not accepted in postverbal position in Greek, and this presumably entails that some sentences do not have true subjects according to A&A’s (1998) views.

- (73) a. I fititria kseri (#i fititria) tin apandisi. [stative verb]
 the student know.3s the student the answer
 ‘The student knows the answer.’
- b. I falenes ine (#i falenes) thilastika. [generic subject]
 the whales are the whales mammals
 ‘Whales are mammals.’
- c. Ta lina plenonde (#ta lina) efkola. [middle construction]
 the linens be.washed.3p the linen easily
 ‘Linens wash easily.’ (Roussou & Tsimpli 2006: 340)

Roussou & Tsimpli suggest that the subjects of sentences such as in (73) are not merged in D_v (which is the domain between V and T), but are directly merged in the

D_T (domain between T and C) instead. The data discussed here provides further evidence that the claim that all preverbal subjects in null subject languages are clitic left dislocated cannot be sustained. At least some pre-verbal subjects must be considered to occupy the canonical subject position of the clause (Spec-IP).

This issue certainly deserves further investigation, both empirical and theoretical. I leave this investigation for future research.

5.7 Conclusion

In this chapter, building on Petersen & Terzi (to appear), I investigated a number of structures, which at first glance give the impression of grammatical instances of hyper-raising in Brazilian Portuguese and Greek, and demonstrated that this was only apparent. In particular, raising out of BP indicative and of Greek subjunctive complements of *seem* were instances of finite-raising, due to an ϕ -incomplete and a deficient T respectively, which leave the embedded subject without Case. Raising out of indicative complements of *seem* in Greek, on the other hand, is an instance of left dislocation.

In the course of this investigation I discovered that there is a LDA mechanism in the Greek agreeing indicatives clauses, whereby the raising verb may agree with the embedded DP when the latter A'-moves to the matrix clause, the 'topic-agree *seem*'. I provided evidence that topic-agree cannot be reduced to copy raising. I also investigated non-agreeing *seem* with both subjunctive and indicative complements, comparing them across various properties. Finally, our investigation revealed that

some Greek pre-verbal DPs may be A-subjects (contra A&A 1998), a finding that opens research questions regarding when and why those can occur.

Chapter 6: Concluding remarks

In this dissertation, I took the challenge of looking into experiencers and experinecers constructions in order to find out what they tell us about the Grammar. The notion of experiencer theta-role itself was questioned: do we need it? My answer was: most certainly, we don't. In an empirical level, I showed that the experiencer theta-roles don't form a coherent unit. In a conceptual level, I argued that thematic roles and a thematic theory are not necessary, and therefore we can dispense with them, if we can build a theory of UG in which what we need to explain the acquisition process follows from its inherent properties.

In chapter 2 and 3, I argued that psych-verbs are not a cohesive or a special class of verbs. Once studied closely, I pointed out they share common properties of different classes of verbs. Their behavior can be explained by their syntactic and semantic properties, and they are a part of larger groups of verbs with which they share properties. We use therefore the term 'psych-verb' with a terminological function that has no relevance to the grammar; it mainly describes verbs that have the property of expressing someone's mental state. The psych-verbs classification I developed in chapter 3 is a way to organize and describe information, rather than classes with unique syntactic status.

In this chapter 4, I discussed another phenomenon in which experiencers participate, namely defective intervention in raising constructions. Bruening (2014) has recently challenged the status of defective intervention as a real syntactic phenomenon, arguing that it is actually the effect of linear order. I showed that

Bruening's (2014) potential counterexamples to the existence of syntactic defective intervention are only apparent, and provided an explanation for his data based on adverb placement and the hierarchical architecture of clauses with experiencers. Defective intervention has different effects across languages, and I was able to classify languages in 3 main groups. I found that traces (A – DPs, clitics – and A') don't intervene in subject raising, lexical DPs do. It's been argued in the literature that cliticization obviates minimality in those circumstances, but a specific account of how was in order. I revised the definition of minimality, specifically, the Minimal Link Condition (1995), to include that only syntactic objects, and not occurrences (copies) are target of syntactic operations (Agree). With that, we can derive the language patterns observed in this study. Lastly, I explored the minimality effects on A'-movements triggered by the introduction of an experiencer to a raising structure. It was suggested that a functional projection that relates the experiencer to the point of view of the clause (PoVP) is responsible for the left dislocation of the raised subject, and the subject, in turn, interferes with other A'-elements.

In chapter 5, I investigated a number of structures, which at first glance give the impression of grammatical instances of hyper-raising in Brazilian Portuguese and Greek. I claimed that raising out of BP indicative and of Greek subjunctive complements of *seem* were instances of finite-raising, while raising out of indicative complements of *seem* in Greek, on the other hand, is an instance of left dislocation. I provided evidence for a LDA mechanism in the Greek agreeing indicatives clauses, whereby the raising verb may agree with the embedded DP when the latter A'-moves

to the matrix clause, the ‘topic-agree *seem*’. I provided evidence that topic-agree in Greek cannot be reduced to copy raising.

Bibliography

- Abels, K. 2003. *Successive cyclicity, anti-locality, and adposition stranding*.
Doctoral Dissertation, University of Connecticut.
- Alboiu, G. 2000. *The Features of Movement in Romanian*. Doctoral Dissertation,
University of Manitoba.
- Alboiu, G. 2006. Are we in Agreement?. In C. Boeckx (ed.), *Agreement Systems*, 13-
39. Amsterdam: John Benjamins.
- Alboiu, G. 2007. Moving Forward with Romanian Backward Control and Raising. In
W. Davies and S. Dubinsky (eds.), *New Horizons in the Analysis of Control and
Raising*, 187-213. Dordrecht: Springer.
- Albou, G., M. Barrie, and C. Frigeni. 2002. Derived Reflexives in Romance: The
Case of SE. In S. Burrelle & S. Somesfalean (eds.), *Online Proceedings from the
2002 CLA Conference*, 7-14. Montreal: Université du Québec à Montreal.
http://homes.chass.utoronto.ca/~cla-acl/2002/Alboiu_Barrie_Frigeni_2002.pdf
- Alboiu, G. and V. Hill. to appear. Evidentiality and Raising to Object as A-bar
movement in Romanian. *Syntax*.
- Alexiadou, A. and E. Anagnostopoulou. 1997. Towards a uniform account of
scrambling and clitic-doubling. In W. Abraham & E. van Gelderen (eds.),
German: syntactic problems—problematic syntax, 142-161. Tübingen: Max
Niemeyer Verlag.
- Alexiadou, A. and E. Anagnostopoulou. 1998. Parametrizing Agr: word order, verb-
movement and EPP-checking. *Natural Language and Linguistic Theory* 16: 491-
539.
- Alexiadou, A. & E. Anagnostopoulou. 2004. Voice morphology in the causative-
inchoative Alternation: evidence for a non-unified structural analysis of
unaccusatives. In A. Alexiadou, E. Anagnostopoulou, and M. Everaert (eds.), *The
Unaccusativity puzzle*, 114-136. Oxford University Press
- Alexiadou, A., E. Anagnostopoulou and S. Wurmbrand. 2013. Movement vs. long
distance Agree in raising: Disappearing phases and feature valuation. *Proceedings
of NELS 43*.

- Alexiadou, A., E. Anagnostopoulou, G. Iordăchioaia and M. Marchis. 2012. In Support of Long Distance Agree. In A. Alexiadou, G. Müller & T. Kiss (eds.), *Local modeling of non-local dependencies*, 85-110. De Gruyter, Linguistische Arbeiten 547.
- Anagnostopoulou, E. 2003. *The Syntax of Ditransitives: Evidence from Clitics*. Mouton de Gruyter.
- Anagnostopoulou, E. 2001. Two Classes of Double Object Verbs: The Role of Zero-Morphology. In M. van Oostendorp and E. Anagnostopoulou (eds.), *Progress in Grammar: Articles at the 20th Anniversary of the Comparison of Grammatical Models Group in Tilburg*. www.meertens.nl/books/progressinggrammar
- Anagnostopoulou, E. 2005. Cross-linguistic and Cross-categorical Variation of Datives. In M. Stavrou et al. (eds), *Advances in Greek Generative Syntax*. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Anagnostopoulou, E. To appear . Clitic doubling and object agreement. In *Proceedings of the Nereus VI International Workshop held in Hamburg*, November, 2014.
- Arad, M. 1998. Psych-notes. *UCL Working Papers in Linguistics* 10. London: University College.
- Asudeh, A. and I. Toivonen. 2006. Copy Raising and Its Consequences for Perceptual Reports. In J. Grimshaw, J. Maling, C. Manning, J. Simpson, and A. Zaenen, (eds.), *Architectures, rules, and preferences: A festschrift for Joan Bresnan*. Stanford, CA: CSLI Publications.
- Asudeh, A., and I. Toivonen. 2012. Copy Raising and Perception. *Natural Language and Linguistic Theory* 30(2): 321-380
- Asudeh, A. 2002. Richard III. In A. Pycha, M. Andronis, E. Debenport and K. Yoshimura, CLS 38: The Main Session, 31–46. Chicago, IL: Chicago Linguistic Society.
- Ausín, A. and M. Depiante. 2000. On the Syntax of parecer with and without Experiencer. In H. Campos (ed.), *Hispanic Linguistics at the Turn of the Millennium*, 150-177. Somerville, MA: Cascadilla Press.

- Baker, M. 1988. *Incorporation: a theory of grammatical function changing*. Chicago: University of Chicago Press.
- Baker, Mark. 1997. Thematic Roles and Syntactic Structure. In L. Haegeman (ed.) *Elements of Grammar*, 73-137. Kluwer, Dordrecht.
- Barbosa, P. 1995. *Null Subjects*. Doctoral Dissertation, MIT.
- Barbosa, P. 2013. *pro as a minimal NP: towards a unified theory of pro-drop*.
<http://ling.auf.net/lingbuzz/001949>
- Barss, A. and H. Lasnik 1986. A Note on Anaphora and Double Objects. *Linguistic Inquiry* 17: 347-354.
- Belletti, A. and L. Rizzi. 1988. Psych Verbs and Theta Theory. *Natural Language and Linguistic Theory* 6: 291-352.
- Bennis, H. 2004. Unergative Adjectives and Psych Verbs. In A. Alexiadou, E. Anagnostopoulou, and M. Everaert (eds.), *The unaccusativity puzzle: explorations of the syntax-lexicon interface*, 84-113. Oxford: OUP.
- Bleam, T. 1999. *Leista Spanish and the Syntax of Clitic Doubling*. Doctoral dissertation, University of Delaware.
- Bobaljik, J. 2008. Where's phi? Agreement as a post-syntactic operation. In D. Adger, S. Béjar, and D. Harbour, (eds.), *Phi-Theory: Phi features across interfaces and modules*, 295-328. Oxford University Press
- Bobaljik, J. and D. Jonas. 1996. The subject positions and the role of TP. *Linguistic Inquiry* 27, 195-236.
- Boeckx, C. 2008. *Aspects of the Syntax of Agreement*. Routledge.
- Boeckx, C., N. Hornstein, and J. Nunes. 2010. *Control as Movement*. Cambridge University Press.
- Bošković, Ž. 2005. On the Locality of Move and Agree: Eliminating the Activation Condition, Generalized EPP, Inverse Case Filter, and Phase-Impenetrability Condition. *University of Connecticut Occasional Papers in Linguistics* 3.
- Bošković, Ž. 2007. On the locality and motivation of Move and Agree: An even more minimal theory. *Linguistic Inquiry* 38: 589-644.
- Bouchard, D. 1995. *The semantics of syntax: A minimalist approach to grammar*. Chicago: University of Chicago Press.

- Bouchard, D. 1995. *The Semantics of Syntax*. The University of Chicago Press, Chicago.
- Bresnan, J. and J. Kanerva. 1989. Locative inversion in Chichewa: a case study of factorization in grammar. *Linguistic Inquiry* 20:1-50.
- Bruening, B. 2012. By-phrases in passives and nominals. *Syntax*, 16: 1-41.
- Bruening, B. 2014. Defects of Defective Intervention. *Linguistic Inquiry* 45: 707-719.
- Burzio, Luigi. 1986. *Italian syntax*. Dordrecht: Reidel.
- Campos-Dintrans, G., Pires, A. and J. Rothman 2014. Subject to subject raising and the syntax of tense in L2 Spanish: A Full Access approach. *Bilingualism: Language and Cognition* 17: 38-55.
- Cançado, M. 1995. *Verbos Psicológicos: A relevância dos papéis temáticos vistos sob a ótica de uma semântica representacional*. Tese de Doutorado. Campinas: IEL/UNICAMP.
- Cançado, M. 2010. Verbal alternations in Brazilian Portuguese: a lexical semantic approach. *Studies in Hispanic and Lusophone Linguistics* 3: 77-111.
- Cançado, M. 2012. Verbos psicológicos: uma classe relevante gramaticalmente? *Veredas Atempáticas* 2: 1-18. UFGF Juiz de Fora.
- Cançado, M. and C. Franchi. 1999. Exceptional Binding with Psych-Verbs? *Linguistic Inquiry* 30: 133-143.
- Cançado, M., L. Godoy and L. Amaral. 2013. *Catálogo de verbos do português brasileiro: classificação verbal segundo a decomposição de predicados*. Volume I: verbos de mudança. Belo Horizonte: Editora UFMG.
- Cardinaletti, A. and M. Starke. 1999. The typology of structural deficiency: A case study of the three classes of pronouns. In Riemsdijk, H. van (ed.), *Clitics in the languages of Europe*, 145-233. New York: Mouton de Gruyter
- Carstens, V. and M. Diercks. 2013. Parameterizing Case and Activity: Hyper-raising in Bantu. In S. Kan, C. Moore-Cantwell and R. Staubs (eds.), *Proceedings of the 40th Annual Meeting of the North East Linguistic Society*, 99-118. Amherst: University of Massachusetts GLSA.
- Chomsky, N. 1964. *Current issues in linguistic theory*. The Hague: Mouton.

- Chomsky, N. 1973. Conditions on transformations. In S. Anderson and P. Kiparsky (eds.), *A Festschrift for Morris Halle*. New York: Holt, Rinehart, and Winston.
- Chomsky, N. 1981. *Lectures on government and binding*. Dordrecht: Foris.
- Chomsky, N. 1993. A Minimalist Program for Linguistic Theory. *MIT occasional papers in linguistics*, 1-67.
- Chomsky, N. 1995. *The Minimalist Program*. Cambridge, MA: MIT Press
- Chomsky, N. 2000. Minimalist inquiries. In R. Martin, D. Michaels, and J. Uriagereka (eds.), *Step by step*, 89-155. Cambridge, MA: MIT Press.
- Chomsky, N. 2001. Derivation by Phase. In M. Kenstowicz (ed.), *Ken Hale: A Life in Language*, 1-52. Cambridge, MA: MIT Press.
- Chomsky, N. 2008. On phases. In R. Freidin, C. P. Otero, and M. L. Zubizarreta *Foundational issues in linguistic theory: essays in honor of Jean-Roger Vergnaud*, 133-166. Cambridge, MA: MIT Press.
- Chomsky, N. 2013. Problems of projection. *Lingua* 130: 33-49.
- Cinque, G. 1988. On si constructions and the theory of arb. *Linguistic Inquiry* 19: 521-581.
- Cinque, G. 1999. *Adverbs and Functional Heads. A Cross-linguistic Perspective*. Oxford: Oxford University Press.
- Collins, C. and E. P. Stabler. 2013. *A Formalization of Minimalist Syntax*.
lingbuzz/001691
- Collins, C. 2005. A smuggling approach to the passive in English. *Syntax* 8: 81-120.
- Cornilescu, A. 1997. Some Notes on the Syntax of the Subject, in *Revue roumaine de linguistique XLII*, 101-147. Editura Academiei Române, Bucharest.
- Costa, J. 1998. *Word Order Variation: A Constrained Approach*. The Hague: Holland Academic Graphics.
- Cruse, D. A. 1973. Some thoughts on agentivity. *Journal of Linguistics* 9: 1-204.
- Cuervo, C. 2003. *Datives at Large*. PhD Dissertation, MIT.
- Cyrino, S., J. Nunes and E. Pagotto 2009. Complementação. In M. A. Kato and M. do Nascimento, *Gramática do Português Culto Falado no Brasil – Vol. III – A construção da sentença*. Campinas: Editora da Unicamp.

- Dailey-McCartney, A., V. Eskenazi and G. -H. Huang. 1999. Varieties of raising and the feature-based bare phrase structure theory. In S. Levi and J. Loveless (eds.), *University of Washington Working Papers in Linguistics* 18: 61-72.
- Diaconescu, C. R. and M. L. Rivero. 2005. An Applicative Analysis of Double Object Constructions in Romanian. *Proceedings of the 2005 annual Conference of the Canadian Linguistic Association*. University of Ottawa.
- Dobrovie-Sorin, C. 1990. Clitic Doubling, Wh-movement, and Quantification in Romanian, *Linguistic Inquiry* 21: 351-397.
- Dobrovie-Sorin, C. 1994. *The Syntax of Romanian*. Mouton de Gruyter, Berlin.
- Dowty, D. 1991. Thematic Proto-Roles and Argument Selection. *Language* 67: 547-619
- Dowty, D. 1979. *Word Meaning and Montague Grammar*. Dordrecht: D. Reidel.
- Duarte, M. E. 1995. *A Perda do Princípio “Evite Pronome” no Português Brasileiro*. Doctoral dissertation, Universidade Estadual de Campinas.
- Epstein, S. and T. Seely, eds. 2002. *Derivation and Explanation in the Minimalist Program*. In D. Lightfoot (ed), *The Generative Syntax series*. Blackwell Publishers: Oxford.
- Epstein, S., and T. Seely. 2006. *Derivations in Minimalism*. Cambridge University Press: Cambridge.
- Ferreira, M., 2000. *Argumentos nulos em português brasileiro*. MA thesis, Universidade Estadual de Campinas.
- Ferreira, M., 2009. Null subjects and finite control in Brazilian Portuguese. In J. Nunes (ed.), *Minimalist Essays on Brazilian Portuguese Syntax*. Amsterdam: John Benjamins.
- Figueiredo Silva, M. C. 1996. *A Posição do Sujeito no Português Brasileiro: Frases Finitas e Infinitivas*. Campinas: Editora da UNICAMP.
- Figueiredo Silva, M. C. 2007. A perda do marcador dativo e algumas de suas conseqüências. In Castilho, A. T. de et al (Org.). *Descrição, História e Aquisição do Português Brasileiro*, 85 -110. São Paulo: Fapesp, Campinas: Pontes Editores.
- Fillmore, C. 1968. The Case for Case. In E. Bach and R. Harms (eds.) *Universals in Linguistic Theory*. New York: Holt, Rinehart and Winston.

- Fillmore, C. 1970. The grammar of hitting and breaking. In: Jacobs, R. and Rosenbaum, P. *Readings in English Transformational Grammar*. Waltham: Ginn,
- Franchi, C. 1994. *Anotações sobre a teoria generalizada dos papéis temáticos*. Ms. Unicamp, Campinas
- Fujii, T. 2007. Cyclic chain reduction. In N. Corver and J. Nunes (eds), *The copy Theory on the PF Side*, 291-326. Amsterdam/Philadelphia: John Benjamins.
- Fuß, E. 2013. C-agreement revisited: core syntax or morphological ornament? *CGSW* 28 Leipzig handout: <http://conference.uni-leipzig.de/cgsw28/handouts/fuss.pdf>
- Galves, C. 2001. *Ensaio sobre as Gramáticas do Português*. Campinas: UNICAMP editor.
- Greenberg, J. (ed.). 1966. *Universals of Language*. Cambridge, MA: MIT Press.
- Grimshaw, J. 1990. *Argument Structure*. Cambridge: MIT Press.
- Gruber, J.S. 1965. *Studies in Lexical Relations*, Doctoral dissertation, MIT.
- Haegeman, L. and M. van Koppen. 2012. Complementizer agreement and the relation between C° and T°. *Linguistic Inquiry* 43: 441-454.
- Haider, H. 1992/2000. Branching and Discharge. In: *Working Papers of the Sonderforschungsbereich 340* (Universities of Stuttgart and Tübingen) 23:1–31
- 2000: In: P. Coopmans, M. Everaert and J. Grimshaw (eds.), *Lexical Specification and Insertion*. Amsterdam: Benjamins (Current Issues in Linguistic Theory 197: 135–164).
- Haider, H. 2004. Pre- and postverbal adverbials in OV and VO. *Lingua* 114: 779–807.
- Hale, K. L. and S. J. Keyser 2002. *Prolegomenon to a Theory of Argument Structure*. Cambridge, MA: MIT Press.
- Hale, K. and S. J. Keyser. 1993. On argument structure and the lexical expression of syntactic relations. In K. Hale and S. J. Keyser, *The view from building 20*, 53–110. Cambridge, MA: MIT Press.
- Harris, A. C. 1984. Inversion as a Rule of Universal Grammar: Georgian Evidence. In: Perlmutter, David M. and Carol G. Rosen (eds.), *Studies in Relational Grammar* 2, The University of Chicago Press, 259-291.
- Hartman, J. 2012. *Varieties of clausal complementation*. PhD dissertation, MIT.

- Herschensohn, J. 1992. Case marking and French Psych-Verbs. *Lingvisticae Investigationes* XVI-1: 21-40.
- Herschensohn, J. 1999. What Does Zero Syntax Add to an Analysis of French Psych Verbs? In: Treviño Esthela & José Lema (eds.), *Semantic issues in Romance Syntax*, Amsterdam/Philadelphia: John Benjamins, 105-119.
- Heycock, C. 1994. *Layers of predication*. New York: Garland.
- Holmberg, A. 2005. Is There a Little Pro? Evidence from Finnish. *Linguistic Inquiry* 36:533-564
- Holmberg, A. and T. Hróarsdóttir. 2003. Agreement and movement in Icelandic raising constructions. *Lingua* 113: 997-1019.
- Holmberg, A. 2000. Scandinavian Stylistic Fronting: How Any Category Can Become an Expletive, *Linguistic Inquiry* 31: 445-483.
- Hornstein, N. 1999. Movement and control. *Linguistic Inquiry* 30:69–96.
- Hornstein, N. 2001. *Move! A minimalist theory of construal*. Oxford: Blackwell
- Iatridou, S. 1988/1993. On Nominative Case assignment and a few related things. *MIT Working Papers in Linguistics* 19: 175-196
- Jackendoff, R., 1990. *Semantic Structures*. Cambridge, MA: MIT Press.
- Jackendoff, R. 1974. A deep structure projection rule. *Linguistic Inquiry* 5: 481-506.
- Jackendoff, R. 1983. *Semantics and Cognition*. Cambridge, MA: MIT Press.
- Jackendoff, R. 1987. *Consciousness and the Computational Mind*. Cambridge, MA: MIT Press/Bradford Books.
- Jackendoff, R. 1992. *Languages of the Mind*. Cambridge, MA: MIT Press.
- Jackendoff, R. 1994. *Patterns in the Mind*. New York: Basic Books.
- Jackendoff, R. 1997. *The Architecture of the Language Faculty*. Cambridge, MA: MIT Press.
- Jackendoff, R. 2002. *Foundations of Language*. Oxford: Oxford University Press.
- Jackendoff, R. 2007. *Language, Consciousness, Culture*. Cambridge, MA: MIT Press.
- Jaeggli, O. 1986. Arbitrary plural pronouns. *Natural Language and Linguistic Theory* 4: 43–76.

- Kato, M. A. and J. Nunes. 2008. A Uniform Raising Analysis for Standard and Nonstandard Relative Clauses in Brazilian Portuguese. In J. Nunes (ed.) *Minimalist Essays on Brazilian Portuguese Syntax*. Amsterdam/Philadelphia: John Benjamins.
- Kato, M. and E. Negrão (eds.). 2000. *Brazilian Portuguese and the Null Subject Parameter*. Madrid & Frankfurt am Main: Iberoamericana & Vervuert.
- Katz, J. J. and P. Postal. 1964. *An Intergrated Theory of Linguistic Description*. Cambridge, MA: MIT Press.
- Kayne, R. 1994. *The antisymmetry of syntax*. Cambridge, MA: MIT Press.
- Kayne, R. S. 1884 *Connectedness and Binary Branching*. Foris, Dordrecht, Holland.
- Keenan, E. L. 1976. Towards a universal definition of 'subject'. In C. N. Li (ed.), *Subject and topic*, 303-34. New York: Academic Press.
- Kiparsky, P. 1987. *Morphology and grammatical relations*. Stanford University: manuscript.
- Kitahara, H. 1997. *Elementary Operations and Optimal Derivations*. Cambridge, MA: MIT Press.
- Klein, K. and S. Kuscher. 2002. Psychic verbs and lexical economy. *Working Papers 'Theory of the lexicon'* 122. University of Düsseldorf.
- Klein, K. and S. Kutscher. 2005. Lexical Economy and Case Selection of Psych-Verbs in German . *Working papers of the SFB 282, Theory of the Lexicon* [Arbeitspapieredes SFB 282 Theories des Lexicons] vol. 122.
- Krapova, I.T. and G. Cinque. 2008. Clitic reduplication constructions in Bulgarian. In D. Kallulli and L. Tasmowski (eds.), *Clitic Doubling in the Balkan Languages*, 257-287. Amsterdam, John Benjamins Publishing Company.
- Kratzer, A. 1996. Severing the External Argument from its Verb. In J. Rooryck and L. Zaring (eds.), *Phrase Structure and the Lexicon*, 109-137. Kluwer. Dordrecht.
- Landau, I. 2004. The scale of finiteness and the calculus of control. *Natural Language & Linguistic Theory* 22: 811–877.
- Landau, I. 2010. *The Locative Syntax of experiencers*. Cambridge, MA: MIT Press.
- Landau, I. 2011. Predication vs. aboutness in copy raising. *Natural Language and Linguistic Theory* 29: 779–813.

- Larson, R. 1988. On the double object construction. *Linguistic Inquiry* 19:335-392.
- Larson, R. 1990. Double objects revisited: a reply to Jackendoff. *Linguistic Inquiry* 21: 589-632.
- Lasnik, H. and C. Boeckx. 2006. Long NP-Movement. In M. Everaert and H. van Riemsdijk (eds.), *The Blackwell Companion to Syntax*. Blackwell, Vol. 3, 109-130.
- Lasnik, H. and M. Saito. 1984. On the nature of proper government. *Linguistic Inquiry* 15: 235-289.
- Lasnik, H. 1999. Chains of Arguments. In *Working Minimalism*, ed. S. D. Epstein and N. Hornstein, 189-215. Cambridge, MA: MIT Press.
- Ledgeway, A. and A. Lombardi. 2005. Verb movement, adverbs and clitic positions in Romance. *Probus* 17: 77-111
- Legate, J. 2003. Some Interface Properties of the Phase. *Linguistic Inquiry* 34: 506-16.
- Levin, B. 1993. *English Verb Classes and Alternations: A Preliminary Investigation*. Chicago: University of Chicago Press.
- Levin, B. and H. Rappaport-Hovav. 1995. *Unaccusativity*. Cambridge, MA: MIT Press.
- Levin, B. and M. Rappaport-Hovav. 2005. *Argument Realization*. Cambridge: Cambridge University Press.
- Maienborn, C. 2005. On the limits of the Davidsonian approach: The case of copula sentences. *Theoretical linguistics* 31(3): 275-316.
- Marantz, A. 1984. *On the Nature of Grammatical Relations*. Cambridge, MA: MIT Press.
- Marantz, A. 1991. Case and licensing. In *Proceedings of the 8th Eastern States Conference on Linguistics* (ESCOL 8), ed. B. A. Westphal German and H-R. Chae, 234–253. Ithaca, NY: CLC Publications.
- Marchis Moreno, M. and C. Petersen, forthcoming. Locality Effects in Romance: the role of clitic doubling. *Proceedings of the VII Nereus International Workshop "Clitic Doubling and other issues of the syntax/semantic interface in Romance"*

- DPs*”. Arbeitspapier 1xx. Fachbereich Sprachwissenschaft, Universität Hamburg 2016.
- Marchis Moreno, M and C. Petersen. Forthcoming. In defense of defective interventions: adverbs and experiencers in Romance. *Proceedings to WCCFL 34, 2016*.
- Marchis Moreno, M. and Petersen, C. Forthcoming. On intervention and the role of cliticization. In *Proceedings to Going Romance 28, 2014*, selected papers. John Benjamins.
- Marchis, M. to appear. Minimal Link Constraint’ Violations: Move vs. Agree. In M. H. Côté, E. Mathieu and S. Poplack (eds.), *Proceedings of LSRL41*. Amsterdam: John Benjamins.
- Marchis, M. and A. Alexiadou. 2013. The syntax of clitics revisited: two types of clitics. *Lingua* 127: 1-31.
- Marín, R. and L. McNally. 2011. Inchoativity, change of state, and telicity: Evidence from Spanish reflexive psychological verbs. *Natural Language and Linguistic Theory* 29: 467-502.
- Martins, A. M. and J. Nunes, 2005. Raising issues in European and Brazilian Portuguese. *Journal of Portuguese Linguistics* 4: 53-77.
- Martins, A. M. and J. Nunes. 2009. Syntactic change as chain reaction: The emergence of hyper-raising in Brazilian Portuguese. In P. Crisma and G. Longobardi (eds.), *Historical Syntax and Linguistic Theory*, 144-157. Oxford: Oxford University Press.
- Martins, A. M. and J. Nunes. 2010. Apparent Hyper-raising in Brazilian Portuguese: Agreement with Topics across a Finite CP. In P. E. Panagiotidis (org.): *The Complementiser Phase: Subjects and Operators*, 143-163. Oxford University Press.
- Martins, A. M. and J. Nunes. 2009. Syntactic change as chain reaction: The emergence of hyper-raising in Brazilian Portuguese. In P. Crisma and G. Longobardi (eds.), *Historical Syntax and Linguistic Theory*, 144-157. Oxford: Oxford University Press.

- McFadden, T. 2006. German Inherent Datives and Argument Structure. In D. Hole, A. Meinunger and W. Abraham (eds.), *Datives and Other Cases*, 49-77. Amsterdam: John Benjamins
- McFadden, T. 2004. *The position of morphological case in the derivation: A study on the syntax-morphology interface*. Doctoral dissertation, University of Pennsylvania, Philadelphia, PA.
- McGinnis, M. 1998. *Locality in A-Movement*. Doctoral dissertation, Cambridge, MA: MIT.
- McIntyre, A. 2006. The interpretation of German datives and English have. In D. Hole, A. Meinunger and W. Abraham (eds.), *Datives and Other Cases*. 185-211. Amsterdam: John Benjamins.
- Merchant, J. 2013. Voice and ellipsis. *Linguistic Inquiry* 44: 77–108.
- Miyagawa, S. 1989. *Syntax and Semantics: Structure and Case Marking in Japanese* 22. New York: Academic Press.
- Modesto, M. 2000. *On the identification of null Arguments*. Doctoral dissertation, University of Southern California.
- Motapanyane, V. 2000. (ed), *Comparative Studies in Romanian Syntax*, Elsevier, Amsterdam.
- Motapanyane, Virginia. 2002. *Complementizer Phrases (CP) in Romanian*. University of New Brunswick, Ms.
- Motomura, M. 2004. *Thematically driven movement in Japanese*. Doctoral dissertation, University of Maryland.
- Nevins, A. 2004. Derivations without the Activity Condition. In M. McGinnis and N. Richards (eds.) *Proceedings of the EPP/Phase Workshop* (MITWPL).
- Nunes, J. 2008. Inherent Case as a Licensing Condition for A-movement: The Case of Hyper-raising Constructions in Brazilian Portuguese. *Journal of Portuguese Linguistics* 7: 83-108.
- Nunes, J. 2009. Dummy prepositions and the licensing of null subjects in Brazilian Portuguese. In E. Aboh, E. van der Linden, J. Quer, and P. Sleeman, (eds.), *Romance Languages and Linguistic Theory – Selected papers from Going Romance*. Amsterdam: John Benjamins.

- Nunes, J. 2011. On the diachronic reanalysis of null subjects and null objects in Brazilian Portuguese: Triggers and consequences. In E. Rinke and T. Kupisch (eds.), *The Development of Grammar: Language Acquisition and Diachronic Change - In Honor of Jürgen M. Meisel*, 331-354. Hamburg studies in multilingualism.
- Oliveira, M. de. 2003. A perda da preposição *a* e a recategorização de *lhe*. *GEL* – 2003. <http://dlcv.fflch.usp.br/sites/dlcw.fflch.usp.br/files/maril008.pdf>
- Ouhalla, J. 1994. Verb movement and word order in Arabic. In D. Lightfoot and N. Hornstein (eds.), *Verb Movement*. 41-72. Cambridge: Cambridge University Press.
- Parsons, T. 1990. *Events in the Semantics of English*. Cambridge, MA: MIT.
- Perlmutter, D. 1978. Impersonal Passives and the Unaccusative Hypothesis. *Proceedings of the Berkeley Linguistics Society* 4:157-189.
- Perlmutter, D. M. 1984. Working 1st and Inversion in Italian, Japanese and Quechua. In D. Perlmutter and C. G. Rosen (eds.), *Studies in Relational Grammar 2*, 292-330. The University of Chicago Press.
- Perlmutter, D. and S. Soames. 1979. *Syntactic Argumentation and the Structure of English*. Berkeley, CA: University of California Press.
- Perlmutter, D. 1978. Impersonal passives and the Unaccusative Hypothesis. In *Papers from the fifth annual meeting of the Berkeley Linguistics Society*. Berkeley, CA: Berkeley Linguistics Society.
- Pesetsky, D. 1995. *Zero Syntax. Experiencers and Cascades* Cambridge, MA: MIT Press.
- Pesetsky, D. 1995. *Zero Syntax*. Cambridge, MA: MIT Press.
- Pesetsky, D. 1987. Binding problems with experiencer verbs. *Linguistic Inquiry* 18:126-40.
- Petersen, C. 2008. A tripartição pronominal e o estatuto das proformas *cê*, *ocê* e *você*. *Delta* 24.2: 283-308. São Paulo: PUC-SP.
- Petersen, C and A. Terzi, Forthcoming. A. Hyper-Raising and locality: a view from Brazilian Portuguese and Greek. *Proceedings of 50th Chicago Linguistics Society*.

- Petersen, C. 2011. *The licensing of null subjects in subjunctive clauses in BP: contributions to the Theory of Control as Movement*. 2011. MA Thesis, Universidade de São Paulo.
- Petersen, C. 2012. Partial Control In Brazilian Portuguese: An Empirical Investigation. Manuscript, University of Maryland.
- Piñón, C. 1997. Achievements in an Event Semantics. In A. Lawson, and E. Cho (eds.), *Proceedings of Semantics and Linguistic Theory 7*: 273-296. Ithaca, NY: CLC Publications.
- Polinsky, M. and E. Potsdam. 2001. Long-Distance Agreement and Topic in Tsez. *Natural Language and Linguistic Theory* 19: 583-646.
- Pollard, C. and I. Sag. 1992. Anaphors in English and the Scope of Binding Theory. *Linguistic Inquiry* 23: 261-303.
- Postal, P. 1969. On so-called 'pronouns' in English. In D. Reibel and S. Schane (eds.), *Modern Studies in English*. Englewood Cliffs, New Jersey: Prentice-Hall.
- Postal, P. 1971. *Cross-over phenomena*. New York: Holt, Rinehart, and Winston.
- Preminger, O. 2009. Breaking agreements: distinguishing agreement and clitic doubling by their failures. *Linguistic Inquiry* 40: 619-666.
- Preminger, O. 2011. *Agreement as a fallible operation*. Doctoral dissertation, MIT.
- Pylkkänen, L. 1998. *On the internal structure of stative psychological causatives in Finnish*. Ms., MIT.
- Pylkkänen, L. 2002. *Introducing Arguments*. Doctoral Dissertation, MIT.
- Pylkkänen, L. 2008. *Introducing Arguments*. Cambridge, MA: MIT Press.
- Rappaport, M. and B. Levin. 1985. *A case study in lexical analysis: the locative alternation*. Ms., MIT.
- Reinhart, T. 2001. *Experiencing Derivations*. A paper presented at SALT 11.
- Rivero, M. L. 1994. Clause Structure and V-movement in the Languages of the Balkans. *Natural Language and Linguistic Theory* 12: 63-120.
- Rizzi, L. 1993. *Some Issues on Cliticization*, Ms., University of Geneva.
- Rizzi, L. 1982. *Issues in Italian Syntax*. Dordrecht: Foris.
- Rizzi, L. 1986. On chain formation. In H. Borer (ed.), *The syntax of pronominal clitics*, 65-95. New York, NY: Academic Press.

- Rizzi, L. 1990. *Relativized Minimality*. Cambridge, MA: MIT Press.
- Rizzi, L. 2001. Relativized Minimality Effects. In M. R. Baltin and C. Collins (eds.), *The Handbook of Syntactic Theory*. Oxford: Blackwell.
- Rizzi, L. 2004. Locality and left periphery. In A. Belletti (ed.), *Structures and beyond: The cartography of syntactic structures*, vol. 3, 223–251. Oxford: Oxford University Press.
- Rizzi, L. 2013. Locality. *Lingua* 130: 169–186.
- Rodrigues, C. 2004. *Impoverished morphology and A-movement out of Case domains*. Doctoral Dissertation, University of Maryland.
- Rogers, A. 1972. Another look at flip perception verbs. In *Papers from the Eighth Regional Meeting of the Chicago Linguistic Society*, 303–315. Chicago.
- Rogers, A. 1974. A transderivational constraint on richard? In *Papers from the Tenth Regional Meeting of the Chicago Linguistic Society*, 551–558, Chicago.
- Rosch, E. and C. B. Mervis. 1975. Family resemblances: Studies in the internal structure of categories. *Cognitive Psychology* 8: 382-439.
- Rosen, C. 1984. The interface between semantic roles and initial grammatical relations. In David M. Perlmutter and C. Rosen (eds.), *Studies in Relational Grammar 2*, 38-80. Chicago: University of Chicago Press.
- Rothstein, S. 2004. *Structuring Events*. Oxford: Blackwell.
- Roussou, A. 2000. On the left periphery. Modal particles and complementisers. *Journal of Greek Linguistics* 1: 65-94.
- Roussou, A. and I-M. Tsimpli. 2006. On Greek VSO again! *Journal of Linguistics* 42: 317-354.
- Ruwet, N. 1972. A propos d'une Classe de Verbes Psychologiques. *Théorie Syntaxique et Syntaxe du Français*. Paris: Editions du Seuil
- Salles, H. 1997. *Prepositions and the Syntax of Complementation*. Doctoral dissertation, University of Wales.
- Sauerland, U. 2003. Intermediate adjunction with A movement. *Linguistic Inquiry* 34: 308–314.

- Shlonsky, U. 2007. Hebrew as a partial null-subject language. *Studia Linguistica* 63: 133-157.
- Sigurðsson, H. A. 1989. *Verbal Syntax and Case in Icelandic*. PhD dissertation, University of Lund.
- Sigurðsson, H. A. 1992. The Case of Quirky Subjects. *Working Papers in Scandinavian Syntax* 49,1-26.
- Speas, M. 1990. *Phrase structure in natural language*. Dordrecht: Kluwer.
- Speas, P. and C. Tenny. 2003). Configurational Properties of Point of View Roles. In Anna Maria DiSciullo (ed.), *Asymmetry in Grammar*, 315–344. Amsterdam: John Benjamins.
- Sportiche, D. 1998. *Partitions and Atoms of Clause Structure: Subjects, Agreement, Case and Clitics*. London/New York: Routledge.
- Spyropoulos, V. 2002. A note on arbitrary null subjects. *Reading Working Papers in Linguistics* 6: 85-100
- Stroik, T. 1990. Adverbs as V-sisters. *Linguistic Inquiry* 21, 654–661.
- Strozer, J. R. 1976. *Clitics in Spanish*. Doctoral dissertation, UCLA.
- Suñer, M. 1983. proarb. *Linguistic Inquiry*, 14:188–191.
- Support of Long Distance Agree. In A. Alexiadou, T. Kiss and G. Müller
- Szabolcsi, A. 1983. The possessor that ran away from home. *The Linguistic Review* 3: 89-102.
- Tenny, C. 1994. *Aspectual roles and the syntax-semantics interface*. Dordrecht: Kluwer.
- Tenny, C. 2006. Evidentiality, experiencers, and the syntax of sentience in Japanese. *Journal of East Asian Linguistics* 15: 245-288.
- Terzi, A. 1992. *PRO in Finite Clauses: A Study of the Inflectional Heads of the Balkan Languages*. Doctoral Dissertation, CUNY Graduate Center.
- Terzi, A. 1997. PRO and null Case in Finite Clauses. *The Linguistic Review* 14: 335-360.
- Terzi, A. 2014. *Sentential complements of 'seem'*. University of Athens talk, handout.
- Torrego, E. 1996. Experiencers and raising verbs. In *Current Issues in Comparative Grammar*, ed. R. Freidin. Dordrecht: Kluwer.

- Torrego, E. 1998. *The Dependencies of Objects*. Cambridge, MA: MIT Press
- Torrego, E. 2002. Arguments for a Derivational Approach to Syntactic Relations Based on Clitics. In S. Epstein & T. Seely (eds.), *Derivation and Explanation in the Minimalist Program*, 249-268. Malden, MA: Blackwell.
- Travis, L.M. 1984. *Parameters and effects of word order variation*. Doctoral dissertation, MIT.
- Tsimpli, I.-M. 2006. The acquisition of voice and transitivity alternations in Greek as native and second language. In S. Unsworth et al. (eds.), *Paths of Development in L1 and L2 Acquisition*, 15-55. Amsterdam: John Benjamins.
- Ura, H. 1994. Varieties of raising and the feature-based bare phrase structure theory. *MIT Occasional Papers in Linguistics* 7. Cambridge, MA: MIT Working Papers in Linguistics.
- Ura, H. 1996. *Multiple Feature-Checking: A Theory of Grammatical Function Splitting*. Doctoral Dissertation, MIT.
- Uriagereka, J. 1988, *On Government*. Doctoral dissertation, University of Connecticut.
- Uriagereka, J. 1995. Aspects of the Syntax of Clitic Placement in Western Romance. *Linguistic Inquiry* 26: 79 –124
- Uriagereka, J. 2002. *Derivations*. London, Routledge.
- Uriagereka, J. 2005. On the Syntax of Doubling. In L. Heggie & F. Ordóñez (eds.) *Clitic and Affix Combinations: Theoretical perspectives*, Amsterdam, John Benjamins, 343-374.
- Ussery, C. 2012. *Case and Phi Features as Probes. Proceedings of WCCFL 29 Working Papers in Linguistics*. Tucson, AZ: University of Arizona Coyote Papers.
- Van Valin Jr., R. D. 2005. *Exploring the syntax-semantics interface*. Cambridge University Press.
- Varlokosta, S. 1994. *Issues on Modern Greek sentential complementation*. Doctoral dissertation, University of Maryland.

- Verhoeven, E. 2008. (Non-)canonical marking of experiencer objects: A typological comparison of Chinese, Korean, Turkish, and Modern Greek. *Language Typology and Universals* 61(1): 81–92.
- Verhoeven, E. 2010. Agentivity and stativity in experiencer verbs: Implications for a typology of verb classes. *Linguistic Theory* 14: 213–251.
- Williams, E. 1982. Another Argument that Passive is Transformational. *Linguistic Inquiry* 13: 160–3.
- Wood, J. and A. Marantz. 2014. The interpretation of external arguments. In R. D'Alessandro, I. Franco and A. Gallego [eds.] *The Verbal Domain*. Oxford University Press.
- Zaenen A., J. Maling and H. Thráinsson. 1985. Case and Grammatical Functions: The Icelandic Passive. *Natural Language and Linguistic Theory* 3: 441–483.
- Zeller, J. 2006. Raising out of Finite CP in Nguni: The Case of fanele. *South African Linguistics and Applied Language Studies* 24: 255–275.
- Zribi-Hertz, A. 1989. Anaphor Binding and Narrative Point of View: English Reflexive Pronouns in Sentence and Discourse. *Language* 65: 695–727.
- Zwart, J. W. 1993. *Dutch syntax. A minimalist approach*. Doctoral dissertation, University of Groningen.
- Zwart, J. W. 2006. Complementizer agreement and dependency marking typology. *Leiden Working Papers in Linguistics* 3(2): 53–72.