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SENTENTIAL WH-EXCLAMATIVES IN BRAZILIAN
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**SENTENTIAL WH-EXCLAMATIVES IN BRAZILIAN
PORTUGUESE**

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ABSTRACT

The main goal of this thesis was to carry out a syntactic analysis of sentential wh-exclamatives in Brazilian Portuguese (BP) in order to provide a detailed account of these structures, contributing to the theory of grammar. The theoretical background for the research was the generative panorama from a minimalist perspective (CHOMSKY 1995 and subsequent work), especially the checking theory, as well as the cartographic approach to syntax (see RIZZI, 1997, 2015; RIZZI AND CINQUE, 2016; RIZZI AND BOCCI, 2017). Sentential wh-exclamatives are structures derived via movement of a wh-operator to the left periphery (cf. BENINCÀ, 2001; ZANUTTINI AND PORTNER, 2003; CASTROVIEJO, 2016; SEBASTIAN, 2017) and have the illocutionary force of exclamatory statements, which express emphasis, surprise, and extreme degree (cf. ZENDRON DA CUNHA, 2016). The analysis of the internal structure of these constructions seems to show that the cartographic map of CP must be enriched with syntactic positions. This has led me to propose a derivation for each specific construction under the cartographic approach, determining a position for their wh-operators. The conclusions are: sentential wh-exclamatives are factive, derived via movement, and the evidence found in the data led me to propose the existence of a functional projection – ExclP – supposed to host displaced wh-elements and to be responsible for the activation of the illocutionary force of the sentence. The proposal organized here also predicts the existence of Topic positions within ForceP, contrary to what is stated in Benincà (2001).

Keywords: exclamatives, wh-exclamatives, CP in Brazilian Portuguese, cartography.

RESUMO

O objetivo principal desta tese foi realizar a análise sintática das sentenças exclamativas-wh no português brasileiro (PB) para prover uma descrição detalhada dessas estruturas, contribuindo para a teoria da gramática. A base para a pesquisa foi a teoria gerativa dentro de uma perspectiva minimalista (CHOMSKY, 1995 e trabalhos seguintes), sobretudo a teoria de checagem, assim como a abordagem cartográfica para a sintaxe (ver RIZZI, 1997, 2015; RIZZI E CINQUE, 2016; RIZZI E BOCCI, 2017). Sentenças-wh exclamativas são estruturas derivadas via movimento de um sintagma-wh para a periferia esquerda (cf. BENINCÀ, 2001; ZANUTTINI E PORTNER, 2003; CASTROVIEJO, 2016; SEBASTIAN, 2017) e que exibem força ilocucionária de declarações exclamativas, as quais expressam ênfase, surpresa e grau extremo (cf. ZENDRON DA CUNHA, 2016). A análise da estrutura interna dessas construções parece mostrar que o mapa cartográfico do CP deve ser enriquecido com posições sintáticas. Isso nos fez propor uma derivação para cada construção específica a partir da abordagem cartográfica, determinando a posição de seus sintagmas-wh. Concluí que exclamativas-wh sentenciais são factivas, derivadas via movimento, e as evidências nos dados nos levam a propor aqui a existência de uma projeção funcional ExclP, que se supõe hospedar elementos-wh movidos e sobre o qual recai a função de ativar a força ilocucionária exclamativa. Nossa proposta ainda prevê posições de tópico disponíveis em ForceP, contrariamente ao que propõe Benincà (2001).

Palavras-chave: exclamativas, exclamativas-wh, CP no português brasileiro, cartografia.

“You have two choices, you can say, 'I'm a pessimist, nothing's going to work, I'm giving up, I'll help ensure the worst can happen'. Or, you can grasp onto the opportunities that do exist, the rays of hope that exist and say, 'Well, maybe we can make it a better world'. It's not much of a choice”.

Noam Chomsky

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FOREWORD

The study of language has a very long tradition. One could cite Panini as one of the first grammarians who saw language as a system that could be submitted to a formal analysis. Other works have appeared throughout the course of human history, such as the *Port-Royal Grammar* from 1660 and the widely known *Course in General Linguistics* by Ferdinand Saussure (published posthumously in 1916). These analyses were descriptive, their focus being the manifestation of language as it is spoken by its native speakers on a daily basis. Other works were more concerned with prescription, such as the several grammars by Rocha Lima and Evanildo Bechara that have been influencing the written form of Brazilian Portuguese for some decades now.

Perhaps the most important and comprehensive theory of language devised so far is Generative Grammar. It was born from Noam Chomsky's book *Syntactic Structures* (1957). After this seminal work, the field grew rapidly and has gone through several changes in the course of 60 years.

The first model consisted of protosentences originating other sentences. Morphology was integrated into syntax, creating a morphosyntactic model. Phonology applied after the initial derivation was finished only to make the product producible by the phonetic apparatus.

The field continued to develop and, after Chomsky (1981), it went through a phase mostly called GB (Government and Binding). GB proposed that language is organized in independent but interacting modules, each responsible for a specific task. These modules were studied separately, and a specific theory was developed for each of them. For instance, Case module was studied by Case theory; X-bar module, by X-bar theory, etc. Government and binding operations were responsible for connecting and governing all these separate modules.

At this time, the P&P (Principles and Parameters) model came into existence under GB. This model is a framework in which the syntax of language is described as made of universal principles that are common to all languages and of specific parameters specific to particular languages. These parameters are instances of the principles and they offer different grammatical options depending on the language. Thus, when a child learns a new language, he or she only needs to receive input from that language and their brain will automatically turn on the correct parameters for that particular language. This resulted in a better language acquisition theory because finally there was a more constrained grammar that could be applied to a larger number of languages. Later the phase called GB had to be changed due to some redundancies and

unnecessary complexities, but most of its core ideas remained. Its most important aspect, the idea of principles and parameters, remained unchanged.

In order to make generative theory simpler, Chomsky and other generative linguists decided to start constraining and simplifying the theory more. They believed that an ideal theory would explain more with less. From this way of thinking, *The Minimalist Program* (1995) was born. The Minimalist Program is not a theory but a set of guidelines that aims to reduce the number of principles and rules for deriving sentences. The ultimate goal is to make language theory as simple as it can be. This is the current phase of the theory (GUIMARÃES, 2017).

Even though this new phase has borne out many new explanations and assumptions, it still shares with its predecessors several underlying factual assumptions, as Chomsky (1995, p.2) writes:

There is a component of the human mind/brain dedicated to language — the language faculty — interacting with other systems [...] and the language faculty has at least two components: a cognitive system that stores information, and performance systems that access that information and use it in various ways.

In sum, the study of language has had many views and approaches, Generative Linguistics being the most successful one in my opinion. This is so because of its capability of explaining data in a scientific manner: one can devise and test hypotheses just like a physicist can do in order to derive laws of the natural world. It is, therefore, the theory of choice of this thesis.

Within the framework of Principles & Parameters, the Cartographic Approach or simply Cartography, which is the approach I will be working with here, has made an impression due to its descriptive power on analyzing specific characteristics of human languages.

The aim of cartography is to draw detailed maps of syntactic configurations. Its focus is the study of functional categories, especially their syntactic position. The main point that Cartography sustains that syntactic structures are uniform, simple, and both necessary and sufficient to structurally represent the functional information relevant for semantic and pragmatic interpretation. Its operations are driven by criteria and by the feature-checking involved to satisfy these criteria. Even though the cartographic project is situated within the current phase of Generative Grammar (namely the Minimalist enterprise), it has some divergences with the Minimalism Program, as I will explain later. This field has been intensely inspired by comparative syntax (SHLONSKY, 2010).

Comparative syntax is an area of great importance for Generative Grammar because it considers languages to be very similar. Though classic works by authors such as linguists

Martin Joos, William Dwight Whitney, and Edward Sapir, tended to propose that languages could differ from one another indefinitely, this idea contradicts the current beliefs of Generative Grammar (CHOMSKY, 1995) of a Universal Grammar and uniform derivation for syntactic structures across human languages.

Hence, presenting evidence against the idea of unrestrained variation across languages is important because it is necessary to support a viable theory of Universal Grammar (UG) as an innate and hardwired apparatus into the human brain. If UG is innate to humans, it is a constrained system due to biological limitations. Therefore, unrestrained variation is unwanted. Thus, showing that languages are in fact very similar would be a landmark for Generative Grammar. I believe Cartography seems to be a promising path to prove this assumption. Shlonsky (2010) claims that Cartography is inspired by and contributes to research in comparative syntax and typology, adhering to the view that syntactic structures are uniform, locally simple and both necessary and sufficient to structurally represent the grammatical or functional information relevant for semantic and pragmatic interpretation.

In this dissertation, I intend to show how some constructions of Brazilian Portuguese provide convincing evidence to propose that the CP area is richer than stated so far. Therefore, by providing evidence to enrich the cartographic map, the present work would also be making progress in the broader unsolved question of whether language is innate.

Within this framework of cartography, I intend to analyze exclamative structures and structures containing both an exclamative and a relative clause.

Exclamatives are emphatic utterances that usually express high degree and factivity. High degree is the placement of the object of exclamation on the top of a scale, as in the sentence below.

(1) How expensive this wine is! (VILLALBA, 2008, p.4)

With (1), the intention of the speaker was to express that the wine is extremely expensive, i.e., expensive to an extreme degree.

Factivity is related to the possibility of exclamative sentences to presuppose the truth of what is being stated. This means that they are considered a fact. Take for instance the sentences below, where the adverb *very* and the wh-word *how* make these embedded sentences unmistakably exclamative (particularly considering (2)).

(2) It's amazing **how very expensive this wine is.**

(3) *I asked **how very expensive this wine was**.

(VILLALBA, 2008, p.11)

The ungrammaticality of (3) stems from the conflict between an exclamative construction, which presupposes the truth of the proposition it denotes, and the predicate *ask*, which presupposes ignorance concerning the validity of the proposition denoted by its complement. As a result, sentence (3) is ungrammatical. Sentence (2), on the other hand, is fine because the adjective *amazing* does not contradict the idea exposed in the exclamative sentence. (VILLALBA, 2008).

According to Sebastián (2017), there are many types of exclamatives, such as wh-exclamatives, verb-initial exclamatives, elliptical exclamatives among others, but there is no general agreement on the constructions to which the term “exclamative” refers. However, a type that is widely considered to be exclamative is wh-exclamatives.

In this thesis, I will explore this type of exclamatives in Brazilian Portuguese (henceforth BP). Wh-exclamatives from other languages will also be contrastively analyzed. The sentence in (4) is an example of a wh-exclamative in English:

(4) How beautiful his wife is!

(ELLIOT, 1974, p. 233)

A remarkable feature of this construction type in English is the presence of a wh-word, such as *what* and *how*.

The following constructions are examples of wh-exclamatives in BP.

(5) a. *Que* livro que ela leu!
‘what book that she read’

b. *Que* rápido que ela leu!
‘how fast that she read’

c. *Como* ela leu rápido!
‘how she read fast’

d. *Quanto* livro que você comprou!
‘how (many) book that you bought’

(ZENDRON DA CUNHA, 2012, p. 32 and 33)

The wh-words *que*, *quanto* and *como* define these constructions as wh-exclamatives in BP.

In this thesis, I will also explore relative sentences that appear together with an exclamative in the utterance, such as (8) below. However, before doing that, I will give an overview of the structures called relative.

Many works have approached relative structures, such as Smith (1964), Vergnaud (1974), Chomsky (1977), and Kayne (1994). Chomsky (1977) explains that their derivation occurs through wh-movement and adjunction to the NP they modify. In contrast, the other authors believe that there is a strict relation between the relative clause and the determiner that selects the relativized element as its complement (MEDEIROS JUNIOR, 2014).

Relative sentences have long been understood as subordinate clauses that have a relative pronoun in their left periphery. This concept changed later, with some authors assuming that the complementizer is located in C^0 .

Usually, relatives modify an NP that precedes them, but they can also modify a whole clause. In addition, the relativized element is called a pivot. The pivot is an element that functions as a bridge between the matrix and the relative clause. It satisfies syntactic demands from the predicate of the matrix clause and plays a role in the subordinate (relative) clause (DE VRIES, 2002; MEDEIROS JUNIOR, 2014). The following sentences are relatives. The pivot is in bold.

(6) Jack never reads **books** I recommend to him (DE VRIES, 2002, p.1)

(7) Eu vi a **menina**_i que você mencionou \emptyset _i.
'I saw the girl that you mentioned \emptyset _i' (MEDEIROS JUNIOR, 2014, p. 26)

The words *books* and *menina* have a syntactic and semantic role in both sentences: They are the direct object of the verbs *reads* and *vi* and of the verbs *recommend* and *mencionou*. This is why they are called a pivot.

Another type of construction I will be exploring in this thesis is the one containing both an exclamative and a relative clause. The sentence below from BP is an example of this kind.

(8) Que linda casa (Excl) a casa que você comprou (Rel)!
'what a beautiful house the house that you bought'

This utterance contains both an exclamative in the leftmost position and a relative following it. This fact is very interesting considering the cartographic map of CP.

In the module of language called X-bar theory, there are three main projections. One projection called VP hosts content elements. In fact, these content elements project VP. Functional elements project IP and CP. CP is the projection hosting the complementizer. The complementizer is a word used to introduce subordinate sentences and to connect the clause with discourse or a higher structure (RIZZI, 1997).

The idea of CP was born under the framework of GB, but later it underwent some changes, especially those proposed by cartographic authors in the mid-1990s. One of them was Rizzi (1997), who proposed that CP should be split into many projections. He devised a map at the time that contained the new structure for CP. This map is found below in (9).

(9) [CP [Force [Top* [Foc [Top* [Fin [IP ...]]]]]]] (RIZZI, 1997, p.18)

Later, other projections were added to the map resulting in the structure below.

(10) [Force [Top* [Int [Top* [Foc [Top* [Mod [Top* [Qemb [Fin [IP]]]]]]]]]]]]

(RIZZI and BOCCI, 2017, p.9)

In chapter 1, the motivation for proposing these maps will be explained. For now, it suffices to understand that, in this dissertation, I will base my analyses on the map in (10). I will show how the sentential type in (8) shows evidence that this map should be enriched. This is the main topic of the present work. In addition to this proposal, the placement of Hanging Topics and Left Dislocated elements in BP will be explored. I will show the analysis by Benincà (2001) for these elements in Italian and see how it applies to BP.

I will also approach wh-exclamatives that are “shorter” than the ones in (4) and (5). I will call them non-sentential wh-exclamatives. The reader will find examples of dislocated elements and non-sentential wh-exclamatives in (11) and (12), respectively.

(11) A casa que você comprou, que linda!
'the house that you bought, how beautiful'

(12) Que lindo esse carro!
'how beautiful this car'

In sum, all the aforementioned constructions will be explored and explanations for them will be constructed under the theory of Generative Grammar, with Cartography as the leading model of analysis.

CHAPTER 1

INTRODUCTION

1. Introduction

In this chapter, I present a general discussion about exclamatives, as well as an introduction to the point of this dissertation, i.e., sentential *wh*-exclamatives, along with an overview of the theory that serves as a framework for the analysis I aim to carry out. The chapter also presents the problems and the core discussion I propose to implement in this dissertation.

1.1 What are exclamatives?

In the theory of generative syntax, exclamatives are generally considered a sentence type that expresses surprise about something the speaker judges to be a fact (cf. LIPTAK, 2005). However, such a definition does not even come close to defining the syntactic, semantic and pragmatic complexities that exclamatives present. In fact, this array of complexities is what makes them so hard to investigate (cf. BOSQUE, 2017).

In the semantic-pragmatic view, exclamatives are regarded as speech acts. Because of that, they have illocutionary force, lack truth values and are exclusively attributed to the speaker (cf. BOSQUE, 2017). Most authors regard this speech act as a manifestation of surprise (cf. ELLIOT, 1974; CASTROVIEJO, 2006). Albeit true, there is evidence to believe they are more than that. According to Bosque (2017), surprise requires counter-expectation, and this is not always the case. For instance, sentence (1) below is an exclamation; however, it does not have to be uttered only due to counter-expectation.

(1) Que bela mañana!
'what a beautiful morning!' (BOSQUE, 2017)

Nonetheless, it is an emotional reaction, which may be characterized as expressing excitement. Thus, surprise seems to be only one of the many emotional reactions that exclamatives express. Other authors claim that emotional reactions, such as disappointment, frustration, excitement, enthusiasm, and amazement are also expressed by this construction type. In addition, there is an extended paradigm of grammatical structures to express

exclamation (cf. BOSQUE, 2017). Zendron da Cunha (2016) illustrates this fact by proposing that in BP there are at least three types of exclamatives, as demonstrated in (2).

- (2) a. Que alto que ele é! (Wh-exclamative)
‘how tall that he is!’
- b. Inteligente esse menino! (Free Small Clause)
‘smart this boy!’
- c. O Carlos é alto! (Illocutionary exclamative)
‘The Carlos is tall!’

(ZENDRON DA CUNHA, 2016, p. 34-36)

The author proposes this distinction based on the assumption that there is a difference between illocutionary force and sentence type, a matter we will tackle in the next sections of this thesis. For now, it suffices to know that for Zendron da Cunha (2016) wh-exclamatives are a sentential type, whereas the other two only have the illocutionary force of exclamation. Nevertheless, what matters at this stage is that there seems to be an extended paradigm of grammatical structures to express exclamation, as stated before. Hence, in this master’s thesis I had to limit the scope of inquiry to the sentential subtype identified as wh-exclamative.

1.2 What are wh-exclamatives?

In this section, my aim is not to give a comprehensive account, but to show some of what I deem to be the major aspects of wh-exclamatives.

The first author to give an account of wh-exclamatives in generative syntax was Elliot (1974)¹, who observed some aspects of this kind of construction in English, such as its similarity with interrogatives. His proposal was that wh-exclamatives were not a subtype of interrogatives, as it was believed at the time. To support his claim, he demonstrated that questions allowed the words “any” (3), “ever” (4), and “whether” (5), while wh-exclamatives did not (p. 234-240).

- (3) a. How does Joe save **any** money?
b. *How Joe saves **any** money!
- (4) a. What did you **ever** do for me?
b. *What you **ever** did for me!

¹ Although the title of his paper is “Toward a Grammar of Exclamations”, Elliot analyzes almost exclusively ‘absolute exclamations’, which we call wh-exclamatives here.

- (5) a. It's unknown **whether** Bill will be here
b. *It's incredible **whether** Bill will be here!

Furthermore, the author claimed that wh-exclamatives in English could not be negated and could only be embedded under factive verbs: (6) and (7), respectively.

- (6) a' I remember what a tall man he is!
b' *I don't remember what a tall man he is! (ELLIOT, 1974, p. 239)

- (7) a' I know how very tall Bill is!
b' * I claim how very tall Bill is! (ELLIOT, 1974, p. 239)

The matrix sentences *I don't remember* and *I claim* are not factive because they do not presuppose the truth of the embedded sentences.

Furthermore, he observed that main interrogatives showed subject-auxiliary inversion, while none took place in wh-exclamatives: (8) and (9), respectively.

- (8) Does Johnny want his dinner now?
(9) How beautiful his wife is!² (ELLIOT, 1974, p. 234)

Another remark by Elliot worth mentioning is that unlike wh-exclamatives, embedded wh-interrogatives (10) do not show subject-auxiliary inversion in English.

- (10) I wonder whether Johnny wants his dinner now (ELLIOT, 1974, p. 233)

Later, Zanuttini and Portner (2003) adopted Elliot's remarks and used them to reinforce their proposal for the derivation of this type of construction. Based on Elliot's observation that wh-exclamatives can only be embedded under factive verbs, they proposed that its structure should contain two CP layers, one with an exclamative phrase in its Spec and the other with a

² Elliot (1974) observes that some sentences with subject-auxiliary inversion are possible, but they sound archaic, e.g. "how beautiful is his wife!" Furthermore, other types are quite ungrammatical, e.g. "*what lovely teeth do you have, my dear!"

factive operator. The factive operator is what accounts for the impossibility of embedding it under non-factive verbs.

Amaral's (2009) analysis of European Portuguese (EP) wh-exclamatives show that word-order is important for the correct interpretation of the sentence (p.14).

- (11) a. O João é lindo.
'John is gorgeous' (Declarative)
- (12) O João é lindo! (Exclamative)
'John is gorgeous!'
- (13) Quem convidaste tu para a festa?! (Interrogative)
'Who invited you to the party?'
'Who did you invite to the party?'
- (14) Quem tu convidaste para a festa! (Exclamative)
'Who you invited to the party!'

The author argues that in (11) and (12) prosody creates a clear distinction between the declarative and the exclamative sentences. However, the prosodic strategy is not available as a tool for distinguishing (13) from (14). In these cases, the speaker must rely on a structural cue to determine the sentence type, which is the presence vs. the absence of subject-verb inversion.

Moreover, in EP and BP the wh-word of interrogatives may remain in situ, whereas that of wh-exclamatives cannot.

- (15) A Maria comprou **o quê**?³
'Mary bought what?'
- (16) **O que** a Maria comprou?
'What Mary bought?1
- (17) Que livro bom a Maria comprou!
'what book good Mary bought!'
- (18) *A Maria comprou que livro bom!
'Mary bought that book good'

³ However, one must bear in mind that the different positions produce different semantic interpretations. See (PIRES and TAYLOR, 2007).

All these remarks demonstrate so far that the connection between syntax and discourse/pragmatics advocated by cartography seems to be on the right track because syntactic positions matter for interpretation in the three languages we have just presented: BP, EP and English.

Perhaps the most salient characteristic of this sentence type is wh-movement. Authors, such as Radford (2004), Sebastián (2017), and Castroviejo (2006) analyze them as being generated by the displacement of the wh-operator from its base position to the left periphery of the clause. Castroviejo (2006), however, assumes that the wh-operator must contain a degree phrase at the left periphery and must include a wh-feature. For this author, the wh-word can contain (21) or be (22) the degree operator.

(19) [CP [QP what fun [C ~~wh~~-EPP-[TP we [T have [VP had ~~what fun~~]]]]]]

(RADFORD, 2004, p.115)

(20) [CP [DP What a big house_i] [TP She [T [+past]_x [VP t_j [V had_x [DP t_i]]]]]]

(SEBASTIÁN, 2017, p.12)

(21) [DP [D⁰ [+wh] quina [NP [N película[DegP[Deg⁰ tán[AP entretinguda]]]]]]] que vam veure a l'avió

‘what an entertaining movie we saw on the plane’

(22) [DegP [Deg⁰ [+wh] Que [AP entretinguda!]] que va ser la película
‘how entertaining the movie was’

(CASTROVIEJO, 2006, p.40)

In sum, wh-exclamatives comprise a multitude of characteristics, and it is my goal to scrutinize their structure, focusing on syntactic aspects, especially the position of their constituents and the features that guide their derivation. In my view, the best approach for accomplishing this task is the cartographic approach.

1.3 Problems and research issues

A detailed analysis of wh-exclamative sentences in BP might reveal that there are several different constructions of this type, as the data below show. Let us first consider (23), (24), and (25). Although similar, these sentences seem to present different syntactic behavior:

- (23) a. Que lindo carro **que** você comprou!
‘what beautiful car (that) you bought’
- b. Que lindo carro você comprou!
‘what beautiful car you bought’!
- (24) a. Que legal o **que** você fez!
‘how nice what you did!’
- b. *Que legal o você fez!
‘How nice the you did!’
- (25) a. Que lindo (carro) o (carro) **que** você comprou!
‘what beautiful car the (car) that you bought’
- b. *‘Que lindo (carro) o (carro) você comprou!’
‘what beautiful car the (car) you bought!’

In (23), the *que* morpheme can be omitted, whereas in (24) and (25) it cannot, indicating that sentences such as (23) are different from those of types (24) and (25). This is an interesting observation, which leads to the conclusion that the analysis of these sentences should reveal structural differences between them.

First, let us compare (23) to (24). In (24), *o* and *que* form a grammaticalized compound [o que] in the Spec of a CP projection, whereas in (23) things appear to be a little different. (23) contains an exclamative CP, and *que* seems to be its head, (C⁰). Sentence (24), on the other hand, contains an exclamative projection followed by a relative one (an exclamative followed by a free relative).

If we compare (24) to (25), other differences can be observed. In (24), the DP *o que* seems to be in the same syntactic configuration as the DP *o carro* in (25). And in (25), we claim that “que” is the C⁰ of the relative sentence. Thus, (24) and (25) have roughly the same structure. However, (24) contains a free relative and (25) contains a headed relative.

Hence, we have the following scenario:

- (23) Que lindo carro **que** _(EP)⁴ você comprou!
- (24) Que legal _(EP) o **que** (que) _(RP)⁵ você fez!
- (25) Que lindo (carro) _(EP) o (carro) **que** _(RP) você comprou!

By observing this, I will try to determine why the omission of the “que” morpheme results in the ungrammaticality of sentences (24b)-(25b), while (23b) remains grammatical. In (23), the morpheme (in bold) seems to be the head of the exclamative projection, that is, it occupies the C⁰ position. In BP, a null C⁰ in exclamatives seems to be possible, thus the sentence remains grammatical. In (24), the *que* morpheme is part of the DP *o que* in the Spec of the relative. The lack of *que* that is part of the DP results in the ungrammaticality of the construction because the relative sentence is now degenerated. In (25), the *que* morpheme is the C⁰ of the headed relative clause, and a null C⁰ is not allowed in BP headed relatives, whereas it is not obligatory (and usually not realized) in headless relatives, like (24) (cf. MEDEIROS JUNIOR 2005, 2006, 2014).

Another interesting remark is that it seems that the exclamative projection must always precede the relative projection (see (26) below). This structural constraint may be explained in cartographic terms, as we will claim later.

- (26) * O que você fez _(RP) que legal _(EP)!
 ‘what you did how nice’

In sum, what can be inferred from the analysis above is that in (23) only an exclamative projection is present, whereas in (24)-(25), there is an exclamative and a relative projection. Thus, (23) is significantly different from (24)-(25), although there are differences between (24)-(25) as well. In addition, there is a strict order between the exclamative and the relative projection, the former always preceding the latter, as shown in (26).

Based on these preliminary observations, I wish to further elaborate the present analysis by asking the following questions:

1. What does the structure of (23), (24), and (25) tell us about the Force node in Brazilian Portuguese?

⁴ EP (Exclamative projection).

⁵ RP (Relative Projection)

2. In addition, what is the difference between (24) and (25)?
3. Why is the order relative+exclamative in (26) not possible?

In this dissertation, I aim to verify whether these first remarks about the structure of (23)-(25) are on the right track and reanalyze them in cartographic terms.

Another type of wh-exclamative can be seen in (27) below. This type of exclamative exhibits a predicate, which is the adjective, and a subject, which is the noun (cf. SIBALDO, 2015). Although these utterances do not contain a verb in their structure, they are wh-exclamatives because they have the illocutionary force of exclamation and a wh-word in their periphery. Nevertheless, they are different from (23)-(25), as we will try to demonstrate below.

In comparison to (23), the difference is the absence of the verb; (23) exhibits a verb, whereas (27) does not. In relation to (24)-(25), the differences are more consistent. Utterances (24)-(25) not only exhibit a verb in their structure, like (23), but seem to contain a relative projection as well; hence, their contrast with (27) is greater.

(27) a. Que lindo esse carro!
 ‘How beautiful this car!’

It is interesting to observe that, although this is a wh-exclamative, one cannot insert the *que* morpheme right after the wh-operator, as (27’) shows, in contrast to what occurs in sentential wh-exclamatives, such as (23). This is odd, since the other wh-exclamatives are grammatical with *que*, which we claim to be the C⁰ of the exclamative clause. Moreover, as Miotto (2001) claims, the overt C⁰ exerts a strong attraction over items with the same features. Thus, the natural assumption is that the absence, not the presence, of the complementizer would be the cause of ungrammaticality, contrary to fact. This reveals that (27) is a different kind of construction, with its structure and derivation to be determined in this research

(27)’ *Que lindo **que** esse carro!
 ‘How beautiful that this car!’

In addition, it should be noticed that the ungrammaticality of (27) with the overt C⁰ is not due to the order of the predicate and subject in relation to the wh-word, since both orders (wh+AP, wh+NP) are ungrammatical.

Therefore, we pose a question whose answer will also be pursued in the present study:

4. Why is it that the *que* morpheme in (27') is not allowed?

Finally, sentences such as (28) are examples of another type of construction. They are not only simple exclamative structures, but contain a topicalized constituent as well. Here the wh-exclamative phrases refer to the topicalized phrases, which are the relative sentences (“*que vocês compraram*”, “*que ele conheceu*”).

- (28) a. A casa que vocês compraram_(topic), que linda!
‘the house that you bought, how beautiful!’
- b. A menina que ele conheceu_(topic), que encantadora!
‘the girl that he met, how enchanting!’

As we noticed in (26) above, the relative projection may not precede the exclamative projection; however, in (28) it does. Although this seems to contradict what we have claimed about (26), it does not. If one looks carefully, one will notice that the structures in (28) are different from the ones in (26) due to the presence of a topicalized constituent in the former. In (28), the relative projection is topicalized, while there are no topics in (26). Notice that without a pause (signalized by a comma in written language) indicating topicalization, the sentence becomes ungrammatical:

(28') * A casa que vocês compraram que linda!

A further look at (28) unveils another issue: according to Rizzi (1997) and Rizzi and Bocci (2017), Force should be the edge of the sentence, bearing no material over it, contrary to what happens in (28), since here the sentences have illocutionary Force of exclamation but contain a topic on the left edge. This observation has led us to pose the following question:

5. Is the topicalized constituent located inside ForceP, or is it outside (cf. BENINCÀ, 2001)?

In sum, all the aforementioned sentences are examples of wh-exclamatives; nevertheless,

they exhibit different syntactic behaviors. Hence, it is my concern here to provide an explanation for their different behaviors under the cartographic approach. My initial hypothesis is that these sentences will be mapped differently under a cartographic analysis, possibly resulting in more layers of structure within CP.

1.4 Objectives

In the previous section, I made some observations regarding the structure of several types of wh-exclamatives. These remarks have led me to pose five questions that will be pursued in this research project. The objectives below are aligned with these questions:

My first goal is to answer why the omission of the C^0 (or null C^0) in (23) is grammatical, whereas it is not in (24)-(25). In addition, I want to shed some light on the architecture of sentences (23-25) in order to determine the differences I pointed out before.

I will also investigate the structural organization of structures in which exclamatives and relatives cooccur. In addition, I will analyze the sentences in (27)⁶, particularly aiming to explain why the presence of the overt “que” is not allowed.

Finally, I will investigate where the topicalized relative projection in (28) is located, and what it tells us about the configuration of CP.

2. Research justification

A great deal of research in the past decades has shown that the internal structure of the clause is highly articulated. This type of research is best embodied in the cartographic approach, which seeks to explore and create structural maps that represent the complexity of these structures (cf. RIZZI AND CINQUE, 2016). This endeavor has returned a very fruitful work. Nevertheless, we believe that the sentences we present here provide evidence to propose that the map of the CP layer currently assumed is still in need of further additions.

We base this assertion on the understanding that wh-exclamatives have not been deeply studied under the cartographic approach, especially in BP⁷, and the constructions mentioned here seem to indicate that more structure within CP is required to account for them. Thus, there

⁶The sentences of type (28) were analyzed in Sibaldo (2015). However, the author does not tackle the problem of the prohibition of an overt “que” morpheme (or C^0) in these sentences.

⁷ However, some studies have approached this topic (cf. AMARAL, 2009; HONDA, 2011; ZENDRON DA CUNHA, 2016; RIZZI AND BOCCI, 2017).

is a need to advance more specific and appropriate analyses of sentential wh-exclamatives and their derivation, given the fact that the example sentences (23)-(28) show that there are many types of wh-exclamative constructions, with different syntactic behaviors⁸.

Hence, my goal is to provide an as thorough as possible analysis of the wh-exclamative constructions in BP, aiming not only to give a descriptive contribution to the literature on wh-exclamatives but also to advance the theory of generative syntax by providing evidence for more structure in the CP system.

3. Theoretical background

3.1 The clause structure

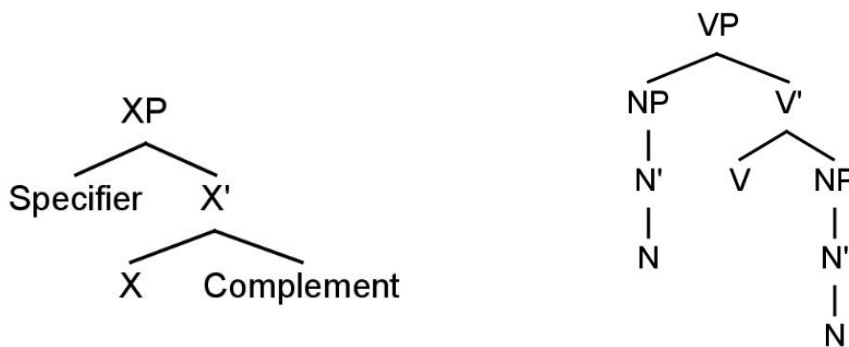
A theory of language must present a format for possible human languages. This format bears the form of X-bar theory, which was developed as a result of the proposals by Chomsky (1970). This theory studies the syntactic representation that phrases and clauses exhibit. The core assumption is that both content (e.g main verbs) and functional (e.g complementizer) heads selected from the lexicon project phrasal categories in a uniform format called the X-bar scheme. The basic relations are specifier-head and head-complement, both being local, although the latter is meant to be even “more local” (cf. CHOMSKY, 1995).

X stands for a variable that can be replaced by any lexical or functional category. The idea that every head projects a phrase is captured in the following way: a phrase is labeled according to the category of the head. Furthermore, there is a level where complements and adjuncts are hosted, which is called X'. A complement that combines with X forms X'. For instance, a head V combines with an NP complement and projects the V' [V NP]. Then, the V' combines with a specifier to project VP. This schema can be represented either by brackets or syntactic “trees”, as the following examples show (cf. HAEGEMAN, 1994).

Brackets: [XP Specifier [X' [X Complement]]] / [VP NP [V' [V NP]]]

Trees:

⁸ For analyses of (27) and (28), see Sibaldo (2015) and Benincá (2001), respectively. The analysis in Benincá (2001) is for Italian.



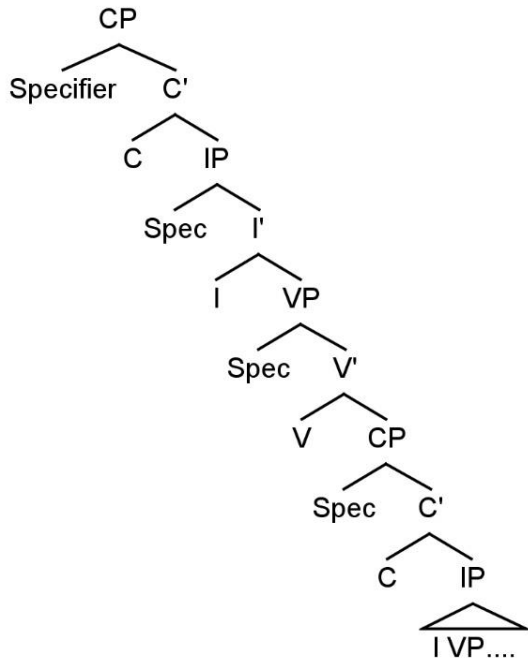
The content elements project VP. The functional elements project IP and CP. VP is embedded under IP, which is embedded under CP. The whole structure is CP-IP-VP⁹. The projection we are most concerned with here is CP, as we are dealing with A'-movement, i.e., movement to non-argument positions. CP has the following structure:

[_{CP} [_{C'} [_C IP]]].

The C head is the position of the complementizer, which is the element responsible for relating the matrix clause with an embedded clause. For instance, in the sentence “Mary said that she likes John” the complementizer is “that”. It relates the embedded sentence “she likes John” with the matrix “Mary said”. In addition, the complementizer is responsible for relating the clause to discourse. Thus, every sentence has a CP headed by a C, even when the element in C is not realized overtly (cf. MIOTO, 2001).

Considering all the facts stated thus far, the structure we reach for a full sentence under X-bar theory exhibits the following configuration:

⁹ Later in this paper, we will try to expose arguments that advocate for more structure.



3.2 Select, Merge and Move

We have assumed that every clause follows the X-bar structure. However, for an object to have such a structure, it must be built by the computational system (or syntax). In a parsimonious approach to language, syntax should utilize only simple and few operations to accomplish this task. The basic operations assumed are *Select*, *Merge* and *Move* (cf. CHOMSKY, 1995).

Select is a procedure that selects lexical items from a numeration in the lexicon and introduces them into the derivation. Then, the second procedure, *Merge*, takes a pair of syntactic objects and merges them, creating a new combined syntactic object. Finally, the third procedure (move) displaces a syntactic object from a certain position to a target position. In the target position, it will fill an empty place or merge with another element, forming a new syntactic object. *Move* only occurs if there is a requirement for feature checking. These procedures are depicted below:

Numeration: {Who, did, Mary, see} → Select: Mary, did see, who →

Merge: see + who= [see who], did+ Mary= [did Mary] = [did Mary see who]

Here we do not have an interrogative sentence yet. For this to be possible, the wh-word must be displaced to the left periphery of the sentence so it bears scope over the whole clause. Move is responsible for its displacement.

Move: [who did Mary see ~~who~~]

The word “who” was crossed out to mean that it used to occupy that position before movement occurred. According to the theory, however, it leaves a copy or a trace (depending on the phase of the program) at the base position (cf. CHOMSKY AND LASNIK, 1977; CHOMSKY, 1995; HORNSTEIN, GROHMANN, NUNES, 2004). Thus, the crossed-out “who” should be interpreted as a copy (or trace) of the other “who” in the left periphery of the clause.

3.3 The Principles and Parameters (P&P) Framework

The X-bar theory described above is part of a larger theoretical framework/approach called The Principles and Parameter Framework, which contains specific theories for each aspect of language. For instance, a Case theory accounts for issues related to abstract and morphological Case; a theta theory, for semantic roles; a movement theory, for displacement of constituents, etc. The P&P framework was developed by Chomsky (1981) and subsequent works by others as a solution to a problem that emerged in the context of earlier generative rules. The issue was a tension between explanatory and descriptive adequacy.

One of the generative linguist’s goals is to provide a grammar for each human language that is descriptively accurate, i.e., one that can present the rules of sentence formation of the language. Despite the fact that this does not seem very complicated at first, it immediately becomes a challenge when it is confronted with another goal in generative syntax, the one of providing explanatory adequacy. This is an important objective of the generative approach because generative linguists aim to explain how humans easily acquire natural languages given the impoverished empirical conditions in which this acquisition happens. The tension emerged due to the large number of rules that were required in order to correctly describe a given language as opposed to the desired simpler set of rules (or principles) necessary to explain how language acquisition occurs in the mind of children. If acquisition is a simple and unchallenging

process (as it is assumed to be), then the set of rules or principles governing human language ought to be simple, otherwise acquisition would be a slow and difficult process. Hence, it is necessary to describe this model in detail, but before explaining what this model is, I will present an explanation of what the generative view considers language to be.

According to Chomsky (1995), language is part of the natural world. It is a brain/mind faculty, more specifically an array of cognitive traits and capacities. One of its capacities is the generation of structural descriptions¹⁰ (SDs), each containing a complex of properties: semantic, syntactic and phonological. A structural description, in this sense, is a well-formed sentence. Any native speaker of a given language is able to generate an unbounded number of SDs.

Language has an **initial state**, which is genetically determined. After the initial state receives input from the external world, it reaches a **stable state**, which undergoes few subsequent changes, the exception being the acquisition of new lexical items. The initial state of language is called **Universal Grammar (UG)**, whereas the attained state is the grammar of a particular language. Therefore, a theory of language must be capable of determining the architecture of both states.

The P&P approach was proposed so that both states could be successfully explained under one unified theory of language. The basis of this approach are two fundamental assumptions that give the framework its name. One is that all languages contain the same set of linguistic principles and the other is that there are parameters determining variability among languages. The goal of attaining a descriptive and explanatory grammar is now possible because variability will be constrained by the parameters. Thus, the task of the child learning a language will simply be to set the parameters, as the fundamental principles are immutable and will be equal across every possible human language. We will clarify these assumptions below.

An example of a fundamental principle is that every sentence must have a subject even if it is not overt, i.e., even if this subject position is not lexically realized (filled by a null category, such as *pro*)¹¹. The question of whether the sentence will present an overt or null subject is a parametric matter, e.g., English usually requires an overt subject, but Italian allows a null pronoun to fill the subject position, as shown below:

(29) a. (Voi) state leggendo un libro

¹⁰ “A structural description of a sentence consists of a representation of the sentence on each linguistic level” (CHOMSKY, 1955, apud CHOMSKY, 1977, p.1)

¹¹ *pro* is a null subject. For further explanation, see Haegeman (1994).

‘You are reading a book’

b.*(You) are reading a book

(ALESSANDRO, 2014, p.1)

In the English sentence, the omission of the subject (you) is ungrammatical, whereas in Italian it is perfectly grammatical.

That being so, the task of the Italian-speaking child is to set the subject parameter as null, while the task of the English-speaking child is to set it as non-null. The possibility of a sentence not having a subject is not even “entertained” by the child, as the obligatory presence of a subject is a fundamental principle in his or her brain.

By adopting these assumptions, the task of acquiring a language becomes much easier than it was previously assumed to be in a model that understood acquisition as the accomplishment of the much harder task of learning a large number of construction-particular rules. In this new approach, these constructions remain only as taxonomic artifacts (cf. CHOMSKY, 1995).

In sum, the P&P framework posed a solution for a classical problem of generative syntax by presenting an alternative way of dealing with the tension that had been an issue in the field since its beginnings.

3.4 The Minimalist Program

3.4.1 Fundamental notions

The P&P framework stemmed from an understanding in the generative study of language that Universal Grammar ought to be simple. As Chomsky (1995) explains, there is good reason to believe that “principles of economy” are fundamental to the design of language. Hence, a natural development of the theory in the subsequent years would be to seek simpler analyses. This is exactly what happened in the 1990s when the Minimalist Program began to take shape. Chomsky (1995) set the base for developing a simple and elegant theory of human language, i.e., a “minimal account” of it. The result is that a minimalist program emerged with the goal of finding ways of understanding what constitutes a more natural and parsimonious account of language.

The Minimalist Program adopts the P&P framework and its concepts. The fundamental notion is that language resides in the brain. In Chomsky's terms, it is a faculty of the human mind. This faculty consists of two components: a lexicon and a computational system. The lexicon houses the lexical items that will feed the computational system. The computational system is roughly what other traditional linguistic theories call syntax. Syntax, in this sense, is responsible for using these lexical items to generate derivations of SDs.

Another fundamental notion is that language interacts with two performance systems, called articulatory-perceptual and conceptual-intentional. These are conceptually necessary levels, as it has been understood since the beginning of modern linguistics that the sign (in Saussure's terms) consists of a signifier and a signified, i.e., sound and meaning.

For language to interact with these systems, it must interface with them. Thus, Chomsky (1995) assumes there are two interfaces that provide instructions for each of these systems: the Phonetic Form (PF) and the Logical Form (LF), respectively. All grammatical linguistic expressions must "pass through" these systems to be pronounced and interpreted correctly.

A syntactic object must be constructed in such a way that it can be interpreted by the interfaces. If the interpretation is successful, the derivation *converges*; if it is not, it *crashes*. A proposal that has been widely adopted is that a minimal unit guides the construction of the object so that it can converge at both interfaces. This unit is called a feature. Features must be checked by a system called the checking system.

Checking of features as a derivational model was adopted in an earlier phase of Minimalism. The most recent phase of the program has abandoned the checking system. However, in this thesis, I will work with this system. I do so because Cartography works with features and criteria; therefore, if the proposals in this thesis are to work, the checking system as a derivational model must be used. Furthermore, I believe there is consistent evidence showing that the checking system is a valid derivational model.

3.4.2 Features

The idea of feature derives from earlier work in morphology and phonology. For example, distinct features distinguish /p/ and /b/ in English, allowing these phonemes to distinguish pairs of words, as in "pig" and "big". In generative syntax, they are considered formal properties of syntactic objects that determine how these objects behave with respect to syntactic operations (such as movement, agreement, and licensing) (cf. SVENONIUS, 2017). For example, the

feature [number] in the subject requires that the verb in a relation with it possesses the same type of feature so that both agree.

- (30) a. She_[3rd person singular] **is**_[3rd person singular]
b. *She_[3rd person singular] **are**_[3rd person plural]

In (31), one can observe two agreement operations: (31a) is a successful agreement case, whereas (31b) is not. (31b) is not acceptable because the features of the verb are different from those of the subject.

In a convergent derivation, both interfaces must be satisfied. The requirements at PF are of a phonological nature; thus, phonological (or morphophonological) features must be transferred to this interface for it to be satisfied. At LF, the features that matter are semantic and syntactic. If both interfaces are satisfied, we say that the computational system has built a legitimate syntactic object that has been fully interpreted by the interfaces, i.e., the derivation has converged.

Another theoretical assumption is the operation *Spell-Out*. At a certain moment during the derivation, the computational system employs *Spell-Out*, which is responsible for separating the structure relevant for phonetic interpretation from the structure that matters to semantic interpretation. The reason for proposing such an operation is that the structures feeding each interface are of a different nature, meaning they have different kinds of features, and the interfaces can only read features of a specific type. For instance, morphophonological features are required by PF, but not by LF.

Nevertheless, these structures share the same derivational process in the beginning because syntax is operating with lexical items retrieved from the lexicon and constructing SDs with them in the X-bar format. Therefore, at some point, a split must occur. We call this moment *Spell-Out*, which is when the computation holds off and some material is transferred to PF, and then once again to the first performance system, A-P.

In sum, features are “compressed” syntactic information that determine the operations involved in building an acceptable syntactic object, one that will be read by the interfaces.

3.4.3 Feature interpretability and movement

In order to be read by any of the interfaces, features must be interpretable, regardless of their type. It would be desirable that all features involved in a syntactic derivation were interpretable, but – due to less than clear reasons – they are not¹². It is assumed that functional heads bear uninterpretable features, whereas lexical items bear interpretable features (cf. CHOMSKY, 1995).

This poses an issue, as the uninterpretable features must be eliminated before reaching the interfaces, otherwise the derivation crashes. As a solution, Chomsky proposed a checking operation that triggers movement of content (lexical) elements to functional projections (*vP* IP and CP) to enter a checking relation with a functional head with matching features. The hypothesis is that the checking operation eliminates uninterpretable features: lexical items with interpretable features move to a position where they enter a checking relation with a functional head with uninterpretable features. After checking takes place, the uninterpretable features of the head are deleted and the lexical elements enter the interfaces, where they will receive their phonological and semantic interpretations.

Furthermore, there is a condition in syntax called the *Last Resort condition*, which is a guideline for following the principles of economy in a syntactic derivation. It states that movement is not optional, and it should occur only to satisfy an obligatory condition. Within the checking approach, the obligatory condition for movement is that uninterpretable features must be eliminated before reaching the interfaces. This imposition licenses the movement operation.

The example in (31) depicts the checking operation. [-] indicates uninterpretable features and [+] indicates interpretable features. Φ is the symbol for phi-features (features of person, number, gender, and Case).

(31) a. Mary loves John.

b. [TP [T -s{ ϕ -}] [VP Mary{ ϕ +} [V' love- John]]]

c. [TP Mary{ ϕ +} [T' -s{ ϕ -}][VP t [V' love- John]]]]

(HORNSTEIN; GROHMANN; NUNES, 2004)

¹²The reason why there are uninterpretable features is not well understood, but the checking mechanism may be applied regardless, as pointed out by Hornstein, Grohmann and Nunes (2004).

The derivation of this sentence starts with (31b). At this point, there are uninterpretable features in T. The derivation then proceeds as shown in (31c), where the DP “Mary” with interpretable features, which is inside the VP, raises to Spec, TP. In the specifier of TP, its features enter a checking relation with the uninterpretable features of T, causing the latter to be deleted. The Last Resort condition is respected, and the derivation is now convergent and ready to be transferred to the interfaces.

3.4.4 Criteria

Rizzi (2015) explains that syntax is driven by a mechanism based on criteria, which he calls the *criterial condition*¹³. For example, the Spec of a Q head must be filled with a wh-operator (e.g. who, what, which), otherwise, the sentence is ungrammatical (RIZZI, 2015, p. 315):

(32) *Which book Q should you read <which book>?

In (32), the wh-operator “which book” was displaced from that base position to the left periphery, more specifically to the specifier of CP. The same happens with a TOP head and the phrase “this book” below.

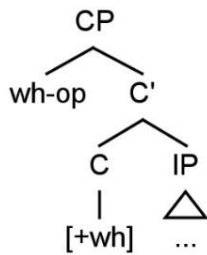
(33) This book TOP you should read <this book> (as soon as possible)

(RIZZI, 2015, p. 315)

The criterial condition expresses that a head with a given feature requires an operator in its specifier so that an interrogative sentence (or topic, etc) will be interpreted as interrogative at the appropriate interfaces (only LF in some cases). Hence, it demands a structural configuration such as (34) below:

¹³ According to Rizzi (2015), “The terms *criterion*, *criterial heads*, and so forth stem from the Wh Criterion of May 1985, Pesetsky 1982, Rizzi 1991 (later called Q Criterion), which was then generalized to a family of criteria (Top, Foc Criteria in Rizzi 1997, Neg Criterion in Haegeman and Zanuttini 1996, etc.)” (RIZZI, 2015, p.317).

(34)



This condition holds uniformly across all languages. This is true even for languages that lack overt syntactic wh-movement (e.g. Chinese, Japanese, etc). In these languages, the wh-operator must move in LF to satisfy the wh-criterion at this level. ECP and other locality effects related to LF corroborate the assumption of covert movement.

Sentence (35) below is an example of a violation of the criterial condition:

(35) *Who supposes [where_i [Mary went *t_i]]*

Here the verb “supposes” does not contain a [+wh] feature in C; hence, the displacement of the wh-word “where” turns the utterance ungrammatical.

The criterial system just presented relies heavily on the traditional feature approach. However, there are some differences between the latter and the former. The criteria have an interpretative import that determines the interpretation of the element bearing a certain type of feature and the elements with the same features that enter a relation with them. Thus, in the criterial approach, features cannot simply disappear from the derivation, as is the case in the traditional model, especially in Chomsky (1995). Hence, both systems attribute a fundamental role to features in syntax. Nonetheless, whereas minimalism focuses on the fact that movement is motivated by the need to check uninterpretable features and delete them from the computation, the criterial approach is concerned with the interpretability of features. This is why features are not deleted after the criterion is satisfied; on the contrary, they are transferred to the interfaces to guide the interpretation of the SDs.

The criterial relation works in the following way: a head with a feature, for instance a wh-feature (responsible for the interpretative import of questions), selects a phrase with a matching feature in its c-command domain and triggers its displacement to its Spec. When the

phrase is in a Spec-head configuration, the wh-criterion is satisfied; for instance, in the sentence “Who did you see?” (below), the wh-element “who” is generated as a complement of “see” and subsequently moves to a position higher in the structure, Spec of CP. This movement occurs in order to satisfy the wh-criterion; when this criterion is satisfied, the derivation converges at LF, as (36) below shows:

(36) [Who_i [_{+wh}] C_[+wh] did [IP you [I [VP V see t_i]]]]

At the interfaces, this sentence will be interpreted as an interrogative because the criterion responsible for determining an interrogative import is satisfied. Hence, the interfaces are left with no other option but to interpret it as a question.

On the other hand, a criterion might not be satisfied, as in (37) below, where there is a C head with a [_{+wh}] that is not in a Spec-head configuration with a wh-operator (what). When that occurs, the derivation crashes at the interfaces.

(37) *[CP C_[+wh] [IP Did you see what_[+wh]]]

One very important principle of Cartography is the “one feature, one head” principle (KAYNE, 2005), which states that each head hosts one feature and only one feature. Besides, each head projects only once. For instance, a relative head only hosts the relative feature and projects only the relative projection. This postulate is paramount to understanding the proposals that will be developed in chapter 3 of this thesis.

Despite the differences we mentioned between criteria and the traditional feature checking system, the criterial model also respects the Last Resort condition in the sense that movement must be triggered by the morphological requirements of a functional head.

Cartography derives from the model of syntactic operations roughly described above (criteria) and poses the question of whether parameters are formal properties of features. In the next sections, I will describe this model in further detail and give an account of how this led to the creation of syntactic “maps”.

3.4.5. The cartographic enterprise

Cartography is a research program within the P&P framework whose goal is to draw precise maps of syntactic configurations, which are assumed to hold universally, although some

parametric differences are allowed. The bulk of the research focuses on the study of functional categories and how they are distributed within the clausal structure. Some of its main contributions go to comparative syntax, since it relies heavily on comparative studies to determine if the syntactic maps are accurate. Finally, cartography promotes a theoretical discussion among many areas in linguistics that are usually separate, such as syntax, semantics, discourse, and information structure. (cf. SHLONSKY, 2010).

The guiding principle in cartography is that syntactic structures are uniform and sufficient to represent the functional information relevant for semantic and pragmatic interpretation. It is a manner of representing scope-discourse semantics by means of the syntactic structure (cf. SHLONSKY, 2010; RIZZI, 2015).

This approach is based on the criterial relation as a mechanism to guide derivations. According to it, all movements to the left periphery must be made to satisfy a criterion, thus no free preposing or adjunction is allowed, in accordance with the economical guideline (derived from Chomsky's principles of economy) in syntax that movement must occur only if necessary.

The adopted configurational schema is X-bar theory, but not with all the structural options previously assumed in generative syntax: options, such as adjunction, or multiple specifiers have been shunned by cartography, which has retained only the core relations provided by the X-bar schema. These core relations are specifier-head and head-complement.

The understanding that the notion of adjuncts as optional appendices should be eschewed from syntax came from works such as Cinque's (1999) analysis of adjuncts across languages. The author proposed that adjuncts followed strict ordering constraints. If they were simple appendices, this should not happen. This observation led Cinque to propose specific positions for the several kinds of adverbs (cf. RIZZI, 1997; SHLONSKY, 2010).

3.4.6 The origins of cartography

Kayne's (1984) binary branching hypothesis led to an impoverishment of structural representations. To compensate for that, other alternatives had to be proposed. One of them came from Pollock's (1989) seminal work on the French inflectional domain. This author found empirical evidence to postulate more functional heads within the clause than had been previously assumed. Based on his analysis of the position of finite and non-finite verbs, Pollock argued that there were two inflectional heads in IP, instead of only one.

This work had a strong impact on generative grammar because it showed that the inflectional domain could be populated by more than one functional head. This prompted

research towards finding more functional heads in IP and other domains, since there was no apparent constraint on the number of functional heads accepted by X-bar theory. Thus, it was an empirical matter to determine how many of them were present in DP, vP, IP, CP, etc.

Furthermore, Pollock argued that verb movement was triggered by the need to pick up inflectional features. His reasoning was not new, though; the idea that movement to a functional zone was meant to pick up inflectional features can be found in the first analyses of the English inflectional system by Chomsky (1957) (cf. SHLONSKY, 2010).

Hence, the assumption was that syntax united inflectional features. Albeit lexical and inflectional features come from the lexicon, syntax is needed to assemble these pieces together and generate convergent structural descriptions. These initial ideas gave birth to cartography, an approach concerned with exploring the inflectional domains and relating them to discourse and pragmatics. In this approach, features are still a driving force for syntactic operations, yet with a different flavor because now they are framed in terms of criteria. The criterial relation obeys the following reasoning: there are features in any derivation; these features are present in the functional heads and in lexical categories. The features of the heads must be in a Spec-head configuration with the features of the lexical categories, as shown above in the derivation of (37). Once this configuration occurs, we say the criterion is *satisfied*.

Once a criterion is satisfied, it carries explicit instructions on how to interpret their dependents at the interfaces. For instance, a Top (Topic) head carries an instruction which determines that its Spec should be interpreted as a topic and its complement as a comment. A Foc (Focus) head tells the interfaces that its Spec is a focus and its complement is presupposed information (cf. RIZZI, 1997). Besides Top and Focus, there are other heads bearing other features, one of them is the *wh*-feature already mentioned here. Moreover, these heads can be overtly realized or not. In case they are not overt, we still assume there are features on them; otherwise, the derivation would not converge.

To conclude this brief account of cartography, a remark on its relation with Minimalism should be given since the latter works with relatively simple structures, whereas the former is concerned with complex structures.

Albeit they present some differences, especially with regard to the criterial system versus the feature system developed in Chomsky (1995, 2001, 2004), it could be said that both approaches are involved in a division of labor. Shlonsky (2010) states that Minimalism should focus on the mechanisms of computation (e.g Merge and Search), while cartography ought to be primarily concerned with the inventory of interpretable features and their interpretative

import. Hence, as stated in Chomsky (2001), Minimalism could be an abbreviated structure of the C-T-v-V system, while cartography delves into the refinements of the structure.

Furthermore, there is the minimalist inquiry of the extent to which language is an optimal solution to minimal design specifications. Chomsky (2001) assumes that these specifications are the legibility conditions at the interfaces. We believe cartography plays a role in answering this type of inquiry because the cartographic focus is on the interpretable features that feed the interfaces, and one of the goals of cartography is precisely that of investigating what these features are and how they interact with the interfaces.

Finally, the understanding that there should be a connection between discourse and syntax had been acknowledged by Chomsky a long time before cartography was born:

Surely, there are significant connections between structure and function; this is not and has never been in doubt. ... Searle argues that 'it is reasonable to suppose that the needs of communication influenced [language] structure'. I agree. (CHOMSKY, 1975, p. 56 apud AMARAL, 2009, p.7)

In sum, these two approaches are not antagonistic, but rather complementary due to some identical theoretical questions and similar theoretical mechanisms, such as feature-driven derivations and the adoption of the simple derivational operations Merge and Move¹⁴.

3.4.7 The fine structure of CP

As mentioned before, the functional projection we are concerned with here is CP. This projection is responsible for interfacing with IP by relating its propositional content with discourse and determining its finiteness.

Rizzi (1997) proposes there are four functional heads within CP¹⁵, each bearing a specific feature that triggers a criterial relation with phrases, in the fashion we described. Thus, the author proposes that CP is not a simple projection, but rather a complex one, which is split into many projections, each with an independent head¹⁶.

¹⁴ Although it is true that Minimalism and cartography do find common ground, it is also true that there is a real tension between them with respect to other matters, see Rizzi (2004), Shlonsky (2010).

¹⁵ This analysis was based mainly on Italian.

¹⁶ Other functional projections are also object of a split analysis. However, they are not our concern in this research; see the series *The Cartography of Syntactic Structures* for these analyses.

After analyzing several data from different languages, Rizzi proposed the initial map for CP:

(38) [CP [Force [Top* [Foc [Top* [Fin [IP ...]]]]]]] (RIZZI, 1997, p. 297)

In the next sections, I will describe Rizzi's CP structure in more detail.

3.4.8. The Force-Finiteness system

First, I will describe the Force-Finiteness (Force-Fin) system because even though these two heads are drawn separately in the map above, they constitute a system, i.e, some sort of unity. Nonetheless, it will be split in case there are other functional heads inside it.

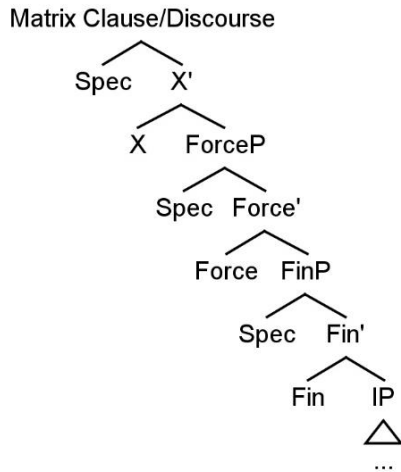
According to Rizzi (1997), this system works in the following manner: the uppermost projection is ForceP, it encodes the illocutionary force of the sentence by means of a phrase in the left edge, and relates the sentence either with discourse or with a superordinate structure. The element that fills the force phrase determines how the clause should be typed. Force is sometimes expressed by an overt complementizer on the head, sometimes by an operator in the specifier, and other times by both. However, due to economical reasons, it seems that language "prefers" only one overt element of specification, instead of two. The idea of illocutionary force comes from Chomsky's (1995) specification of force.

The lower projection is FinP, which interfaces with the embedded sentence; therefore, it is responsible for determining the finiteness of the clause. Rizzi postulated FinP in order to provide a simple and straightforward way of accounting for the assumption that the choice of the complementizer reflects certain properties of the verbal system of the clause. Chomsky and Lasnik (1977) formalized this assumption by showing that a tensed verb co-occurs with the complementizer "that", while an infinitive does so with the complementizer "for". Therefore, Rizzi argues that Fin contains a tense specification that matches that of the lower clause.

Rizzi (1997) assumes there are two heads, Force and Fin, because languages tend to split verbal paradigms into two classes of forms: finite and infinitive (or non-finite). Finite forms co-occur with a certain kind of complementizer, the "that" kind. Infinitive forms, on the other hand, do not. Thus, the author proposed a split system. However, it is important to highlight that although Force and Fin are not quite the same, they are expressed by the same head if there is

no other element between them, such as a topic or focus. These two, in turn, constitute another system, which we will describe below¹⁷.

(39)



(RIZZI, 1997, p. 283)

3.4.9. The Topic-Focus system

Between ForceP and FinP, there are projections for topics and foci, which are TopP and FocusP, which contain a head and a specifier. In the case of TopP, there is a Top head and a specifier that harbors the topicalized constituent. As we have already said, this constituent is interpreted as a topic and the complement of the head is interpreted as a comment. Similar conditions apply to FocusP: its Spec contains the focused element and its complement is a presupposition. In addition, it is assumed that the Spec of FocusP houses wh-words in main interrogatives (cf. RIZZI, 1997). This explains why main wh-interrogatives and focused elements cannot co-occur, as (40) shows:

(40) *A GIANNI¹⁸ che cosa/*Che cosa A GIANNI hai detto, non a Pietro?
 'TO GIANNI what/What TO GIANNI did you say, not to Pietro?'

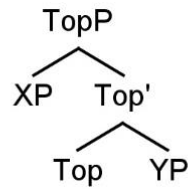
(RIZZI AND BOCCI, 2017, p. 8)

¹⁷ Rizzi (1997) proposes that even in finite sentences, Fin must be activated and the *che* particle must be generated within it and then moved to Force (see page 75 again if necessary)

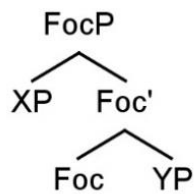
¹⁸ Capital letters mean that the word is being pronounced with a focus intonation.

The star symbol after Top means it is recursive. Focus, on the other hand, can never be iterated, i.e., there is always only one position for it in the clause. (cf. RIZZI, 1997). To conclude this discussion, I present the syntactic trees for each phrase ((41), (42)) and for the entire system (43).

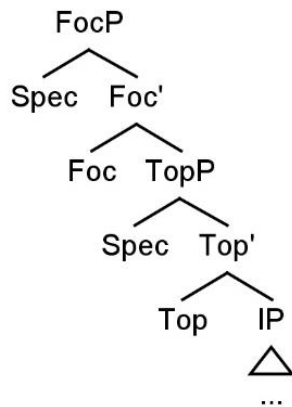
(41)



(42)



(43)



3.4.10. Expanding the original map

As mentioned before, the assumption in cartography is that syntactic representations are complex objects consisting of sequences of hierarchically organized functional elements. Therefore, the main goal of the field is to draw detailed maps of these structures and explain how they interact with computational principles.

With that understanding in mind, it became clear that the initial analysis by Rizzi (1997) did not approach all the possible elements. Thus, Rizzi and others began pursuing the strategy of analyzing CP in greater detail.

Rizzi's initial analysis was based on Italian, so subsequent works used it as a benchmark for pursuing comparative analyses with other languages. The comparison started with closely related languages and dialects, and progressively extended to typologically distant languages.

These studies showed there was a need to propose several extensions, such as IntP, ModP, and QebmP. These are all projections that give specific interpretative imports to the elements they host.

3.4.11 IntP

The interrogative projection (IntP) originated from the study of the Italian complementizer *se*, which is equivalent to the English *if*. This complementizer differs from *che* and *di* in that it can be both preceded and followed by a topic, as in (44).

(44) Mi domando, a mio figlio, se, la macchina, gliela compreremo quest'anno

'I wonder, to my son, if, the car, we will buy it to him this year'

(RIZZI AND BOCCI, 2017, p.5)

In addition, it can co-occur with a focus (45), as long as the Int head comes before the focus.

(45) Mi domando se LA MACCHINA/*LA MACCHINA se gli potremmo regalare
(non la moto)

'I wonder if THE CAR/*THE CAR if we could give to him (not the motorbike)'

(RIZZI AND BOCCI, 2017, p.5)

Thus, it cannot be in the specifier of FocP (compare to what happens in main interrogatives, see (40) above). These observations were enough to propose a specific position for if-like elements in the clause structure. The resulting configuration is (46):

(46) [Force [Top* [Int [Top* [Foc [Top* [Fin [IP ...]]]]]]]]

(RIZZI AND BOCCI, 2017)

3.4.12 ModP

Certain adverbials can be highlighted by being preposed to a clause-initial position. This showed that a specific interpretation derives from this movement operation because these adverbials are not topics or foci (even though they can be in non-neutral contexts), as sentences (47a) and (47b) show (cf. Rizzi and Bocci, 2017):

(47) a. Gianni ha trovato rapidamente la soluzione.

‘Gianni found rapidly the solution.’

b. **Rapidamente**, Gianni ha trovato la soluzione.

‘Rapidly, Gianni found the solution.’

(RIZZI AND BOCCI, 2017, p.6)

(47a) is a sentence with the adverbial in an IP-internal position, whereas (47b) contains the highlighted adverb. The latter is not a topic because it is not about the manner in which Gianni found the solution, i.e., it is not related to background information. It simply means that Gianni acted quickly when trying to find the solution, and not that the solution was found in a rapid manner (cf. RIZZI AND BOCCI, 2017).

Based on these observations and on the fact that cartography maps structural positions to semantic-pragmatic interpretations, the logical conclusion was that this type of adverbial should be given a specific position in the clause structure, resulting in the structure in (48):

(48) [Force [Top* [Int [Top* [Foc [Top* [Mod [Top* [Fin [IP ...]]]]]]]]]]

(RIZZI AND BOCCI, 2017, p.8)

3.4.13. Qemb

Main and embedded questions are structurally different. In a main question, a wh-word cannot co-occur with a focused element (see (40) above). However, in an embedded question this concurrence may take place (as long as the order is Foc-Wh):

(49) Mi domando A GIANNI che cosa abbiamo detto, non a Piero.

‘I wonder TO GIANNI what we said, not to Piero.’

(RIZZI AND BOCCI, 2017, p.8)

The impossibility of having both elements in a sentence was positional so their concurrence meant that they occupy different positions in the embedded clause. This led Rizzi and Bocci (2017) to assume a special position for wh-elements only in embedded questions, which was distinct from and lower than the one in main questions.

3.4.14 The latest version of the map

The three extensions we described here (IntP, ModP and QembP) were then incorporated into the original projections of Rizzi (1997). The resulting map is the one in (50) below:

(50) [Force [Top* [Int [Top* [Foc [Top* [Mod [Top* [Qemb [Fin [IP]]]]]]]]]]]]]

(RIZZI & BOCCI, 2017, p.9)

In sum, the main contribution of these analyses of CP and the other functional projections was to show that interface issues, which were previously studied independently by semantics, formal semantics, and information structure, could be explained in pure syntactic terms, narrowing the relation between syntactic computation and meaning/use. Besides that, the observation that order holds among functional elements corroborated Cinque’s conclusion that some mechanisms, such as adjunction of CPs in a recursive way or multiple specifiers, are not valid options.

Thus, there should be a universal structure, containing fixed positions for each functional element, and these positions ought to determine the specific interpretations at the interfaces (cf. BENINCÀ, 2001). That being so, and because generative syntax is concerned with the universal character of language, finding these positions is paramount to studies in this area.

Rizzi and Bocci (2017) state that Italian allows for the occurrence of the complementizer *che* to immediately follow an exclamative phrase, as in (55). However, they ask whether *che* lexicalizes the exclamative criterial head or Fin, leaving the question open.

(55) *Che bel libro [che [ho letto]]!*
“What a nice book EXCL I read”!

(RIZZI AND BOCCI, 2017, p.13)

4. Some notes on relative clauses

Putting aside the question of which analysis is correct, it seems a consensus that there should be a place for *wh*-exclamatives in the cartographic map. In this research, I will assume this position and will carry out an analysis along these lines.

As mentioned at the beginning of the chapter, some of the data I put into analysis in this dissertation contain an exclamative and a relative construction within the same utterance. I will not address the relativization theory very deeply here, but it suffices to say that I will adopt Kayne’s (1994) relativization theory to propose the derivation of such sentences.

Kayne’s analysis for relative clauses must fall within his Linear Correspondence Axiom (LCA). The LCA is the hypothesis that phrase structure always determines linear word order. The author proposes that asymmetric *c*-command maps words into linear order. In Kayne’s own words:

To express the intuition that asymmetric *c*-command is closely matched to the linear order of terminals, let us, for a given phrase marker, consider the set *A* of ordered pairs (X_j, Y_j) such that for each *j*, X_j asymmetrically *c*-commands Y_j . Let us further take *A* to be the maximal such set; that is, *A* contains all pairs of nonterminals such that the first asymmetrically *c*-commands the second. Then the central proposal I would like to make is the following (for a given phrase marker *P*, with *T* the set of terminals and *A* as just given): Linear Correspondence Axiom: $d(A)$ is a linear ordering of *T*. (KAYNE, 1994, p. 6)

The notion that Kayne wants to capture with the definition above is that if a nonterminal category *X* asymmetrically *c*-commands another nonterminal category *Y*, all the terminal nodes dominated by *X* must precede all of the terminal nodes dominated by *Y*. This means that the categories that are hierarchically superior and asymmetrically *c*-command

should appear before (in linear order) the hierarchically inferior and asymmetrically c-commanded categories.

This axiom forced Kayne to review many structures under X-bar theory, one of them being right adjunction. Adjunction to the right is no longer possible under the LCA. Thus, approaches as the ones by Ross (1967), Chomsky (1977) and Jackendoff (1977) for the structure of relative clauses are ruled out.

Kayne must then assume a derivational structure that is consistent with the LCA. The author does that by adopting Smith's (1964) and Vergnaud's (1974) ideas on the relation between D and CP. Based on that, the author proposes a head raising analysis.

In a few words, this analysis suggests that the relative CP is selected by the determiner in the matrix clause and the antecedent nominal of the relative CP (i.e. the relativized nominal) is raised within the subordinate sentence and ends up in a specifier position (the Spec, CP in *that* relatives and the Spec of the displaced *wh*-phrase in *wh*-relatives) from where it enters into some relation with the external D (maybe agreement, see Bianchi (1999)). (56) and (57) exemplify the derivation of a *that*-relative and a *wh*-relative, respectively:

- (56) a. the [(two) pictures of John's]_i [that [. . . lent me [e]_i]]
 b. [DP [D⁰ the [CP [NP (two) pictures of John's]_i [C⁰ that you lent me t_i]]]
- (57) a. [CP [TP Bill saw [DP which picture]]]
 b. [CP [DP [D which picture]_i [TP Bill saw t_i]]]
 c. [DP D⁰ the [CP [DP [NP picture]_i [D which t₂] [TP Bill saw t_i]]]]¹⁹

(KAYNE, 1994, p.86-88)

Hence, I will assume Kayne's head raising analysis for the derivation of relative clauses in this dissertation and if necessary, some more information on relativization will be given²⁰.

5. Methodology

¹⁹ For general and detailed discussion on Kayne's proposal, see (BIANCHI, 1999).

²⁰ For more on the LCA, see (KAYNE, 1994).

The scientific method of choice for data collection and analysis is the hypothetico-deductive method. This method consists of observing some data, making some generalizations about the patterns in them, developing hypotheses that explain these data, and testing the hypotheses against more data. In this thesis, all these procedures are guided by the idea that there is an internal grammar in the brain that has been shaped through the interaction of UG with language input at an early age. Therefore, my goal here is to discover which exclamative structures are part of the internal grammar of Brazilian Portuguese.

I will proceed in the following manner: First, I will tap into my native speaker intuition to obtain data from BP. Then, I will test them with other native speakers of BP to see if they are proper to be used. In addition, some data collected from daily situations might also be analyzed in order to build the proposal.

Furthermore, I will look for similar cross-linguistic data from languages such as German, Italian, and Catalan searching in corpora or in what is recorded by other researchers in their analyses.

Standard English will be used in the thesis as the writing language but also for syntactical examples. By doing so, I intend to make the examples more easily understandable for the reader.

6. Thesis overview

In chapter 1, I introduced the initial data, the issues related to them, and the questions they raise.

In chapter 2, I will consider the structure of *wh*-exclamatives (23)-(25) in BP in order to provide the reader with the background for my proposals in the following chapters.

In chapter 3, I will propose that ForceP should be split in at least two projections: ExclP and RelP. I will also explain why the order *relative+exclamative* as in (26) is not possible. Finally, I will address some constructions with a topicalized relative projection above the exclamative projection (28) seeking to find a position where to accommodate a topic within these sentences. This might lead to even more material within ForceP

In chapter 4, the structure of *verbless wh*-exclamatives (27) will be discussed and their structure worked out in order to clarify why these sentences do not allow an overt *que* morpheme.

In the final remarks section, I will summarize the findings of this thesis.

CHAPTER 2

ANALYZING SENTENTIAL WH-EXCLAMATIVES IN BRAZILIAN PORTUGUESE

1. Introduction

In this chapter, I will discuss the structure of sentential wh-exclamatives in BP, as well as that of more complex sentences that contain an exclamative and a relative clause.

In section 2, I give an overview of exclamatives. In section 3, I approach the semantics of wh-exclamatives in more detail. In section 4, I discuss the syntax of wh-exclamatives and give examples of their many structures. In section 5, I show the origins of ForceP under Cartography. Section 6 concludes the chapter.

2. Understanding exclamatives

Most works on exclamatives have been restricted to their semantic import or some pragmatic analysis, but there are many different syntactic structures through which one can express exclamation: verb-initial exclamatives, elliptical exclamatives, non-sentential exclamatives, illocutionary exclamatives, free small clauses, and so on. However, there is no general agreement on what universal definition can be given for exclamatives (if there is one), since it is not yet clear what specific characteristics a construction must have to be considered an exclamative. For instance, do they need to include a wh-element, or is emphatic intonation alone enough for a sentence to be an exclamative? Can any interrogative-like construction be interpreted as an exclamative? What are the most relevant aspects to their definition: syntactic, semantic or pragmatic? Should all these aspects define them concomitantly? These are some of the issues surrounding this type of clause that still need to be studied in more detail (CASTROVIEJO, 2006; SEBASTIAN, 2017).

3. The semantics of exclamatives

Whatever the definition scholars can agree upon, I believe it is correct to state that exclamative sentences are complex utterances that generally express some emotional state of the speaker. Furthermore, they tend to be “conventionally associated with a particular grammatical structure” (MICHAELIS AND LAMBRECHT, 1996, p. 375), especially if one

considers sentential wh-exclamatives (CASTROVIEJO, 2016; SEBASTIAN, 2017; MEDEIROS JUNIOR AND SIEIRO, 2018). Moreover, sentential wh-exclamatives are generally said to exhibit extreme degree (cf. CASTROVIEJO, 2016).

By extreme degree, we understand the degree of the adjectival property ascribed in the construction to be maximal, placing the object of the utterance on a scale, and particularly on the extreme of such a scale (CASTROVIEJO, 2006; VILLALBA, 2008). Take for instance the following sentence:

(1) *How very/extremely/unbelievably hard is this exam?

(CASTROVIEJO, 2006, p.33)

The datum in (1) contains an interrogative sentence with no extreme degree, for extreme degree is absent in interrogatives, which is an important property that draws a distinction between wh-exclamatives and interrogatives (CASTROVIEJO, 2006). The issue with the sentence above is the occurrence of an extreme-degree denoting adverb that modifies an adjective that is part of the wh-phrase “how hard”.

On the other hand, sentential wh-exclamatives can be modified by this type of adverb:

(2) It’s amazing how very/unbelievably/extremely long he can stay under water

(CASTROVIEJO, 2006, p.33)

Here the wh-phrase “how long” can be modified by any of the adverbs above. In fact, even when there is no extreme degree adverb, a wh-exclamative sentence shows extreme degree, as can be seen in (3) below, where the denotation is that the man is extremely cute or cute to an extreme degree.

(3) How very cute he is!

(ZANUTTINI AND PORTNER, 2003, p. 47)

In a sentence such as (3), saying that the man is somewhat cute does not make any sense. People would produce such an utterance only if they found the man to be extremely cute. Zanuttini and Portner (2003) corroborate the idea of extreme degree with the concept they call

scalar implicature, which can be understood as the notion of surprise and extremity of the utterance. It means that the characteristic expressed by the utterance is unexpected and, therefore, surprising. To put it differently, there is a gradation and the object is on the extremity of this gradation. This concept applies to BP as well. For instance, Leopoldino (2018) proposes that in (4), a Brazilian Portuguese sentence, scalar implicature refers to the notion of surprise and extremity of this kind of sentence.

(4) Que alto esse menino!

‘how tall this boy’

(LEOPOLDINO, 2018, p.4)

In (4), the notion conveyed is that the boy’s height is above what is usually expected (for his age, for example); therefore, it is surprising. As one can see, the idea of scale and the placement of the object of exclamation on the extreme of such a scale is present in BP as well, as Leopoldino (2018) shows. Consider (5) and (6) below:

(5) *It isn’t amazing how very cute he is!

(6) It is amazing how very cute he is!

(ZANUTTINI AND PORTNER, 2003, p.47)

The property of scalar implicature explains the impossibility of embedding wh-exclamatives under “It isn’t amazing” in (5) because they cannot be negated. This utterance is unacceptable because it denies the amazingness of his cuteness, and this amounts to contradicting the scalar implicature. However, its positive counterpart (6) is possible, which is not impressive at all if one looks again at the concept of scalar implicature: something on the top of a scale is likely to be amazing; therefore, stating that it is amazing is semantically perfect.

A parallel explanation can be given to (7) and (8) below. In (8), the interrogative casts doubt on the implicature. Why would someone ask this if the fact that he is cute is so obvious? In contrast, (7) is acceptable because a negative question expects a positive answer. Thus, the answer “yes, it is!” is fine and in line with the concept of scalar implicature, i.e., its extreme cuteness (ZANUTTINI AND PORTNER, 2003).

(7) Isn’t it amazing how very cute he is?

(8) *Is it amazing how very cute he is?

(ZANUTTINI AND PORTNER, 2003, p.47)

Brazilian Portuguese sentential wh-exclamatives seem to exhibit something very similar:

(9) a. Não é incrível como ele é fofo?!
'Isn't it amazing how cute he is?'

(10) a. É incrível como ele é fofo!
'It's incredible how cute he is!'

b. *É incrível como ele é fofo?
'Is it amazing how cute he is?'

(11) a. *Ele não é incrivelmente fofo!
'he is not incredible cute!'

b. *Não é incrível como ele não é fofo!
'Isn't that incredible how he is not cute!'

In (10b), the notion of cuteness is being questioned: his cuteness is obvious, so there is no reason to cast doubt on it by posing a question. In contrast, a negative question (9) expects a positive answer, just as in the English example, thus the answer “Sim, é mesmo! (yes, it is!) is aligned with the concept of scalar implicature. (10a) is grammatical since it is a regular exclamative structure.

The sentences in (11) are negative exclamations, like (5). And, as in (5), these utterances deny the amazingness of the person's cuteness, which contradicts the scalar implicature and the factivity of the exclamative sentences.

In a similar breath, Castroviejo (2006) states that exclamatives should be treated as some kind of degree construction containing a gradable predicate. For instance, in the data below, obtained from Catalan, only (12) is grammatical; (13) is ungrammatical because the predicate is not gradable:

(12) Quin gat t n simp tic!
'What a nice cat!'

(13) *Quin gat t n quadr pede!
'What cat so four-legged'

(CASTROVIEJO, 2006, p.17)

The predicate *tán simpàtic* (very nice) contains a gradable adjective: *simpàtic* (nice). This adjective can vary on a scale. A cat can be somewhat nice, nice or incredibly nice. On the other hand, the adjective *quadrúpede* (four-legged) is not gradable.

Thus, for the author, degree operators, such as *tán* (so) and *mes* (more) imply that there is some critical degree to which the relevant property holds of its argument. Though this value is not explicitly stated, it expresses high degree. In fact, it is high enough to provoke an emotional attitude in the speaker. The same is observed in BP:

- (14) Que mulher mais linda!
‘what woman more beautiful’
What a beautiful woman!

In (14), the speaker wishes to highlight the woman’s beauty, and the hearer will interpret her beauty as above average. This is in line with the idea presented in Zanuttini and Portner (2003) that the adjective is the head of the exclamative predicate, which allows the adjective to vary on a degree scale, allowing the exclamative predicate to receive a high degree reading.

Let us look at BP wh-exclamatives again:

- (15) Que mulher belíssima ela se tornou!
‘what woman gorgeous she has become’
- (16) *Que mulher grávida ela se tornou!
‘what woman pregnant she has become’

In these sentences, the adjective *belíssima* (absolutely gorgeous) is a high degree adjective that expresses the woman’s beauty on the extreme of a scale. The hearer will inevitably understand that the woman is someone of great beauty. However, the adjective *pregnant* cannot vary on a scale, making (16) bad.

In sum, adjectives and adverbs must be compatible with wh-exclamatives’ high degree, like the adjectives *tan* (so) and *mes* (more) in Catalan and *mais* (more) in BP. Adverbs, such as *reasonably* (*raonablement*, in Catalan), may not appear in this construction type:

(17) Que extremadamente alt que és en Pau!
'How extremely tall Pau is!'

(18) # Que raonablement alt que és en Pau!
'How reasonably tall Pau is!'

(CASTROVIEJO, 2006, p. 18)

Sentences with the adverb *razoavelmente* in Brazilian Portuguese seem to present the same restrictions:

(19) Que incrivelmente/absurdamente/exageradamente alto é esse prédio!
'how incredibly, absurdly, exaggeratedly tall is this building'

(20) # Que razoavelmente alto é esse prédio!
'how reasonably tall is this building'

As exclamative operators, the adverbs and wh-phrases analyzed above are supposed to be located in the CP area (see CASTROVIEJO, 2006) as they are supposed to be in part constituting the illocutionary force of the sentence; based on the data, it seems that these elements must be higher than the sentence predicate.

Another distinguishing property of wh-exclamatives is their inability to function in question/answer pairs. Interrogatives are characteristically employed to ask a question. Exclamatives cannot do so.

(21) A: How tall is he? B: Seven feet.

(22) A: How very tall he is! B: *Seven feet. / He really is! / Indeed! / No he's not!

(ZANUTTINI AND PORTNER, 2003, p.48)

In (21) "seven feet" provides the information requested by the question. This is a proper reply. In contrast, the same reply is not applicable to (22). A proper reply is only acceptable if it indicates agreement with A's presupposition, as *He really is!* and the other responses given. The same happens in BP, where an answer may not be given to an exclamative (24), while it can to an interrogative (23).

(23) A: O Pedro é alto? B: Sim.
'Pedro is tall? Yes'

A. Quanto alto ele é? B: 1,80m

(24) A: Quanto/que alto é o Pedro! B: *1,80m²¹
'how tall is Pedro! Yes

In this section, I have presented some of the semantic aspects of wh-exclamatives. In the next section, I will discuss the syntax of sentential wh-exclamatives in more detail, as well as how the structure of such sentences conveys the meaning usually associated to them.

4. The syntax of wh-exclamatives

As mentioned in the previous section, here I will discuss the syntax of wh-exclamatives and try to make a distinction between two types of wh-exclamatives. One is the sentential type, which I call sentential wh-exclamative and the other is what I will call non-sentential wh-exclamative.

Both wh-exclamative types share some aspects that are enough to define them as wh-exclamatives. Some of these aspects are: having a wh-operator in their left periphery and having the exclamative flavor, a set of characteristics mentioned by Elliot (1974), Zanuttini and Portner (2003), and Castroviejo (2006), such as scalar implicature, impossibility of occurring in question/answer pairs, impossibility of being embedded under non-factive verbs, and a gradable adjective.

I will state the difference between a sentential and a non-sentential wh-exclamative as being related to the presence of the verb in the former versus the absence of it in the latter. The sentences below are examples of both types of construction, sentential exclamatives in (25) and non-sentential in (26):

(25) a. Que casa linda que a Maria comprou!
'what house beautiful that Mary bought'

b. Que casa linda a Maria comprou!
'what house beautiful Mary bought'

c. Que professor inteligente ele é!
'what professor smart he is'

²¹ If the reply is an exclamative, such as *Sim!* (Yes!), the sentence is grammatical.

- (26) a. Que casa linda!
 ‘what a beautiful house!’
- b. Que inteligente esse professor!
 ‘how smart this teacher!’
- c. Que professor!
 ‘what a teacher!’

Let us look at each sentence. (25a) is an example of a sentential wh-exclamative because it contains a verb, *comprou*. This sentence has the same structure of the one numbered (23) in the introduction of this thesis (see p. 10). (25b) is very similar to (25a) except for the absence of *que* in C^0 , but it is also a sentential wh-exclamative. (25c) is another example of a sentential wh-exclamative, which contains a copula, *é*. (26a), (26b) and (26c) are examples of the non-sentential type of exclamatives, because they do not contain a verb. (26a) and (26b) are only different among themselves due to the element directly modified by *que*: in (26a) *que* modifies an NP, and in (26b), an adjective. Finally, (26c) is a non-sentential wh-exclamative that contains the *que* morpheme and an NP. Later, I will consider the possibility that an adjective has been elided in this sentence.

The distinction drawn here between these two types of construction will be crucial for the analysis I will develop in chapter 4, where I will claim that constructions like (26) are non-sentential wh-exclamatives, contrary to what Sibaldo (2015) argues; I will show how the impossibility of the occurrence of *que* in those utterances might indicate that there is a clear syntactic distinction between sentential and non-sentential wh-exclamatives.

4.1 Entering the syntax of wh-exclamatives

Before discussing the syntactic aspects of wh-exclamatives in English and BP, let us go back to the typology of exclamative constructions presented in chapter 1, p. 13. In English, some exclamatives are non-wh-sentences. Such constructions, according to Collins (2005), convey similar illocutionary force to exclamative clauses, but they do it indirectly; only in what he calls "true" exclamatives, i.e., in wh-exclamative constructions, has the exclamatory statement force been grammaticalized. The sentences below are examples of non-wh-exclamative clauses.

- (30) Is linguistics easy!
 (31) They were so mean!
 (32) The things he eats!

(COLLINS, 2005, p.5)

In BP, the same observation about the “non-wh type” is found in Zendron da Cunha (2016). The sentences below are the same ones I showed on page 6 of this thesis.

- (33) Que alto que ele é! (Wh-exclamative)
 ‘how tall that he is!’
 (34) Inteligente esse menino! (Free Small Clause)
 ‘smart this boy!’
 (35) O Carlos é alto! (Illocutionary exclamative)
 ‘The Carlos is tall!’

(ZENDRON DA CUNHA, 2016, p. 34-36)

As stated previously on page 6, Zendron da Cunha considers only (33) to be an exclamative sentential type, whereas the other two are supposed to have the illocutionary force of exclamation only. She calls this kind of construction a wh-exclamative or canonical exclamative. In (34), there is a Free Small Clause and in (35) there is an illocutionary exclamation. The main distinction between (33) and the other two is that the exclamatory force has been grammaticalized²² in (33) by the presence of a wh-phrase in the left periphery (*que alto*).

There are some remarks to be made here. First, all the three types, (33) to (35), express extreme degree and surprise, which are typical aspects of exclamatives (as we have just discussed). Thus, the exclamative flavor is evident in these sentences. In addition, they are phonologically emphasized, another trait of exclamatives. Therefore, the illocutionary force of exclamation, which is mainly pragmatic and semantic, is ubiquitous in all the three sentences. As a result, I, following Zendron da Cunha (2016), have considered them exclamatives. Their difference to be determined only in syntactic terms.

However, one must make a caveat here: it may be, as Zendron da Cunha warns, that

²² What I mean by “grammaticalized” here is the fact that there is an element (*que*) making the sentence possible.

there are no apparent (overt) inflected copula and tense features. Nevertheless, these elements could be there, but they would be realized covertly.

In sum, the main distinction found in the non-wh type is, as the name suggests, the absence of a wh-phrase that grammaticalizes the exclamative force. This is no surprise at all because, as Zanuttini and Portner (2003) state, in principle any sentence may become an exclamation, but there are some sentential types that are directly connected to a sentential exclamative modality (ZENDRON DA CUNHA, 2016, p. 35). This specificity is associated to a grammatical form, which is the one I am concerned with here, namely the constructions containing a wh-phrase, which are labeled wh-exclamatives.

4.2 Some remarks on wh-exclamative clauses with and without a verb

As I have consistently argued, sentential wh-exclamatives are constructions containing a wh-phrase that carries exclamatory force, which it imprints to the whole sentence over which it has scope. Typical examples of a sentential wh-exclamative construction in English are (36) and (37).

(36) How beautiful his wife is!

(37) What a disaster it was!

(SEBASTIAN, 2017, p. 1-2)

As I also debated before, these sentences should be considered sentential wh-exclamatives because they contain a wh-phrase in CP and a verb in TP. The presence of the inflected verb constitutes clear evidence that these sentences have a TP layer, thus bearing sentential structure. Let us look at similar sentential wh-exclamatives in BP:

(38) [_{CP} Que linda [_C⁰ que [_{TP} é a mulher dele!]]]
'how beautiful that is the wife his'

(39) [_{CP} Que desastre [_C⁰ que [_{TP} isso foi!]]]
'what disaster that this was!'

Compare them with the non-sentential wh-exclamatives in (40) and (41), which only

exhibit a wh-phrase but not a verb. The position of the wh-phrase in such constructions should be determined in chapter 4.

(40) What a nice car!

(41) What a teacher!

In Brazilian Portuguese, wh-words are also present in sentential ((42) and (43)) and non-sentential wh-exclamatives ((44) and (45)).

(42) **Que** alto (que) ele é!
'how tall (that) he is!'

(43) **Que** lindo (que) é o seu carro!
'how beautiful is your car!'

(44) **Que** inteligente esse menino!
'how smart this boy!'

(45) **Que** legal esse filme!
'how nice this movie'

The *que* (in bold) is the wh-operator in all these sentences; however it is optional in (42) and (43) but obligatory in (44) and (45). Furthermore, the wh-phrases (*que alto*, *que lindo*, etc) must be at the initial position of the sentence, just like *what* and *how* in English. Otherwise, the sentences are ungrammatical, as shown by (46), (47) and (48):

(46) *Ele é que alto!
'he is how tall'

(47) *O seu carro é que lindo!
'your car is how beautiful'

(48) *Esse menino que inteligente!
'this boy how smart'

(ZENDRON DA CUNHA, 2016, p.114)

This was a brief summary of the difference between sentential and non-sentential wh-

exclamatives. Here, I just wanted to show the reader exactly what kind of constructions I will be discussing in this chapter, which are sentential wh-exclamatives. Non-sentential wh-exclamatives will be analyzed in depth in chapter 4.

4.3 The syntax of sentential wh-exclamatives

Concerning the syntax of exclamatives, a good question to be made now is: How are sentential wh-exclamatives derived? Evidence suggests that these sentences contain an exclamative phrase displaced to the left periphery of the clause. This happens because the phrase must bear scope over the whole sentence so that the exclamative force is imprinted upon the utterance (SEBASTIÁN, 2017). This will be clear when I analyze the data below, which indicate that these operators fulfill different syntactic positions within the clause, i.e., within IP/TP. This seems to be true for both English and Portuguese, as I will try to make clear by analyzing the data presented in the following subsections.

4.3.1 Deriving English sentential wh-exclamatives

According to Sebastian (2017), in English sentential wh-exclamatives, the wh-elements that must be in the initial position of the sentence (in the left periphery) can fulfill different syntactic functions since many different constituents of the sentence can be displaced to the initial position. Here are some examples:

(49) What ill-behaved children _ were on the tram today! [Subject]

(50) What a provocative book she lent me _! [Direct Object]

(51) How very kind you are _! [Predicative Subject]

(52) How quickly they changed their minds _! [Adverbial]

(QUIRK ET AL, 1985 apud SEBASTIÁN, 2017, p.2).

The data above show that displacement seems to be crucial for the derivation of wh-exclamatives. If this hypothesis is correct, there are some syntactic phenomena that should be observed in the derivation of this kind of structure, such as A' islands, the occurrence of parasitic gaps licensed by coindexed traces, that-trace effects, and weak crossover. Sebastian (2017) shows some of these phenomena are a reality in English exclamatives. Here I present

the author's findings and reproduce them to demonstrate that most of them take place in BP as well:

A' islands

The impossibility of movement out of the A' islands below ((53)-(56)) is expected because, if there is displacement, we should expect wh-exclamatives to have the same type of restrictions that are traditionally associated with other constructions involving A' movement, such as interrogatives (53).

(53) *[What beautiful dresses]_i does he like the girl [_{adjunct} who wears t_i]?

(54) *[What beautiful dresses]_i he likes the girl [_{adjunct} who wears t_i]!

(55) *[How pretty]_i you [_{complex NP} made the claim that she is t_i]!

(56) *[What a beautiful dress]_i [_{subject} that she will buy t_i] is likely!

(SEBASTIÁN, 2017, p.9)

Parasitic gaps licensed by coindexed traces

Parasitic gaps are constructions in which one empty position, or a gap, appears to be dependent on another gap. This means that one of the positions is only licensed by virtue of another position that contains a trace to license it. This is why it is said that one position is parasitic to the other.

If English wh-exclamatives are derived via movement, one should expect to find licensing of parasitic gaps in these constructions, as it happens in English interrogatives (57), because movement leaves a trace behind signaling the position from which a constituent has departed. As it turns out, the expectation is confirmed:

(57) [What book]_i did you file t_i without reading t_i ?

(58) [What an expensive book]_i I filed t_i without reading t_i !

(59) [What a delicious dish]_i you cooked t_i despite not liking t_i !

(SEBASTIÁN, 2017, p.10)

That-trace effect

That-trace effect is a phenomenon in which the complementizer *that* cannot be followed by a trace in some languages, like English. The wh-questions below illustrate it in finer detail:

Object movement

(60) Who(m) do you think that John kissed $t_{who(m)}$?

(61) Who(m) do you think John kissed $t_{who(m)}$?

Subject movement

(62) Who do you think t_{who} kissed Mary?

(63) *Who do you think **that** t_{who} kissed Mary?

One can see that *that* is optional in sentences with object movement; though the same is not true of sentences with subject movement. The reason for this asymmetry between object and subject extraction seems to be caused by the ECP (CHOMSKY, 1981). The ECP requires that a trace be properly governed, which means to be either theta-governed by a head or antecedent-governed by an antecedent. B is theta-governed if B is governed by A and if it is theta-marked by A. B is antecedent-governed by A if A governs B and is coindexed with B. Let us look at (62) and (63) again to understand why (62) is properly governed, whereas (63) is not.

(62)' Who_i do you think t_{who} kissed Mary?

(63)' Who_i do you think **that** t_{who} kissed Mary?

In (62)' the verb *think* governs and theta-marks the trace. In (63)', however, this is not possible because of *that*, which intervenes between the verb and the trace. This causes a violation, and the sentences become ungrammatical. In object extraction, traces from both clauses (60) and (61) are being governed. Hence, no ungrammaticality is observed.

This phenomenon happens with A'-movement, such as in wh-questions, (64) and (65). Hence, the prediction is that it should happen in other instances of wh-movement (A'-movement), like in wh-exclamatives. Sebastian (2017) tested some wh-exclamative sentences, (66) and (67), to investigate if this prediction is borne out:

(64) *[How much]_i do you think that *t_i* remains to be done?

(65) [How much]_i do you think *t_i* remains to be done?

(66) *[What a strange man]_i you heard that *t_i* won the race!

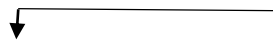
(67) [What a strange man]_i you heard *t_i* won the race!

(SEBASTIÁN, 2017, p.11)

Indeed, the data reveal that the that trace effect affects wh-exclamatives, strongly suggesting that these sentences are derived via movement.

Weak crossover effect

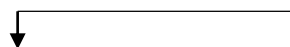
This effect occurs when a fronted constituent crosses over a pronoun with which it is coindexed on its way to the left periphery of the sentence, resulting in an ungrammatical or slightly ungrammatical sentence.



(68) *[What good students]_i their_i teacher punished *t_i* !



(69) *[What a bad dog]_i his_i owner hit *t_i* !



(70) *[What a strange man]_i his_i mother loves *t_i* !

(SEBASTIÁN, 2017, p.11)

4.3.2 Deriving Brazilian Portuguese sentential wh-exclamatives

As I have shown in the data above (48-51), the wh-phrase can be placed in different syntactic positions in English, the same is observed in BP sentential wh-exclamatives:

(71) [Que meninos levados]_i que ____i estavam fazendo bagunça no trem ontem! [Subject]
'what ill-behaved children that were messing around on the train yesterday'

(72) [Que livro intrigante]_i ela me emprestou ___i! [Direct Object]
 ‘what an intriguing book she lent me’

(73) [Que bondoso]_i você é ___i! [Predicative Subject]
 ‘how kind you are’

(74) [Quão rápido]_i eles mudaram de opinião ___i! [Adverbial]
 ‘how fast they changed their minds’

These data attest the same kind of behavior that Sebastián states to be affecting English sentential wh-exclamatives, namely that they seem to be derived via movement in that language. As I will try to make clear, it is possible to suggest that they are derived via movement in BP as well. To confirm this hypothesis, it would be interesting to observe whether the same phenomena pointed out to English are found in Brazilian Portuguese; this seems to be the case²³.

A' islands

(75) *[CP [Que belos vestidos]_i [C [IP ele gosta da garota [relative clause que veste *t_i]]]]!
 ‘what beautiful dresses he likes the girl who wears’*

(76) * [Que linda casa] o João comprou porque eu gostei *t_i*
 ‘what beautiful house John bought because I liked *t_i*’

As it is clear, one can see the same subjacency effects found in English, where an element (the operators “*que belos vestidos*” and “*que linda*”) may not move out of an island. The islands are the relative clause in (75) and the adjunct clause in (76).

Parasitic gaps

(77) [CP [Que livro caro]_i [IP eu doe*i* *t_i* sem ter lido *t_i]]]!
 ‘what an expensive book I donated without having read’*

²³ The that-trace effect test is not possible in BP since this effect is non-existent in this language with any construction.

(78) [CP [Que casa mais chique]_i [IP o João comprou *t_i* sem ver *t_i*]]!
 ‘what a fancy house John bought without looking

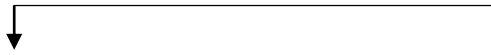
Clearly, parasitic gaps can also license traces in BP as in English. This should be seen as another piece of evidence that leads to the conclusion that these sentences are derived via movement.

Weak crossover

Weak crossover is also prohibited in BP, as pointed out in the data below.



(79) *[CP [Que homem estranho]_i [C que [IP a mulher dele_i ama *t_i*]]]!
 ‘what a strange man that his wife loves’



(80) *[CP [Que livro legal]_i [C que [IP a capa dele_i rasgou *t_i*]]]!
 ‘what a nice book that its cover tore’

In-situ wh-operators

Finally, another argument that Sebastián uses to support that wh-exclamatives are derived via movement (an observation that is paramount to my proposal) is the fact that these sentences do not allow in situ wh-phrases ((81) and (82)). This is true for BP as well, as made evident by the sentences below ((83), (84)).

English

(81) a. *It was what a disaster!

b. *She hated it how!

(82) a. [What a disaster]_i it was *t_i*!

b. [How]_i she hated it *t_i*!

Brazilian Portuguese

- (83) a. *Aconteceu que desastre!
‘Happened what disaster!’
b. *Ela odiou como!
‘She hated how!’
- (84) a. [Que desastre]_i que aconteceu *t_i*!
‘what disaster that happened’
b. [Como]_i ela odiou *t_i*!
‘how she hated it’

Having supported the idea that this kind of construction is derived via movement, I will present some other syntactic aspects of wh-exclamatives before proceeding to my proposal of BP’s wh-exclamatives and what they mean to the cartographic approach.

4.4 Factivity

As mentioned before, Elliot (1974) was the first author to observe that English wh-exclamatives can only be embedded under factive verbs, such as (85), in contrast to (86), a non-factive verb:

- (85) I know what an attractive woman she is!
(86) * I claim how very tall Bill is!

(ELLIOT, 1974, p. 232)

Since this observation had a significant impact on the literature on wh-exclamatives, it would be interesting to observe if this is a cross-linguistic phenomenon, existing in BP as well. The sentences below show evidence in favor of this occurrence.

- (87) Eu sei que linda que ela é!
‘I know how beautiful she is’
- (88) a. *Eu penso que linda que ela é!
‘I believe how beautiful she is’

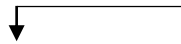
b.* Eu acho que linda que ela é!
'I think how beautiful she is'

c.* Eu considero que linda que ela é!
'I consider how beautiful she is'

4.5 The mapping of wh-exclamative operators/phrases in sentential wh-exclamatives

As stated before, Rizzi (1997) posits relative operators in Force, and Rizzi & Bocci (2017) claim exclamative operators must be in Force as well.

There are data from English demonstrating that wh-operators must be higher than C, as they are higher than auxiliary verbs in sentences where subject-aux inversion takes place (SEBASTIÁN, 2017). This can be seen in the English sentence below, where the wh-operator [*What magnificent character*] is above C.



(89) [_{CP} What magnificent character] [_C does_i] [_{IP} she [_I *t_i* present in her latest novel]]]!

(QUIRK ET AL, 1985 APUD SEBASTIAN, 2017, p.6)

I-to-C movement is a strong piece of evidence from English to propose that the wh-operator moves to a position higher than C.

Here I want to show evidence that in BP they are higher than C as well. Although BP does not have I to C movement (see MIOTO, 2001), data from classical Portuguese displays the order verb-subject in many utterances ((90)-(94)). Even though these utterances are no longer so common in BP, it shows that I-to-C movement was present in classical Portuguese.

Declaratives

(90) Quando lá chegou, **estava (V)** Magalhães (Subj) lendo um romance
'when he arrived there, was Magalhães reading a novel'

(M. DE ASSIS, *Almas Agradecidas*, p. 15)

(91) **Debatem (V)** os lazaristas (Subj) o grave dilema
'debate the Lazarists the serious dilemma'

(PONTES, 1982, p.91, 96)

- (92) **Foi (V)** um homem (Subj) ao mato...»
 ‘Went a man to the woods’

Imperatives

- (93) Não **suba (V)** o sapateiro (Subj) além da chinela
 ‘don’t place the shoe rack above the shoe?’ (PONTES, 1982, p. 96)

Exclamatives

- (94) Como **é (V)** tão belo (**AdjP**) o sol (Subj)!
 ‘how is so beautiful the sun’ (PONTES, 1982, p. 96)

In addition, there are more recent data from BP showing that the wh-operator is above C in some utterances, as presented by Thomas Earl in his book **The Syntax of Spoken Brazilian Portuguese** (1969):

- (95) Que caras estão as casas!
 ‘how expensive are the houses’

- (96) Como é bonita aquela moça!
 ‘how is beautiful that lady’

In these sentences, the wh-phrases “*que caras*” and “*como*” are located above C, in sentences with verb inversion to C; the representation in brackets might be useful for a better visualization.

- (97) [CP Que caras]_i [C estão]_i [IP as casas ~~estão~~_i ~~caras~~_i]]!
-

- (98) [CP Como [C é bonita [IP aquela moça é bonita como]]]!
-

(THOMAS, E. APUD PONTES, 1982, p. 99, adapted)

Finally, I would like to add an example that is largely accepted in modern BP, even though it is no longer very productive.

(99) Que belas obras **tem** (V) ela (Subj) acumulado ao longo dos anos!
 ‘what beautiful works of art has she accumulated over the years’

Another piece of evidence for stating that wh-operators are above C is found in sentences where adverbials are located at a clause-initial position in order to receive emphasis:

(100) Que lindas flores **geralmente** ela colhe nesse jardim
 ‘what beautiful flowers usually she plucks in this garden’

Rizzi and Bocci (2017) call this position ModP. It is located above FinP. Sentence (101) contains an example from Italian with an adverb occupying ModP. Here the adverb *rapidamente* is above the subject *Gianni*. The map in (102) pinpoints the exact location of ModP, showing that it is below ForceP.

(101) **Rapidamente**, Gianni ha trovato la soluzione.
 ‘Rapidly, Gianni found the solution.’

(RIZZI & BOCCI, 2017, p. 6)

(102) [Force [Top* [Int [Top* [Foc [Top* [**Mod** [Top* [Fin [IP ...]]]]]]]]]]

(RIZZI & BOCCI, 2017, p. 8)

Perhaps many Brazilian Portuguese speakers would consider sentence (100) to be a little unnatural, preferring a sentence such as (103). This may be true, but, as I have said before, the objective of displacing the adverb is to add emphasis to it.

(103) Que lindas flores ela **geralmente** colhe nesse jardim!
 ‘what beautiful flowers she usually plucks in this garden’

All these examples support the idea that wh-phrases can be higher than C in BP, especially wh-phrases in wh-exclamative sentences. This piece of evidence is essential to the proposal I will state in chapter 3.

In the following section, I will look at how ForceP “came into existence”. In subsection 5.1, I concentrate on some analyses for ForceP in Brazilian Portuguese.

5. Coming back to Force-Fin: the origins of ForceP

The cartographic approach has changed the understanding of the CP projection substantially. As I have already argued, a projection once considered to be integrated by a head and its Spec is now believed to host many other functional heads, such as Force, Fin, Top and Foc. I will now go back and concentrate a little more effort on discussing the Force-Fin system, with an emphasis on the Force projection.

In the traditional generative grammar terminology, stemming from GB and later adopted by Minimalism, the clause is introduced by a single C node expressed in English by morphemes such as *that, if, for* (RIZZI AND BOCCI, 2017). To illustrate this, let us look at the sentences below:

(104) [Whom_i do you believe [_{CP} **that** [_{IP} Lord Emsworth will invite t_i]]?

(105) [He wonders [_{CP} [_C **if** [_{IP} Lord Emsworth will invite Poirot]]]]

(HAEGEMAN, 1994, p. 378)

And for Brazilian Portuguese:

(106) Quem você acredita que o João vai convidar?
'who you believe that the John will invite?'

(107) Ele se pergunta se o João vai convidar o Pedro.
'he asks himself if the John will invite the Pedro'

The lexical items *that and if* in English and *que* and *se* in BP are complementizers introducing subordinate clauses. These are single C nodes and CP does not seem to contain a lot of material here. But there are other examples with compelling positional evidence that the CP projection has a richer articulation, casting doubt on the hypothesis of a single C node. (RIZZI, 1997; RIZZI AND BOCCI, 2017). Data in (108) and (109) are good examples of a richer CP projection with a topic preceding and following the complementizer.

(108) Ho deciso **che**, la macchina (top), la comprerò quest'anno.
'I decided that, the car, I will buy it this year.'

(109) Ho deciso, la macchina (top), **di** comprarla quest'anno.
'I decided, the car, of to buy it this year.'

(RIZZI AND BOCCI, 2017, p.3)

As the data make it clear, there is a relative order concerning topicalized elements and complementizers; *che* (*that*) precedes topics in tensed sentences whilst the infinitival complementizer *di*, introducing control infinitives, necessarily follows topics.

Based on these analyses, Rizzi (1997) claims (as I have already consistently shown) that CP should be divided into at least two projections: ForceP and FinP; the former would host complementizer particles like *che* and the latter would host other di-type. As it is known, Rizzi later proposes a richer set of projections integrating CP, but I will not bring them back here (see chapter 1 for a recall).

Rizzi (1997) conceives the complementizer system as the interface between a superordinate structure, a higher clause or discourse, and the propositional content (IP). This means that the system must express information related to the outside and the inside. ForceP relates to the outside by encoding the illocutionary force of the sentence by means of a phrase in the left edge. The element that fills the force phrase determines how the clause should be typed and interpreted:

(110) a. I think **that** John will come to the party (declarative sentence)

b. I know the person **who** came here (relative sentence)

(111) a. Ho deciso **che**, la macchina, la comprerò quest'anno. (declarative sentence)
'I decided that, the car, I will buy it this year.'

b. Che bel libro [**che** [ho letto ____]]! (exclamative sentence)
What nice book that I.SG.AUX read

(RIZZI AND BOCCI, 2017, p.13)

Force is sometimes expressed by an overt complementizer in the head, sometimes by an operator in the specifier, and other times by both. The idea of illocutionary force comes from Chomsky's (1995) specification of force.

On the other hand, FinP is the projection that expresses inside information. It is responsible for determining the finiteness of the clause. Rizzi postulated FinP to provide a simple and straightforward way of accounting for the assumption that the choice of the complementizer reflects certain properties of the verbal system of the clause. Chomsky and Lasnik (1977) had brought forth this assumption by showing that a tensed verb co-occurs with the complementizer "*that*", while an infinitive does with the complementizer "*for*".

Therefore, Rizzi argues that Fin contains a tense specification that matches that of the lower clause. For instance, in (107) there is a finite clause with the complementizer “*che (that)*” and in (108) there is an infinitive clause with the complementizer “*di (for)*”, located in ForceP and FinP, respectively.

A sentence, such as (112) is ungrammatical in Italian because a FinP element cannot occupy the higher position, which is reserved for a ForceP element (RIZZI, 1997, p.288):

(112) *Credo di il tuo libro apprezzarlo molto”
 ‘I believe of your book to appreciate it a lot’

The evidence presented so far compels us to adopt the concept of ForceP. In the next section, I will describe the properties associated with this projection in Brazilian Portuguese.

5.1 Starting to analyze ForceP in Brazilian Portuguese

If one takes the characterization of the force system into account, one might consider the *que* morpheme in (113) to be the phonological realization of Force. It is located in the uppermost projection and relates the embedded clause to the matrix clause, or the matrix clause to discourse (see p.29), as shown below:

(113) [O João acha [_{ForceP} [_{Force} **que** a Maria encontrou o Pedro no cinema]]]
 ‘John thinks that Mary found Peter at the movie theater’

(MIOTO, 2001, p.102)

The subordinate clause is a declarative selected by the verb *achar*, which subcategorizes for a declarative CP. Thus, the sentence is grammatical.

FinP, on the other hand, interfaces with the embedded sentence (as stated before), determining the finiteness of the clause. FinP is the category that licenses an **infinitive** IP only (see p.29). For this reason, a finite sentence contains a ForceP filled with either a *wh*-word in its Spec or *que* in the head, or both, while FinP does **not** allow *que* to remain in its head, since this is an element that is located in the Force head. However, it must be the case that it is generated in FinP because there is information about the finiteness of the sentence. In the words of Rizzi and Bocci (2017, p.4) “The fact that *che* expresses both properties of declarative force and finiteness may be technically characterized through movement (external merge in Fin and further movement to Force, as in Belletti 2009), or through a Search relation between Force and Fin (Rizzi, 2013a)”.

To illustrate this, let us compare (114) to (115), two infinitive sentences. In (114), *que* does not occupy the Fin head (the *que* in Spec is part of the grammaticalised compound, see p.10) (115), on the contrary, contains a *que* in the Fin head. This is not possible and the sentence becomes ungrammatical.

(114) [_{FocP} O que [_{FinP} [_{Fin} fazer numa situação dessas]]]?
‘what to do in such a situation’

(115) * [_{FocP} O que [_{FinP} [_{Fin} **que** fazer numa situação dessas]]]?
‘what that to do in such a situation’

(MIOTO, 2001, p.104)²⁴

In (114), the wh-word is located in FocP (above Fin) because the Spec of FocP houses wh-words in main interrogatives (see p.29).

Now look at the two **finite** sentences below ((117) and (118)). In (117) there is a wh-word (*o que*) in Spec, QembP, and in (118) there is the wh-word (*o que*) in the Spec of QembP and the *que* morpheme in the head of this projection. These positions are higher than FinP but lower than ForceP, as I showed in the map on page 35, repeated here for clarification (116).

(116) [Force [Top* [Int [Top* [Foc [Top* [Mod [Top* [Qemb [Fin [IP]]]]]]]]]]]]]]]]]]]]]]]]

(RIZZI AND BOCCI, 2017, p.9)

(117) O João não sabe o que fazer.
‘John doesn’t know what to do’

(118) *O João não sabe o que **que** fazer.
‘John does not know what that to do’

(MIOTO, 2001, p.104)²⁵

They are evidence that a Fin head filled with *que* is ungrammatical, exactly in the way (115) is. (118) is ungrammatical because the Fin head is filled with *que*. We know the *que* in bold is in FinP for two reasons. First, it is the only position left below Qemb (see (116)), which is the position where *o que* is located. Second, because IP/TP is infinitive. Let us look at another pair of sentences.

²⁴ I have added the brackets and the FocP label for purposes of clarity.

²⁵ Same as footnote 21.

(119) [O João não sabe [_{ForceP} o que a Maria fez]]
'John doesn't know what Mary did'

(120) [O João não sabe [_{ForceP} o que [_{Force} **que** a Maria fez]]]
'John doesn't know what that Mary did'

(MIOTO, 2001, p.104)

These sentences show the distribution of ForceP in contrast to FinP in Brazilian Portuguese. The underlying assumption is that wh-elements must move from their base position to the left periphery. ForceP is one of the positions that hosts many of these elements; this movement is feature-driven, i.e., it is the checking of a feature that forces elements to be moved from their original position to the landing position.

Relatives can be understood as occupying ForceP as well (121). I will explain this configuration in detail in section 6.

(121) [_D O [_{ForceP} livro_i que (o João leu _{t_i)}]]
'the book that John read'

(MIOTO, 2001, p. 103)

Exclamatives should also occupy ForceP since they determine the illocutionary force of the sentence. In fact, Rizzi and Bocci (2017) suggest that this may be the case for Italian wh-exclamatives, as I stated on page 37, when I mentioned example (100), repeated as (122) here.

As I said, the authors ask whether *che* lexicalizes the exclamative criterial head (probably located in ForceP) or Fin, leaving the question open. The same question should apply to BP. I will assume that *que* (the correspondent of *che*) lexicalizes ForceP in BP because it determines the illocutionary force of the sentence. Thus, a sentence such as (123) is an exclamative whose Force head is occupied by an exclamative *que* (in bold) hosting exclamative features.

(122) Che bel libro [**che** [ho letto]]!
'What a nice book EXCL I read!'

(RIZZI AND BOCCI, 2017, p.13)

(123) Que belo livro **que** [_{+EXCL}] você leu!
'what nice book that you read'

6. Preliminary conclusions

In this chapter, I have looked at the syntax and semantics of exclamatives, wh-exclamatives and relatives and I complemented my initial presentation of ForceP in chapter 1. All this information is necessary to support my proposals in the following chapter.

CHAPTER 3

BRAZILIAN PORTUGUESE DATA AND THE EVIDENCE FOR MORE MATERIAL WITHIN FORCEP

1. Introduction

Let us get back a little bit. In chapter 1, I presented a few questions regarding the structure of sentences (23), (24) and (25). Now, I intend to analyze these sentences in depth in order to answer these questions. Therefore, I aim at:

- Explaining why the omission of the complementizer in (23) is not ungrammatical, while it is in (24) and (25);
- Analyzing the structure of (23), (24), and (25), determining why their structures differ;
- Providing an answer to why the order relative + exclamative is not possible in BP;
- Looking at a previous proposal for a split Force and arguing in favor of keeping some of its findings while accommodating my data within that proposal
- Analyzing Hanging Topics and Left Dislocated elements in Brazilian Portuguese;
- Enriching cartographic analyses of sentential wh-exclamatives and their structure in BP;
- Contributing to the cartographic literature as a whole, by showing evidence of more structure within CP;

The first question I want to address here is “what does the structure of Brazilian Portuguese sentential wh-exclamatives like the ones in (23), (24), and (25) of chapter 1 tell us about the Force node?”

To search for an answer, one must look at the structural differences between these sentences. Let us first compare sentences (23) and (24), repeated here as (1) and (2):

(1) [_{ForceP} Que lindo carro **que** [_{IP} você comprou!]]
‘what beautiful car that you bought’

(2) a. [_{ForceP} Que legal o carro [_{ForceP} **que** o Pedro comprou *ti*]]
‘how nice the car that Pedro bought’

b. [_{ForceP} Que legal [_{ForceP} **o que** (que) [_{IP} você fez!]]]
‘how nice what you did’

Sentence (1) contains an exclamative, whereas (2a) and (2b) contain an exclamative followed by a relative. The relative projection in (2a) is a headed relative, while (2b) shows a headless relative. The main difference is that there is only one functional projection activated in ForceP in (1), while there are two in (2 a and b). As I have argued before, such a structure seems to pose a problem for a cartographic project based on Kayne’s (2005) “one feature, one head principle”, and the reason is clear: there are two different wh-phrases in Force, each carrying a different feature that must be checked, i.e. each one activating a different criterion. However, there is only one projection: ForceP. Let me show the details to make the issue clearer.

I assumed for Brazilian Portuguese the hypothesis that the exclamative *que* lexicalizes ForceP, as in the following sentence:

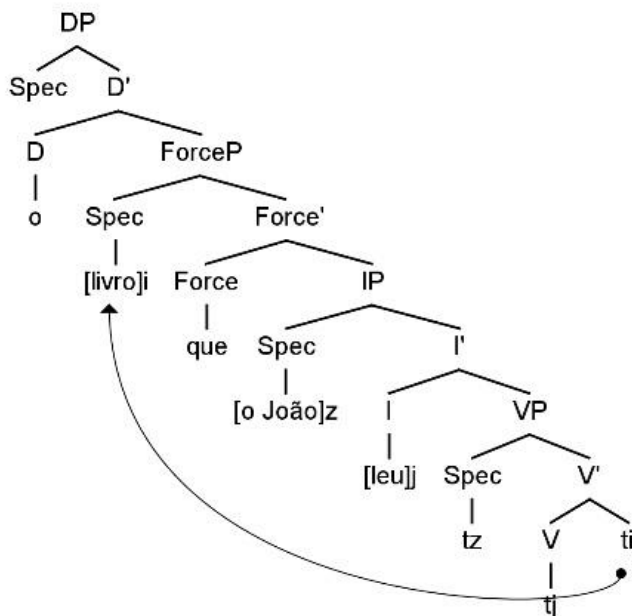
- (3) [_{ForceP} [**Que linda**]_i [_{Force0} **que** [_{IP/TP} a sua casa [_I é *t_i*]]]!
‘how beautiful that your house is’

Here *que* (in bold) clearly occupies a position which is higher than IP/TP. The exclamative phrase *que linda* is displaced to the CP area. Notice that the bolded *que* is higher than *a sua casa*, which is the subject of the sentence (hence, in Spec, IP/TP). This being so, the exclamative phrase (*que linda*) is supposed to be in the Spec of *que*.

What seems to be happening with the data in analysis is that *que* is in fact the realization of Force⁰. Let me assume, for the sake of argumentation, that this Force head bears an exclamative feature [+Excl]. Within a syntax of criteria, this head must now search for a compatible operator for a checking operation to occur; when it is found, (and it is precisely *que linda* in the utterance above) the Exclamation criterion is activated and the checking operation can apply; *que linda* must then occupy Spec, ForceP. The exclamative sentence has been successfully derived.

Now, remember I have said before I would need to consider the syntax of relatives in order to explain some of my data? This is the moment to do so. Here I will assume Miotto’s (2001) analysis for BP relative clauses. According to his analysis, *que* in these constructions lexicalizes the Force node. He explains that ForceP is responsible for the sentential type, such as the relative type, as shown below:

- (4) [[_D O [_{ForceP} livro [_{Force} que [_{IP} o João leu *t_i*]]]
‘the book that John read’ (MIOTO, 2001, p.103)



In the analysis above, based on Bianchi's (1995, 1999) works, D subcategorizes ForceP (see Kayne's (1994) proposal, p.38-41). The NP *livro* occupies the Spec of ForceP and the *que* morpheme occupies the Force head. The idea here would be very similar to the description of the exclamativization process: *que* in Force⁰ would contain a relative feature [+Rel], which must search the c-commanded area for a compatible operator. *Livro* bears the expected feature and the relative criterion is activated, displacing the DP to the Spec of *que*, which is the Force head, as I have stated earlier²⁶.

If the above analysis is on the right track, it poses a problem for the derivation of a sentence like (2): how can both the relative and the exclamative operators occupy the Spec of the same projection, namely ForceP, if the principle "one feature, one head" is to be obeyed? This seems to be the case because I am proposing that both the exclamative and the relative heads should be located in ForceP.

What this principle aims to show is that derivations are feature-driven. This was necessary after a shift to a more constrained X-bar theory after Kayne (1984) binary branching hypothesis, which, in turn, pushed research towards figuring out how to analyze some sentences under an impoverished syntactic structure. The solution was to reduce movement to some feature driven purpose. In this approach, each head must bear only one feature and project only once²⁷.

²⁶ On the existence of a RelP projection, see Medeiros Junior (2005).

²⁷ I am aware that recent models of generative syntax do not work with the concept of movement triggered by the need to check, but by the presence of [+EPP]. However, because this thesis is being developed according to the cartographic approach, I will adopt the checking model so that the criterial syntax assumed here works.

A discussion of this idea is found in Larson’s (1988) demonstration that the representation of multiple complements requires a VP shell-like structure, with two head positions at least. These two head positions should project two different verbal constituents, giving birth to the distinction between vP and VP (this will be clear on p.73 ahead) (SHLONSKY, 2010).

If the principle “one-feature, one-head” is correct, it should block the derivation of sentences like (2), repeated as (5) below, because one Force projection could not host two different heads activating two different criteria, i.e., one exclamative and one relative, as these host each a different feature. However, sentences in (5) are perfectly grammatical, leading to an apparent contradiction of the principle.

- (5) a. [_{ForceP} Que legal o carro [_{ForceP} que o Pedro comprou ti]]
 ‘how nice the car that Pedro bought’
- b. [_{ForceP} Que legal [_{ForceP} **o que** [_{IP} você fez!]]]
 ‘how nice what you did’

One solution would be to do away with ForceP entirely and assume the existence of one Exclamative Phrase and one Relative Phrase. However, the motivation for proposing ForceP is strong, as I have shown. Therefore, another solution should be proposed. I will do so in the next section.

2. The reason why ForceP must be split

Based on the data from BP, I believe that ForceP must be split into at least two different functional projections: RelP and ExclP, since each projection must be responsible for “checking” its heads’ corresponding features, as it was explained in the last section. Here I will present the derivations for sentences (23) and (24) of chapter 1, repeated as (6) and (7) to clarify my proposal.

- (6) [_{Exclamative phrase} Que lindo carro **que** [você comprou!]]
 “what a beautiful car that you bought!”
- (7) [_{Exclamative phrase} Que legal [_{Relative phrase} **o que** você fez!]]
 ‘how nice what you have done!’”

The exclamative in (6) would be derived as follows:

Step 1: The exclamative phrase *que lindo carro* is selected by the verb *comprou*, being interpreted as its complement.

(8) [TP você comprou [que lindo carro [+Excl]]
 ‘you bought what beautiful car’

Step 2: The Force head is merged and activates Force:

(9) [Force que [TP você comprou [que lindo carro[+Excl]]]]
 ‘that you bought what beautiful car’

Step 3: A Force criterion is activated and requires movement of the exclamative phrase containing the relevant feature; the exclamative phrase is, then, moved to Spec, ForceP:

(10) [ForceP [Que lindo carro] [Force que [TP você comprou [~~que lindo carro~~ [+Excl]]]]]
 ‘what a beautiful car that you bought!’

(MEDEIROS JUNIOR; SIEIRO, 2018; MEDEIROS JUNIOR; SIEIRO, to appear, p.13)

The exclamative sentence (6) was derived successfully. What about (7)?

This is the crucial part of my proposal. Here there are two projections in ForceP, as I will demonstrate in the derivation below. As stated, this poses a problem if the idea of “one feature, one head” is to be accepted. **Thus, a solution ought to be proposed. I propose that ForceP should be split so that it can host an exclamative projection, needed to derive sentences such as (6), but also a relative projection to derive sentences like (7).** The structure I suggest for CP is the following:

(11) [ForceP [ExclP [RelP [Top* [Int [Top* [Foc [Top* [Mod [Top* [Qemb [Fin [IP]]]]]]]]]]]]]]

I will derive the structure in (7) to illustrate my proposal:

Step1: The relative and the exclamative phrases are selected by the verb *fez*.

(12) [TP Você fez [o que _[+Rel]] [que legal _[+Excl]]]²⁸
 ‘you did what how nice!’

Step 2: The existence of a phrase containing a relative feature activates a relative criterion and, consequently, a Relative Projection (RelP).

(13) [RelP [o que _[+Rel]]_i [TP você fez [~~o que~~ _[+Rel]]_i [que legal _[+Excl]]]]]
 ‘what you did how nice

Step 3: The phrase with an exclamative feature, then, activates the Exclamative Projection and an exclamative criterion forces displacement to Spec, ExclP:

(14) [ExclP [[que legal _[+Excl]] [Excl [RelP [o que] _{[Rel [+Rel]}] [TP você fez [~~o que~~ _[+Rel]]_i [~~que legal~~ _[+Excl]]]]]]]
 ‘how nice what you did !’

(MEDEIROS JUNIOR; SIEIRO, 2018; MEDEIROS JUNIOR; SIEIRO, to appear, p.14)

The sentence has been successfully derived. It was only possible with the splitting of ForceP, which now contains two projections: ExclP and RelP. This is my proposal: sentence ((7)) contains a free relative. But what about headed relatives? Are they subject to the same kind of procedure? Let us find out.

To answer this question, I now approach question number 2 of the introduction: what is the difference between (7) and (25) of chapter 1, repeated as (15)?

(15) [TP Que lindo (carro) [o (carro) _[+Rel] [que você comprou _[+Excl]]]!
 ‘what beautiful car the car that you bought!’

²⁸ I take the relation between [o que] and [que legal] to be some sort of secondary predication. The idea is that the compound is selected by the predicate in the matrix, being both of them wh-operators carrying a different kind of feature: the lexicalized [o que] carries a relative feature [+Rel] and the operator [que legal] carries an exclamative feature. As the relative head is merged, it immediately activates a relative criterion and [o que] is displaced due to a checking operation. Later, the exclamative head is externally merged and activates an exclamative criterion causing the displacement of the [que legal] exclamative operator to the Force area, as shown in steps 1, 2 and 3 of the derivation.

An alternative analysis (suggested to me by Marcelo Sibaldo in personal communication) is to consider the relative CP to be derived independently and the whole relative CP to be considered an argument of the AP [que lindo], which would be displaced, after the external merge of the exclamative head and the consequent activation of an exclamative criterion, in order to check an exclamative feature within the Force area. However, this idea would face some problems with the derivation of the topicalized constructions I discuss in section 4. Naturally, this whole implementation needs more refinement, but I will keep the first option for now and leave the matter open for future investigation.

To answer that, I must propose a derivation for (15). It falls within the same derivation of (7) except for some minor alterations:

Sentence (15) would be derived as follows:

Step 1: After TP is complete, (15) will look like (16):

(16) [TP Você comprou [carro [+Rel]] [que lindo [+Excl]]²⁹
 ‘you bought car how pretty’

Step 2: As expected, the presence of a phrase with a [+Rel] feature activates the Relative projection within Force, Rel⁰ (que) is then merged:

(17) [RelP [Rel que [TP Você comprou [carro [+Rel]] [que lindo [+Excl]]
 ‘that ‘you bought car how pretty’

Step 3: As I have argued before, the relative clause in this sentence is selected by a determiner (see. p. 44-45). After the relative projection is activated, D is externally merged:

(18) [DP o [RelP [Rel que [TP Você comprou [carro [+Rel]] [que lindo [+Excl]]
 ‘the that you bought car how pretty’

Step 4: The relative criterion applies, and the phrase carrying the [+Rel] feature is moved to the Spec, RelP:

(19) [DP o [RelP carro [Rel que [TP Você comprou [~~carro~~ [+Rel]] [que lindo [+Excl]]
 ‘the car that you bought car how beautiful’

Step 5: The presence of a phrase with a [+Excl] feature activates the Exclamative projection:

(20) [ExclP [Excl [DP o [RelP [carro [+Rel]]i [Rel que [TP Você comprou [carro [+Rel]]i [que lindo [+Excl]]
 ‘the car that you bought car how beautiful’

²⁹ Here there is also a secondary predication between the exclamative and the relative phrase.

Step 6: The exclamative criterion applies and the exclamative phrase is raised to Spec, ExclIP:

(21) [ExclIP [[que lindo [+Excl]]]_k [Excl [DP O [RelP [carro [+Rel]]]_i [Rel que [TP você comprou ~~carro~~ [+Rel]]]_i [que lindo [+Excl]]]
‘how beautiful the car that you bought’

(MEDEIROS JUNIOR; SIEIRO, 2018; MEDEIROS JUNIOR; SIEIRO, to appear, p.14)

As the derivation shows, headed relatives can be perfectly derived within the structure I am proposing.

Now let us look at word order within ForceP. A sentence like (26) of chapter 1, repeated below as (22), is ungrammatical in Brazilian Portuguese. This sentence has a relative projection above the exclamative projection:

(22) *O que você fez (RP) que legal (EP)!

I will argue here that this ungrammaticality is caused by syntactic and pragmatic reasons. Let us look at syntax first. In (23) one finds the successful derivation of a sentence with an exclamative and a relative projection. This derivational process clarifies why the relative projection cannot be above the exclamative one.

(23) a. [DP [D O [RelP [Rel que [TP você comprou [NP carro [+Rel]]] [que lindo [+Excl]]]
‘the that you bought car how pretty’
b. [DP [D O [RelP carro_i [Rel que [TP você comprou [NP ~~carro~~ [+Rel]]] [que lindo [+Excl]]]
‘the car that you bought car how beautiful’
c. [ExclIP que lindo [DP [D O [RelP carro [Rel que [TP Você comprou [NP ~~carro~~ [+Rel]]] [que lindo [+Excl]]]
‘how beautiful the car that you bought’

The first two steps of this derivation ((23a) and (23b)) show what is at stake here: the determiner (D) selects the relative sentence as a complement. If the relative phrase were not lower than the exclamative, this would not be possible, as made evident by (23c), where the exclamative projection is above the determiner. Furthermore, as Bianchi (1999) suggests, the

nominal antecedent of the relative CP (i.e. the relativized nominal) is raised within the subordinate sentence and ends up in a specifier position (the Spec, CP in *that* relatives and the Spec of the displaced *wh*-phrase in *wh*-relatives) from where it enters into some relation with the external D (see p.46). In this case, the relation is between the NP *carro* in Spec, RelP and the determiner. An alternative possibility would be the determiner selecting an exclamative phrase, but this possibility is also cast aside, as shown in (24) and its respective derivation, (25).

(24) *O que lindo carro que você comprou
 ‘ what (the+that) beautiful car that you bought’

(25) *[DP [D O [ExcIP que lindo [RelP carro [Rel que [TP Você comprou [NP ~~carro~~ [+Rel]] [~~que lindo~~ [+Excl]]]
 ‘the how beautiful car that you bought car how beautiful’

In addition to the syntactic arguments, one may find pragmatic reasons to support the order exclamative+relative. First, the element encoding the illocutionary force of the sentence should occupy the leftmost position of the sentence. This means that an exclamative element should be in the head or specifier of the leftmost projection in an exclamative sentence like (22). Thus, a relative in this position is not possible because the sentence gets the wrong illocutionary force, or it does not get the appropriate interpretation, which is exclamation.

At this point, it is important to make a distinction between the illocutionary force of a sentence and sentential/clause type, following the ideas exposed in Coniglio and Zegrean (2012). Their proposal is based on their observation of discourse particles in some languages, which shows the aforementioned difference. In their work, they show that some discourse particles can only occur in some sentential types.

For instance, the unstressed German particle *ja* can only occur in declarative clauses, whereas *denn* may only occur in questions, as illustrated by the sentences below:

(26) Er kann **ja** schon schwimmen.
 ‘he can prtI already swim’

In this sentence, the speaker uses the particle *ja* to emphasize that the propositional content of the utterance is obvious and potentially known to the hearer. This is a pragmatic function, i.e., it modifies the speaker’s intention. This is considered the illocutionary force of the utterance. Nevertheless, it may only occur with a specific type of sentence, i.e., with a

specific sentential/clause type. On the other hand, a particle such as *denn* may only occur in questions:

(27) Er kann (***denn**) schwimmen.

‘he can prtl swim’

Usually, a certain type of illocutionary force is mapped into syntax by means of a specific clause type. Therefore, most times there is a one-to-one relation between clause/sentential type and illocutionary force. Thus, for instance, a directive (requesting an action) typically corresponds to an imperative clause, as for example in (28).

(28) Call the police! Force= directive/ clause type = imperative

However, sometimes there is no correspondence, as in (29) below, where the speaker, for reasons of politeness, uses a question to express a command:

(29) Could you call the police? force = directive/ clause type = interrogative

This example, along with others (see CONIGLIO AND ZEGREAN, 2012), shows that a speech act may be realized by a clause type that does not typically correspond to its illocutionary force. Hence, the authors show that in some cases illocutionary force and clause type are two distinct features of a sentence. Coniglio and Zegrean (2012) present these arguments to propose that ForceP should be split into two projections, which they call Illocutionary Force (ILL) and Clause Type (CT).

ILL is the projection that encodes the speaker’s intentions in relation to discourse, lying at the interface between syntax and pragmatics and being relevant at the discourse level. CT, on the other hand, interacts with FinP and IP/TP, as it is the projection that conveys information about the syntactic structure of the clause, meaning that if the syntax is not compatible with the features in CT, the derivation will crash. Finally, CT must be located below ILL because of the interaction with FinP and IP/TP.

The authors’ proposal is incompatible with Rizzi’s view of a single force projection, and so is my proposal. However, I capture the observations made by Coniglio and Zegrean (2012) by arguing that ExclP is the projection that encodes the illocutionary force of the sentence, whereas RelP encodes the sentential type in the examples I mentioned.

The example sentences I took from BP in addition to Coniglio and Zegrean's proposal cast doubt on the idea of a single force projection as proposed so far by cartographic authors such as Rizzi, Bocci and Miotto.

Thus, it was my intention to demonstrate that a richer and more accurate possibility (the split of ForceP) seems to be an option at hand, and one of the purposes of this dissertation was to cast some light on this type of structure in BP. I also believe that ForceP might be split in other languages, but only research might reveal that³⁰.

4. Hanging topics or more structure within ForceP? Discussing Benincà (2001) and proposing an alternative analysis.

4.1 Introduction

After having shown my proposal for a split ForceP, I will use the structure I proposed as a basis for the analysis of another construction. This construction is the one found in sentences like (28) in chapter 1, repeated as (30) below.

- (30) a. A casa que vocês compraram(topic), que linda!
'the house that you bought, how beautiful'
- b. A menina que ele conheceu(topic), que encantadora!
'the girl that he met, how enchanting'

As we can see, there is a topic positioned above the exclamative phrase within the utterances in (30). The reader might recall that this fact gave birth to the following question in the introduction of this dissertation: where are those topics positioned, within or without ForceP? I will argue here there are reasons to believe topics in such constructions are held within ForceP, which might indicate that the Force projection holds yet more functional positions than RelP and ExclP.

³⁰ An alternative view to the cartographic analysis of the clausal architecture can be found in Lahne (2009). The author analyzes the C-domain as a single CP with multiple specifiers whose order results from hierarchy-driven handling of the feature hierarchy of C⁰. However, I adhere to the cartographic analysis because it seems to be hard to explain ordering among them with simple recursion, as Benincà (2001) explains "Solutions such as recursion of CP, adjunction to the Spec or multiple specifiers, would not lead us to expect any ordering among different elements, unless this was due to independent reasons." (BENINCÁ, 2001, p.3).

The derivation of (30a) starts as (31).

(31) [TP Vocês compraram [casa _[+Rel] [que linda _[+Excl]]
 ‘you bought house how beautiful’

Step 2: As expected, the presence of a phrase with a _[+Rel] feature activates the Relative projection within Force. Rel⁰ (*que*) is then merged:

(32) [_{Rel}P [_{Rel} que [TP Vocês compraram [casa] [que linda _[+Excl]]]
 ‘that ‘you bought house how beautiful’

Step 3: As I have argued before, the relative clause in this sentence is selected by a determiner (see. p. 44-45). After the relative projection is activated, D is externally merged:

(33) [DP a [_{Rel}P [_{Rel} que [TP Vocês compraram [casa _[+Rel]] [que linda _[+Excl]]]
 ‘the that you bought house how beautiful’

Step 4: The relative criterion applies, and the phrase carrying the _[+Rel] feature is moved to Spec, RelP:

(34) [DP a [_{Rel}P casa [_{Rel} que [TP Vocês compraram [~~casa~~ _[+Rel]] [que linda _[+Excl]]]
 ‘the house that you bought house how beautiful’

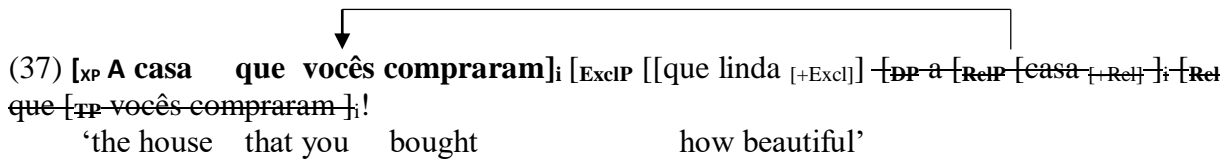
Step 5: The presence of a phrase with a _[+Excl] feature activates the Exclamative projection:

(35) [_{Excl}P [_{Excl} [DP a [_{Rel}P [casa _[+Rel]]_i [_{Rel} que [TP Vocês compraram [~~casa~~ _[+Rel]]_i [que linda _[+Excl]]]
 ‘the house that you bought house how beautiful’

Step 6: The exclamative criterion applies and the exclamative phrase is raised to Spec, ExclP:

(36) [_{Excl}P [[que linda _[+Excl]]_k [_{Excl} [DP a [_{Rel}P [casa _[+Rel]]_i [_{Rel} que [TP vocês compraram [~~casa~~ _[+Rel]]_i [que linda _[+Excl]]]
 ‘how beautiful the house that you bought’

Then, the whole relative sentence is dislocated to a projection, which I will call XP for now, above ExclP.



It is important to highlight that the sentence is good with a pause, which indicates the topicalization of the relative clause, but if there is no topicalization prosody, the result is bad, as one can see in (38):

(38) *O que você fez que legal!³¹
 ‘what you did how nice’

The question now is where this topicalized sentence is located. In order to answer that, I wish to consider the work by Benincà (2001), who proposes that a left dislocated topic is a Hanging Topic (HT) located in a projection above ForceP, which she calls DiscourseP.

In fact, the inspiration for collecting sentences from BP with dislocated topics came from Benincà (2001). However, there are reasons to believe there is no need to postulate such a projection as DiscourseP in order to describe (30). In lack of strong evidence to state the existence of DiscourseP, I will propose those topics are within ForceP, which might suggest there are topic positions available within Force. In the next subsections, I will analyze Benincà (2001) to argue that her model does not seem to be on the right track and then look at this kind of construction in Brazilian Portuguese.

4.2 Benincà’s (2001) proposal and the evidence for more structure within ForceP

Benincà (2001) adopts the cartographic analysis, stating that many elements can be assumed to be in CP. Some examples that she mentions are interrogative pronouns and phrases; relative pronouns and phrases; exclamative phrases; thematized elements (possibly binding a resumptive clitic) and focalized elements (with contrastive intonation).

³¹ The reader must read this sentence as a run-on with no pauses.

Some of these elements are analyzed here, namely exclamative phrases and relative pronouns and phrases. Furthermore, I have shown some examples of interrogatives, topics and foci.

The elements that matter most in this section, however, are the ones she refers to as Hanging Topic (HT) and Left Dislocation (LD), which are dislocated thematized elements. I will show their characteristics ahead.

4.3 Hanging Topics and Left Dislocation in Italian

Benincà (2001) proposes a structure she calls Discourse Phrase (DiscP), supposedly hosting an HT and LD.

An HT, according to the author, is a topic or theme that was dislocated to the left periphery of the clause to be marked. It must be a DP without prepositions. Moreover, it is associated with a resumptive clitic that expresses the type of argument. This clitic only agrees with the HT in number and gender, not in Case in Italian. Sentence (39) hosts a HT in Italian.

(39) **Mario (HT)**, non ne parla più nessuno
'Mario, not of-him talks anymore nobody' (BENINCÀ, 2001, p. 6)

LD is very similar to HT. With LD, the entire thematized argument appears on the left, including any prepositions. Furthermore, a resumptive pronoun is obligatory with direct and partitive objects in Italian. However, it is optional in cases where the type of argument has no appropriate clitic. In contrast to HT, the pronoun of LD agrees with the topic in Case as well. (40) is an example of LD.

(40) **Di Mario (LD)**, non (ne) parla più nessuno
'Of Mario, not (of-him) talks anymore nobody' (BENINCÀ, 2001, p. 5)

Let us contrast the aspects of (39) and (40). In (39), the dislocated element (*Mario*) is a DP not accompanied by any preposition. It is associated with the resumptive genitive clitic *ne*. This clitic expresses its relationship with the verb in the sentence. The clitic shows that it is *Mario* whom nobody talks about anymore.

In (40), on the other hand, the DP is accompanied by a preposition (*di*). This preposition shows the grammatical function of the DP (an indirect object). The presence of the resumptive clitic element (*ne*) is optional because the DP is governed by the preposition *di*.

What one must bear in mind here is that the pragmatics of both the HT and LD are the same: they are a marked thematization. The main difference is that, in Italian, HT is limited to the colloquial style, while LD is very common in written and formal language. As a matter of fact, if the preposed argument is a direct object or a subject, HT and LD become indistinguishable.

What about the position of these elements? Are they located above or within ForceP?

4.4 Hanging Topics and Left Dislocation in relation to relatives and exclamatives

Before showing the position of HT and LD in relation to relatives and exclamatives, Benincà applies some tests to determine their position between themselves.

She proposes that the order seems to be LD, HT and Focus. Let us start with LD and Focus. LD must usually precede focalized elements³²:

(41) a. **A Giorgio**, un posticino, **IL DOTTOR PIVA** può trovarglielo! **LD-FOC**
 ‘To G., a job, DOCTOR PIVA can find it to him!’

b.(*) **IL DOTTOR PIVA**, **a Giorgio**, un posticino può trovarglielo! ***FOC-LD**
 ‘DOCTOR PIVA, to G., a job, he.could find.it.to.him!’

(BENINCÀ, 2001, p.8)

As the reader might have noticed, LD precedes FOC. What about HT?

(42) a. **Pietro**, **TUTTI GLI STUDENTI** hanno votato per lui **HT-FOC**
 ‘P., ALL THE STUDENTS have voted for him’

b ***TUTTI GLI STUDENTI**, **Pietro**, hanno votato per lui ***FOC-HT**
 ‘ALL THE STUDENTS, P., have voted for him’

(BENINCÀ, 2001, p.9)

HT also precedes FOC in Italian. The final question is the position of HT in relation to LD. The data below present the evidence the author discusses:

(43) a. **Giorgio**, ai nostri amici, non parlo mai di lui **HT-LD**
 ‘G., to our friends, I never talk of him’

³² Capital letters indicate focus.

- b. *Ai nostri amici, **Giorgio**, non parlo mai di lui ***LD-HT**
'To our friends, G., I never talk of him'

(BENINCÀ, 2001, p.8)

The order HT-LD is the only one possible in Italian. Benincà brings together the results of the tests to arrive at the following order: HT-LD-FOC. With this sequence at hand, it is now possible to determine the order of these elements with respect to *wh*- elements and complementizers.

The author follows Rizzi in assuming that relative phrases are located in ForceP, and so do I. According to Benincà (2001), p. 10 “the relative *che* is assumed to be the same lexical element as the complementizer introducing a subordinate clause. It appears to occupy the same functional position in CP as the relative *wh*- pronoun does, namely a position on the far left”. The author shows the position of LD and HT in relation to the relative *che* in the following examples (44-46).

- (44) *Sono certa *di questo libro* **che** non (ne) ha mai parlato nessuno **LD-che**
'I am certain, of this book, that nobody (of.it) has spoken'
- (45) Sono certa *questo libro* **che** non ne ha mai parlato nessuno (**relative**) **HT-che**
'I am certain, this book, that nobody (of.it) has spoken'
- (46) Sono certa **che** *di questo* libro non ne ha mai parlato nessuno **che-LD**
'I am certain that, of this book, nobody (of.it) has spoken'

(BENINCÀ, 2001, p.11)

It is clear from the data that HT and LD occupy a very high position in the structure. Perhaps, HT being located above ForceP and LD below ForceP. This must be so if the relative *che* in Italian is located in Force⁰. Next, I will show data of exclamative phrases in relation to HT and LD.

For Benincà, the exclamative *wh*-phrase is in a very high position in the sentence, possibly ForceP. In the author's words, “We have provided evidence for a localization of exclamative *wh*-. it seems likely that this location be the Spec of ForceP, both for syntactic and semantic reasons.” (BENINCÀ, 2001, p. 24). The following example shows that the exclamative phrase is located above LD.

- (47) *Che bel posto, a Giorgio, che (gli) hanno assegnato!* **Excl LD**
 ‘What a nice place, to G., that they have allotted-to him’

(BENINCÀ, 2001, p. 23)

By contrasting the positional data, the author obtains the following sequence: HT-Excl-LD. Let us see why: If HT is above LD and the relative head (*che*), which is in Force⁰, it can only be located in the highest position of the clause, namely above ForceP, or so the author claims. The relative is below HT but above LD (see (45) and (46)), the same is true of the exclamative (see (47)). Therefore, LD must be below ForceP. The sequence can only be HT-ForceP (ExclP-RelP, following my proposal)-LD. In the next subsection, I will analyze whether this word order also applies to BP. After that, I will claim that although the order seems to be the one presented by Benincà, the structure is a little finer than it seems. This will be my proposal for a topic inside ForceP.

5. LD and HT in Brazilian Portuguese?

Now let us look at HT and LD in Brazilian Portuguese. I have shown Benincà’s analysis of some aspects of these two elements in Italian. Let us look at some sentences from BP to identify these constituents in this language. As I explained in the previous subsection, HT is a topic or theme that has been dislocated to the left periphery of the clause to be marked and it must be a DP without prepositions. This is clear in (48). Here the DP “*a casa que vocês compraram*” was dislocated to the left periphery for emphasis, there is no preposition associated to the DP and there can be an associate resumptive element (*ela*). The same applies to (49).

- (48) [DP **A casa que vocês compraram**] (HT), que linda (ela)!
 ‘the house that you bought, how beautiful!’

- (49) [DP **O carro que o João alugou**] (HT), que velho (ele)!
 ‘the car that John rented how old’

What about LD? In Benincà’s analysis, an LD in Italian must have the following characteristics: the entire thematized argument appears on the left, including any prepositions. Furthermore, a resumptive pronoun is obligatory with direct and partitive objects, except for

those cases where the type of argument has no appropriate clitic. In addition, the pronoun of LD agrees with the topic in Case as well.

If we look at (50) below, we seem to have an LD. There seems to be only one problem: Benincà says that a resumptive pronoun is obligatory and in (50) there is none. However, there is an exception: the type of argument having no appropriate clitic. Sentence (50) seems to be the case, as one can see in (51). In (51), the speaker cannot use an appropriate clitic because there seems to be no appropriate dative clitic in BP. One could try the clitic *lhe* in (52), but the sentence still is deteriorated.

(50) [**Para a noiva**] (LD), que lindas as flores que o João vai dar!
 ‘for the bride how beautiful the flowers that John will give’

(51) ??[**Para a noiva**], que lindas as flores que o João vai dar para ela!
 ‘for the bride how beautiful the flowers that John will give to her’

(52) *[**Para a noiva**], que lindas as flores que o João vai dar-lhe!
 ‘for the bride how beautiful the flowers that John will give her’

Assuming that (48-49) are HTs and (50) is a LD, we have similar facts to the ones Benincà observes for Italian. Nevertheless, there is a distinction. In Italian, the order is HT-Excl-LD, whereas in BP it seems to be HT-LD-Excl, as the sentences below seem to suggest. These sentences contain Excl above LD, resulting in a clear ungrammaticality.

(53) *Que lindas a flores (Excl), para a noiva (LD), que o João vai dar.
 ‘how beautiful the flowers for the bride that John will give’

(54) *Que lindas a flores (Excl), para a noiva (LD), que o João vai dar para ela
 ‘how beautiful the flowers for the bride that John will give to her’

(55) *Que lindas a flores (Excl), para a noiva (LD), que o João vai dar-lhe
 ‘how beautiful the flowers for the bride that John will give her’

Although this word order is not possible, this should not be considered a problem, since it is well known that languages differ parametrically. Thus, I will assume the order HT-LD-Excl for the analysis ahead. In fact, even if one does not accept the position of LD, the argument I will put forth at least applies to HT.

5.1 Topics inside Force?

Benincà provides a map with the location of each constituent in CP. I show this map in (56).

(56) [DiscP HT C (subordinate che) [ForceP Excl.wh C (subordinate che) [TopP LD Topic H [FocP wh/Focus H [FinP C IP]]]]]]

(BENINCÀ, 2001, p. 25, adapted)³³

In this map, the highest projection is DiscourseP, responsible for hosting an HT. Right below it, there is ForceP, hosting an exclamative phrase. Moreover, below ForceP, there is a TopP hosting an LD. The author claims that HT is higher than ForceP and LD below it, resulting in the sequence HT-Force-LD. In BP, the order should be a little different: HT-LD-Force. Benincà's proposal is interesting, but, in my opinion, it fails to take something very important into account: the definition of ForceP.

As I have already argued, according to Rizzi (1997), the complementizer system works as the interface between a propositional content, which is expressed by IP/TP, and a superordinate structure, expressed by a higher clause or the articulation of discourse in the case of root clauses (see p.31). The element filling the Fin-Force system determines what comes below and above. Let us look at some examples.

(57) *Eu vi a menina [_{ForceP} [_{Force} *se* você falou]]
'I saw the girl if you spoke'

(58) Eu vi a menina [_{ForceP} [_{Force} *que* você falou]]
'I saw the girl that you spoke'

(59) Você perguntou ao João [_{IntP} [_{Int} *se* a Maria vem]]?
'you asked to John if Mary comes'

As I argued before (see p. 34) the complementizer *se* is in Int⁰, while the relative *que* is in Rel⁰ (or Force⁰). In (57), the embedded clause is a relative, thus the complementizer in C should be a relative complementizer, i.e., the relative *que*. However, in this sentence, Int occupies C, making the sentence ungrammatical. On the other hand, (58) is perfectly

³³ The only adaptation made was to the representation it in brackets instead of in a tree format, as was originally devised by Benincà.

grammatical because there is a relative *que* occupying Force/Rel. Finally, there is (59), a successful case of a filled Int head. The embedded clause is an interrogative, so the complementizer selecting it must be one compatible with this type of clause.

This applies both to the lower clause and to the higher clause or discourse. Thus, one should expect that an exclamative clause contained an exclamative element in Force, as in the following sentence:

(60) [_{ForceP} Que linda casa [_{Force} **que** você comprou!]]
'how beautiful house that you bought'

Now, let us remember some theoretical remarks I made in chapter 1 about the Force node and the cartographic project.

First, cartography understands syntax in a very simple way: it states that the computational system of the brain related to language uses criteria to guide derivations. The sentences above show that. The successful derivations had their correct criteria met, the unsuccessful one (57) did not. This is the criterial condition: specs and heads must be in a given configuration in order for their features to agree, leading to the satisfaction of the criterion (see p. 25).

In addition to that, according to Shlonsky (2010) and Rizzi (2015), the guiding principle in cartography is that it is a manner of representing scope-discourse semantics by means of the syntactic structure (see p. 28). The idea behind Force is that this projection has the role of determining the scope-discourse semantics and the pragmatics of a sentence, that is, the interpretative import of the sentence. The Force head is responsible for indicating the *mood* or force of the sentence, i.e., how this sentence should be interpreted. Should it be interpreted as declarative, interrogative, relative or exclamative? (BAYER, HINTERHÖLZL, AND TROTZKE, 2015, p.4)

Let us consider the following examples to make this concept even clearer.

(61) (I wonder) **whether** Hans drank beer.

(62) (I know) **that** Hans drank beer.

(BAYER, HINTERHÖLZL, AND TROTZKE, 2015, p.4)

In these examples, the choice of the complementizer changes the illocutionary force of the sentence. In (61), the sentence is an interrogative, whereas in (62) it is a declarative. As the reader can see, apart from the choice of the complementizer, the embedded clauses are identical. The complementizer defines the specification of force. With this important observation in mind we can now look again at the map proposed by Benincà (2001) in (56), repeated as (63), and at the sentences containing an HT (48-49), and an LD (50) in BP, repeated as (64) and (65) below.

(63) [**DiscP HT C** _(subordinate che) [**ForceP Excl.wh C** _(subordinate che) [**TopP Topic H** [**FocP wh/Focus H** [**FinP C IP**]]]]]

(64) [**DP A casa** **que** **vocês compraram**] (HT), que linda (ela)!
 ‘the house that you bought, how beautiful!’

(65) [**PP Para a noiva**] (**LD**), que lindas as flores que o João vai dar!
 ‘for the bride, how beautiful the flowers that John will give’

(BENINCÀ, 2001, p. 25, adapted)

The map in (63) shows DiscP, the projection allegedly hosting HT, to be located above ForceP. Furthermore, as I discussed on page 93, there is reason to believe that LD is above ForceP in BP. Thus, the sequence in (63) seems to be correct for Italian, as Benincà demonstrates, and seems to apply relatively well to BP, only with minor alterations. However, I believe there is a problem with the location proposed. HT and LD (if one accepts my analysis of LD above Excl) cannot be located above Force because this would contradict the concept of force. If the Force node really is responsible for the illocutionary force (mood) of the sentence, then it must be above the whole clause so that it can imprint its illocutionary force over it. As I explained before (see p.61) “Sentential wh-exclamatives are constructions containing a wh-operator that carries exclamatory force, which it imprints to the whole sentence over which it has scope”.

Sentences (64) and (65) and others like them are clearly exclamative. There is no doubt that they have the illocutionary force of exclamation; therefore, it is the case that the wh-operator must be in the highest projection of the sentence. This idea is incompatible with the presence of the projection DiscP, which Benincà claims to be above Force.

Perhaps a better solution is to propose that ForceP should be split even more to contain an HT or LD within it. This seems to be the answer for the question in chapter 1 “Is the topicalized constituent located inside ForceP, or is it outside it? (p. 15).

Below I will repeat sentence (28) of chapter 1, p.14, and propose a derivation for it where HT is located inside ForceP.

(66) A casa que vocês compraram, que linda!

(67) a. [TP Vocês compraram [DP a casa [ExclP que linda]]]

b. [RelP [OP[REL]-Ø a casa]_i [Rel que [TP vocês compraram [DP *t*_i [ExclP que linda]]]]]

c. [ForceP [ExclP Que linda]_j [RelP (OP[REL]-Ø a casa)_i [Rel que [TP vocês compraram [DP *t*_i [ExclP *t*_j]]]]]]]

d. [ForceP [HTP A casa que vocês compraram]_z [Top [ExclP que linda! [RelP *t*_z]]]]]

This is the derivation I propose for sentences containing HT and LD in Brazilian Portuguese. Considering the fact that Force should be the edge of the sentence, bearing no material over it, this derivation seems to befit the principles of cartography better.

However, I must state that more data must be brought under analysis to further support this proposal. This is only a first approach to the topic and it is by no means exhaustive. Nevertheless, it shows us that the CP system may be much richer than we thought.

6. Preliminary conclusions

This chapter has presented an overview of wh-exclamatives concerning their semantic, syntactic, and pragmatic aspects. It has also shown a proposal for a split ForceP, casting doubt on the current assumptions about the CP map. Furthermore, it has compared my proposal to an existent one, (CONIGLIO AND ZEGREAN, 2012). I believe these two proposals should be viewed as complementary, not as mutually exclusive.

Moreover, it has touched on the structure of dislocated topics, showing that they may be located inside ForceP.

Finally, I have looked at several data on wh-exclamatives in BP, thus enriching the analysis of this type of construction in the referred language. The information discussed here will serve as a basis for the analysis in the subsequent chapter.

CHAPTER 4

A NOTE ON NON-SENTENTIAL WH-EXCLAMATIVES

1. Introduction

In this chapter, I will approach sentences of the type found in (27) of chapter 1, which I will call non-sentential wh-exclamatives, repeated here as (1a) and (2a), and their respective ungrammatical counterparts (1b) and (2b). I aim to answer question number 4 of the introduction, namely “Why is it that the *que* morpheme in (1b) and (2b) is not allowed in these exclamative sentences?”

- (1) a. Que lindo esse carro!
 ‘What beautiful this car!’
- b. *Que lindo **que** esse carro!
 ‘How beautiful that this car!’
- (2) a. Que linda casa!
 ‘what beautiful house’
- b. *Que linda **que** casa
 ‘what beautiful that house’

This chapter is organized as follows: In section 2, I will show the apparent problem with the *que* morpheme in wh-exclamatives such as (1) and (2). In section 3, I will discuss a previous analysis for these sentences by Sibaldo (2015) to offer a different proposal for their structure; finally, in section 4, I conclude the chapter.

2. What is wrong with *que* insertion?

As I explained in chapter 1 and in the introduction of the present chapter, one cannot insert the *que* morpheme right after the wh-phrase in sentences such as (3a) and (3b) below, in contrast to what occurs in sentential wh-exclamatives such as (4), (5) and (6). Sentences (4) and (5) are similar to (3); the only difference is the presence of the copular verb (*é*). And sentence

(6) is just like the ones I analyzed in chapter 2. Thus, here I will assume the same analysis for them.

The distinction I just pointed out (the presence vs the absence of *que*) is a little odd because the other wh-exclamatives are grammatical with the morpheme, which we claim to be the C⁰ of the exclamative clause, and because the overt C⁰ exerts a strong attraction over items with the same features (see MIOTO, 2001). In fact, here I will use the nomenclature that I proposed in chapter 2. Thus, I claim that the *que* morpheme in (4), (5) and (6) is located in Excl⁰³⁴.

(3) a. *Que lindo **que** esse carro!
 ‘How beautiful that this car!’

 b. *Que mulher **que** bela!
 ‘what woman that beautiful’

(4) Que lindo que **é** esse carro!
 ‘how beautiful that is this car’

(5) Que lindo que esse carro **é**!
 ‘how beautiful that this car is’

(6) Que lindo carro **que** você comprou!
 ‘what beautiful house that you bought’

What is the reason for this difference? Why are the sentences in (3) ungrammatical with the morpheme? The reason seems to be that they are not sentential wh-exclamatives. Because of that, they do not project a CP. If they really contained a CP projection, like (4), (5) and (6), the morpheme *que* would likely be acceptable in these constructions, as it is in the other wh-exclamatives. Actually, other constructions that project CP in BP also allow a *que* morpheme in their C⁰ head, such as the interrogatives in (7) and (8) and the relative in (9). This is stronger evidence for the hypothesis that the constructions in (3) do not have a sentential status³⁵.

(7) [_{FocP} Quem [_{Foc0} **que** chegou]]?
 ‘who that arrived’

³⁴ This does not change the argument in any way. ExclP is part of ForceP, which, in turn, is part of CP. Thus, in a way, the *que* morpheme is still located in C⁰. In fact, one can see [CP[C⁰]] as an abbreviation of a more complex system, as explained in Rizzi and Cinque (2016), p.19: “On the other hand, such labels as C, T, and *v* are sometimes explicitly considered abbreviations of richer cartographic structures in the minimalist literature (e.g., Chomsky 2001, footnote 8)”.

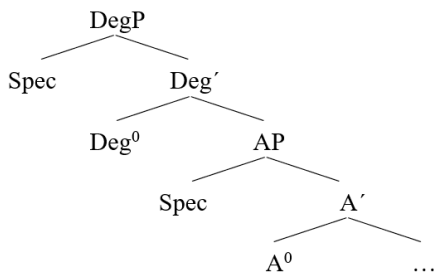
³⁵ I believe further arguments should be put forward to support the hypothesis in question.

(8) [_{FocP} Quando [_{Foc0} **que** o João saiu]]?
 ‘when that John left?’

(9) [_{RelP} A menina de quem [_{Rel⁰} **que** eu gosto]].
 ‘the girl of whom that I like’

Instead of accepting them as sentential wh-exclamatives, I partially assume Leopoldino’s (2018) analysis that sentences like (3) are a DegP containing an adjective phrase. Let us look at a possible structure for this type of construction in (10).

(10)



In the structure in (10) *que lindo* (how beautiful) constitutes a unit, sharing features. This allows any one of them to be omitted without affecting the exclamative reading. The adjective *lindo* is the predicate that selects *que carro* as a complement. The *que* morpheme is the determiner of *carro* (*que carro*). This will be clearer in a systematic fashion:

Step 1: The DP *que carro* is selected by the adjective *lindo*:

(11) [_{AdjP} lindo [_{DP} [_D que [_{NP} carro]]]]

Step 2: DegP selects the AdjP:

(12) [_{DegP} [_{Deg} [_{AdjP} lindo [_{DP} [_D que [_{NP} carro]]]]]]

Step 3: DP moves to Spec, DegP:

(13) [_{DegP} [_{DP} [_D que [_{NP} carro]]] [_{Deg} [_{AdjP} lindo]]]]

Even if *que* or *lindo* is omitted, the sentence remains grammatical because it is DegP that gives the exclamative reading of the sentence.

It could be the case that *que* moves to Spec, DegP so it can check its degree features with the Deg head below. The degree feature would be responsible for the exclamative reading of the sentence.

This structure does not contain a CP projection. Instead, it is a simpler proposal that analyzes these constructions as degree phrases. I will call this type of construction non-sentential wh-exclamatives because they are exclamatives since they have the force of exclamation but they do not seem to have the sentential status. This analysis is based on Castroviejo's (2006) thesis.

2.1 Non-sentential wh-exclamatives as degree phrases

According to Castroviejo (2006), a degree word is the basic ingredient of every type of exclamative, thus she treats wh-exclamatives as a kind of degree construction. For an utterance to be a degree construction, it is required to contain a gradable predicate (a gradable adjective since the adjective is the predicate of the exclamative phrase). I mentioned this type of predicate in chapter 2 (see p. 56): it is one that can be modified by an intensifier or by the wh-operator, as in the examples below.

(14) Quin gat **tan** simpatic!
'What a nice cat!'

(15) *Quin gat **tan** quadrúpede!
'What cat so four-legged'

(CASTROVIEJO, 2006, p.17)

(16) **Que** mulher belíssima ela se tornou!
'what a gorgeous woman she has become'

(17) ??**Que** mulher grávida ela se tornou!
'what a pregnant woman she has become'

Only in (14) and (16) are there gradable adjectives because they are the only ones that can be modified by an intensifier (*tán* in Catalan) and *que* in BP. Another aspect that can be noticed here is that *quin* is a wh-operator that does not include a degree feature, different from *que*.

According to Castroviejo, the degree operator *tán* in bold in (14) and (15) expresses high degree, an essential aspect of the exclamative construction. It is necessary for the grammaticality of the utterance because the gradable adjective cannot appear with the exclamative wh-operator *quin* only³⁶. This is so because even though *quin* is an exclamative operator, it does not contain a degree feature.

For clarity, let me mention examples (21) and (22) of chapter 1, repeated as (18) and (19) here. The assumption is that the wh-operator must contain a degree phrase at the left periphery, in this case the word *tán*, and must include a wh-feature. For the author, in (18) the wh-operator *quina* (as *quin*) contains a wh-feature but does NOT contain a degree word. Nevertheless, it must contain a degree word to be grammatical. The insertion of the degree word *tán* “rescues” the sentence. In (19) we have a different scenario, because *que* contains both a degree feature and wh-feature, its presence alone suffices (CASTROVIEJO, 2006, p. 40).

(18) [DP [D⁰ [+wh] **Quina** [NP [N película[DegP[Deg⁰ **tán**[AP entretinguda]]]]]]] que vam veure a l'avió
 ‘what an entertaining movie we saw on the plane’

(19) [DegP [Deg⁰ [+wh] **Que** [AP entretinguda!]] que va ser la película
 ‘how entertaining the movie was’

The point I want to make here is that, without the overt degree operator, the exclamative flavor is lost. It may modify the noun but without the implication that the degree denoted by the predicate is special in any way. For example, let us look at utterance (20). This is not a successfully produced exclamative. The exclamative flavor is not present here. Compare it with (21), where there was the insertion of *tán* giving the sentence its exclamative reading.

(20) ??Quin cotxe vermell que t'has comprat!
 ‘what car red that to you AUX you bought

(21) ?Quin cotxe vermell **tán** luxos que t'has comprat!
 ‘what car red so luxurious that to you AUX you bought

(CASTROVIEJO, 2006, p. 17-18)

³⁶ It is possible with *que* in Catalan, because this is a degree operator, according to Castroviejo (2006).

The same scenario can be observed in BP. In (22) there is no intensifier like *tán*, but the sentence is grammatical because of the wh-operator *que*, which imprints a degree reading over the sentence. As I explained before, the high degree reading gives the utterance the exclamative flavor.

The morpheme *que* plays an important role. First, it contains a wh-exclamative feature, which forces its movement from the position it was generated to the left periphery of the sentence to check the exclamative criterion. Second, it is a degree operator, perhaps containing [+evaluative] and [+degree] features. These aspects combined are responsible for the grammaticality of sentence (22) and its exclamatory reading.

(22) Que mulher belíssima ela se tornou!
 ‘what a gorgeous woman she has become’

In sum, Castroviejo (2006) assumes that sentential wh-exclamatives are degree constructions containing an adjective phrase. Furthermore, the adjective phrase is the head of the exclamative phrase (ZANUTTINI AND PORTNER, 2003). Based on these remarks I will assume that sentences like (1) have the structure represented in (10). They are a degree construction containing an adjective as its head and their exclamative flavor comes from the degree operator.

In the next section, I will show Sibaldo’s (2015) analysis of this type of construction, which he calls free que-small clauses (que-FSCs³⁷). His analysis is different from the one I propose here and contains some interesting observations. He considers them sentential wh-exclamatives. To support his claim, he demonstrates that canonical sentential wh-exclamatives and que-FSCs share many characteristics. I will give an overview of his 2015 paper ahead.

3. Focusing Sibaldo (2015), an alternative analysis

3.1. Free que-Small Clauses

Sibaldo (2015) proposes that Brazilian Portuguese contains an exclamative construction type called Free Small Clause (FSC). He defines it “as the juxtaposition of a predicate and its subject, in that fixed order, without any verb or morphological specification for tense on the

³⁷ I have created this abbreviation since Sibaldo’s abbreviation was in BP: que-Small Clauses Livres (que-SCLs).

surface” (SIBALDO, 2016, p.1). Sentences (23) and (24) are examples of what he calls FSCs:

(23) Muito linda a Maria!
'very beautiful the Maria'

(24) Uma maravilha essa aula!
'a marvel this class'

(SIBALDO, 2016, p.114)

Notice that these sentences are different from (1) since they have no *que* in their structure. However, they are very similar. Let us look again at some examples like (1) for comparison:

(25) Que linda essa bolsa!
'how beautiful this purse'

(26) Que droga aquela aula!
'how terrible that class'

(SIBALDO, 2015, p.114)

As I stated before, Sibaldo calls (25) and (26) *que*-FSCs and argues that the only difference between FSCs and *que*-FSCs seems to be related to the variation in the first elements contained within the predicate: instead of “muito” and “uma” in (23) and (24), there is a *que* in *que*-FSCs.

The author also shows that these elements are likely to be in complementary distribution (p.114).

(27) ***Que muito** linda essa bolsa!
'what how beautiful this purse'

(28) ***Muito que** linda essa bolsa!
'how what beautiful this purse'

(29) ***Que uma** droga aquela aula!
'what a shit that class'

(30) ***Uma que** droga aquela aula!
'a what shit that class'

It seems to me that the reason they cannot be in complementary distribution lies in the fact that *muito/uma* and *que* are degree operators, and a sentence cannot contain two degree operators. For instance, sentence (31) is ungrammatical because it contains a degree operator (*muito*) and degree morphology, represented by the suffix *-íssima*. In contrast, (32) is fine because it expresses high degree only with the suffix *-íssima*.

(31) *Muito lindíssima a sua roupa!
 ‘very beautiful+suffix your clothes’

(32) Lindíssima sua roupa!
 ‘beautiful+suffix your clothes’

After discussing the main differences between what he calls Free Small Clauses and que-Free Small Clauses, Sibaldo evaluates the possibility of the latter to bare exclamative import. On the way to provide an answer to that point, Sibaldo takes into account three aspects of exclamatives proposed by Zanuttini and Portner (2003), which are scalar implicature, question-answer relation, and factivity. I approached these aspects before in chapter 2, sections 3 and 4, in the analysis of sentential wh-exclamatives. Now let us look at Sibaldo’s analysis for que-FSCs. The utterance below (33) is an example of a sentence containing all the three aspects (SIBALDO, 2015, p. 116).

The first aspect, which is scalar implicature, conveys a meaning of unexpectedness. It implies that there is a scale where the adjective is placed on the top, conveying high degree.

(33) Que feio o seu sapato!
 ‘how ugly your shoe’

This sentence conveys the idea that the ugliness of the shoe is beyond normal, it is, therefore, surprising. On top of that, the adjective, which is the head of the exclamative phrase, is gradable; this is why an intensifier like *muito* (very) can replace it in an FSC, as in (34).

(34) Muito feio o seu sapato!
 ‘very ugly your shoe’

An exclamative sentence with a non-gradable adjective is ungrammatical, as I have just stated. (35) shows another occurrence of this ungrammaticality.

(35) *Que russa aquela vodka!
'how Russian that vodka'

(SIBALDO, 2015, p.116)

The second aspect Sibaldo observes is that que-FSCs cannot be answered- (36b), (37) and (38) below, in contrast to interrogatives (36a). As I pointed out in chapter 2, p.58, sentential wh-exclamatives such as (39) cannot be answered either.

(36) a. How tall is he? Seven feet tall
b. How very tall he is! *Seven feet!

(ZANUTTINI & PORTNER, 2003, p. 27)

(37) Muito inteligente a Maria! *Sim.
'very intelligent the Mary yes'

(38) Que linda a sua namorada! *Claro!
'how beautiful your girlfriend sure'

(SIBALDO, 2015, p. 116)

(39) Que linda casa que você comprou! *Sim.
'what beautiful house that you bought yes'

The third and final aspect the author observes is the possibility of embedding them only under factive verbs since exclamatives in general can only be embedded under factive verbs. This aspect, however, is not present in que-FSCs. These constructions cannot be embedded at all. Sibaldo (2015) justifies this fact by claiming that this sentential type is a root clause, and because root clauses are “free” they may not be embedded in any situation. The following sentence shows that embedding it results in an ungrammatical sentence.

(40) *O Pedro sabe que luxo essa casa!
'the Pedro knows what luxury this house'

(SIBALDO, 2015, p.117)

One, however, may come to the following question: Since sentential wh-exclamatives can be embedded under factive verbs, why do que-FSCs not behave in the same way? Here we must bear in mind the fact that Sibaldo claims that que-FSCs are sentential wh-exclamatives as well. The following questions also come to mind: Is there anything about the verb in the sentential wh-exclamatives of the type shown in (39) (*Que linda casa que você comprou!*) that allows them to be embedded? Alternatively, is this possible because que-FSCs in reality do not have a sentential status? These are some questions worth investigating.

3.2. Constraints on word order

Sentential wh-exclamatives exhibit a very constrained word order, as I argued in chapter 2, p 69. For instance, sentences like (41) and (42) are ungrammatical. Sibaldo shows that the same is true of que-FSCs, as shown in (43b) and (44b).

(41) *Ele é que alto!
'he is how tall'

(42) *O seu carro é que lindo!
'your car is how beautiful'

(43) a. Que linda essa bolsa!
'how beautiful this purse'
b. *Essa bolsa que linda!
'this purse how beautiful'

(44) a. Que droga aquela aula!
'what a shit that class'
b. *Aquele aula que droga!
'that class what a shit'

(SIBALDO, 2015, p. 117)

These data show some similarities between sentential wh-exclamatives and que-FSCs (or non-sentential wh-exclamatives).

3.3. Constraints on the semantics of the subject and the predicate

The subject must be specific and clear in the discourse (45), it cannot not be indefinite (46), be a bare plural (47), or contain a negative polarity item (48).

(45) Que linda essa bolsa!
'how beautiful this purse'

(46) *Que linda **uma** bolsa!
'how beautiful a purse'

(47) *Que linda(s) bolsa(s)!
'how beautiful purses'

(48) *Que linda **nenhuma** bolsa!
'how beautiful no/none purse'

(SIBALDO, 2015, p.118)

What about the predicate? What kind of element may be the head of the predicate? The only possible options are gradable adjectives (49) and evaluative NPs (50). Non-evaluative NPs (51), verbs (52), prepositional phrases (53), and adverbial phrases (54) are not possible.

- (49) Que **linda** essa bolsa!
'how beautiful this purse'
- (50) Que **luxo** a sua bolsa!
'what luxury your purse'
- (51) *? Que **professor** aquele cara!³⁸
'what a teacher that guy'
- (52) *Que **trabalhando** aquele cara!
'how working that guy'
- (53) *Que (**em**) **NY** o Pedro!
'how (in) NY Pedro'
- (54) *Que **mal** o Pedro!
'how unwell the Pedro'

(SIBALDO, 2015, p. 118)

These observations about the predicate of que-FSCs are in line with what I have shown so far about sentential wh-exclamatives. Moreover, their predicate is usually an adjective and this adjective must be gradable and evaluative (as it happens in sentential wh-exclamatives), as the data below show:

- (55) *Que **bêbado** o João!
'what a drunk John'
- (56) *Que **grávida** essa menina!
'how pregnant this woman'

(SIBALDO, 2015, p. 119)

The adjectives *bêbado* and *grávida* are not gradable and do not evaluate the NPs they precede.

³⁸ Although Sibaldo adds a star before this sentence, I do consider this datum grammatical. Other native speakers of BP share the same opinion. Sibaldo does acknowledge that and attributes its cause to the semantics of the *que* morpheme, which seems to evaluate or qualify the NP to some extent. This would make the sentence more acceptable or grammatical for the speakers. The author even shows that the insertion of an adjective before the NP makes the sentence much better (in his opinion): Que **excelente** (**Adj**) professor aquele cara! (Translation: 'what a **great** (**Adj**) teacher that guy (is)') (SIBALDO, 2015, p. 118).

What these data also show is that que-FSCs' predicates must be a DegP, as claimed by Castroviejo (2006) about sentential wh-exclamatives. This is clearly demonstrated by adding an evaluative adjective to sentences (55) and (56)), making them grammatical, see (57) and (58).

(57) Que bêbado **chato** o João!
 'what drunk annoying John'

(58) Que grávida **feia** esse menina!
 'what pregnant ugly this woman'

(SIBALDO, 2015, p. 119)

3.4. The syntax of que-FSCs

Sibaldo's (2015) paper (pages 120-127) inquires whether que-FSCs are derived via right adjunction of the subject or raising of the predicate to an A'-position. He carries out some tests with time adverbs and locative PPs to see which explanation applies better. Sibaldo uses time adverbs and locative PPs because, as is well known in generative syntax, these constituents signal the boundary of the core sentence (boundary of TP/IP). Therefore, whatever comes above them should be considered to be located in an A'-position. Let us look at the sentences below.

(59) a. * Que lindas *na igreja/ ontem* as flores!
 'how beautiful at the church/yesterday the flowers'

b. *Que bonito *na festa/ ontem* o seu vestido!
 'how at the party/yesterday your dress'

(60) a. Que lindas as flores *na igreja/ ontem!*
 'how beautiful the flowers at the church/yesterday'

b. (Que) Bonito seu vestido *na festa/ ontem!*
 'how beautiful your dress at the party/yesterday'

(SIBALDO, 2015, p. 121)

Sentences (59a) and (59b) are ungrammatical because the PP (*na igreja*) and the time adverb (*ontem*) intervene between the predicate and the subject. This ungrammaticality speaks against the hypothesis of right adjunction of the subject.

According to the author, (60a) and (60b) corroborate the hypothesis that the predicate (e.g. *que lindas*) was raised to an A'-position. In addition, Sibaldo explains that the phrase *que*

+ adjective may not stay in an A-position. It must be displaced to an A'-position because of its [+wh] feature, which must enter in a checking relation with C⁰.

3.5 The sentential status of que-FSCs

In section 3.2 of his paper, Sibaldo asks the following question: Do que-FSCs have nominal or sentential status? A common test used to answer this type of question is clefting.

In BP, only nominal and whole CPs can be clefted. In (61) and (62) the DPs (nominals) have been clefted without a problem. However, if one looks at que-FSCs (63) and (64), one will see that clefting them results in ungrammaticality. According to Sibaldo, this suggests that these constructions have the characteristics of a sentence.

(61) Foi [DP o idiota do marinheiro] que o Pedro viu.

‘it was the idiot of the sailor who Pedro saw’

(62) Foi [DP aquele babaca do policial] que a Maria xingou.

‘it was that asshole of the police officer who Mary cursed’

(63) *Foi [(que) bonita a sua roupa] que eu achei.

‘it was how beautiful your clothes that I found’

(64) *Foi [que/ uma merda aquele filme] que eu considerei.

‘it was what a shit that movie that I considered’

(SIBALDO, 2015, p. 123)

The important question now seems to be where these structures are located. To provide an answer, Sibaldo once again compares them with FSCs by determining the position of both structures in relation to VP adverbs. These adverbs are considered to be located in a position adjoined to VP; therefore, lower than TP/IP. Sibaldo believes that FSCs and que-FSCs originate as *Small Clauses*. The author understands that these small clauses are below TP/IP. Thus, if an adverb is above the small clause, it should be on the left of the whole FSC if we assume that the FSC is generated as a small clause and it is not further changed via movement. *Sempre* (always) is one example of this kind of adverb in BP. So let us look at the position of this adverb in the FSCs below ((65) and (66)).

(65) a. Sempre bonita a sua roupa!

‘always beautiful your clothes’

b. Sempre muito chata essa aula!

‘always very boring this class’

(66) a. *Bonita sempre a sua roupa
'beautiful always your clothes'

b. *Muito chata sempre essa aula!
'very boring always this class'

(SIBALDO, 2015, p.123)

The position of *sempre* says a lot about these constructions. It is clear by looking at (66) that *sempre* must not be below the predicate. To be grammatical, the whole structure must be below the adverb, as it happens in (65). This indicates that FSCs seem to be below TP/IP.

Sibaldo applies the same test with time adverbs to locate the position of que-FSCs.

(67) a.*Que bonita sempre a sua roupa
'beautiful always your clothes'

b. *Que chata sempre essa aula!
'very boring always this class'

(68) a.*Sempre que bonita a sua roupa!
'always beautiful your clothes'

b. *Sempre que chata essa aula!
'always very boring this class'

(SIBALDO, 2015, p.123)

In these constructions, both the predicate and the subject cannot stay below the adverb *sempre*. For example, sentence (67a) shows an instance of just the subject *a sua roupa* being located below the adverb, while the predicate *que bonita* is above it. The sentence is clearly ungrammatical in BP (the same applies to (67b)). This case is similar to FSCs. What about the possibility of having the adverb above the whole construction? In the case of que-FSCs, it makes no difference: in (68a) the predicate *que bonita* is below the adverb and so is the subject *a sua roupa*, but the sentence is also ungrammatical (same applies to (68b)). This is a clear difference in relation to FSCs, where grammaticality is possible with the adverb at the highest position. The reason, according to Sibaldo, is that que-FSCs are above the small clause.

3.6 Functional projections in que-FSCs?

Sibaldo cites the work of Cardinaletti & Guasti (1995) to explain that Small Clauses (SCs), in contrast to Full Clauses, do not contain a Tense Projection in their structure.

An effective way of arguing for the absence of TP in SCs is trying to insert a time adverb in their structure. Adverbs adjudge to the category they modify; hence, time adverbs should be adjoined to TP. If there is no TP, these adverbs cannot be present. For instance, see the bolded constituents in (69) and (70) below. In (69) the embedded clause (in bold) clearly contains a TP in its structure since there is a verb, *estava*. This constituent is a Full Clause and may host an adverb that modifies it. The same does not apply to (70), where the bolded constituent is an SC (there is no verb there). The consequence is that the time adverb *ontem* cannot modify the embedded clause in (70) as it does in (69).

(69) Hoje eu acho **que o João estava bêbado ontem**
'Today I think that the John was drunk yesterday'

(70) *Hoje eu acho **o João bêbado ontem**
'Today I think the John drunk yesterday'

(SIBALDO, 2015, p. 124)

For Sibaldo, this is strong evidence that SCs do not contain a TP in their structure. The question he now asks is whether que-FSCs also have a TP in their structure. To verify that, he applies the same "test" (insertion of time adverb) to que-SCLs. The result is seen below.

(71) Que lindo o dia hoje!
'how beautiful the day today'

(SIBALDO, 2015, p.125)

What does the presence of the time adverb *hoje* tell us about que-FSCs according to Sibaldo? That they contain a TP in their structure. If they did not, the adverb would not successfully be inserted there, as is the case with regular SCs such as (70)³⁹.

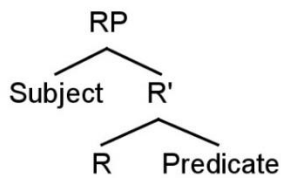
³⁹ For more data on BP and Italian in relation to the kind of constructions cited here, see (Sibaldo, 2015).

3.7 The Relator Phrase

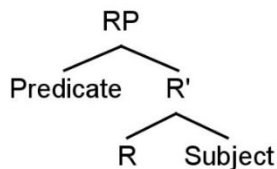
In this final section, I will show what proposal Sibaldo makes for the derivation of que-FSCs. The author makes use of the functional projection Relator Phrase (RP) proposed by Den Dikken (2006); hence, the title of this section.

Den Dikken states that relators mediate the relationship between subjects and predicates in the basic representation of structures of predication. The relationship is established in either of two ways: one way is that the subject is the specifier of the relator-head and the predicate is its complement, and the other is that the predicate is the specifier and the subject is the complement. Therefore, the relationship is nondirectional. The trees in (72) and (73) illustrate the two possible structures for RP.

(72)



(73)



(DEN DIKKEN, 2006, p.3)

The relationship established by the relator is both syntactic and semantic. As one can see, RP bears a strong parallel to a copular construction in that the relator works in the same way as a linking verb or a copula does: it connects the predicate to the subject. This is no coincidence; in fact, Den Dikken (2006) explains that the relator is an abstract functional head. It is not a novel lexical category or a specific functional element (like T or D); it is a placeholder for any functional head in the structure that mediates a predication relation between two terms. That being so, a copula can be a predicator, as in the example (74) below. Here there is a copular construction in which *be* is the copula, the subject is in the specifier of the copula and *round* is

the complement of the copula. As one can see, this structure can be perfectly accommodated in a RP structure, see (75).

The earth must **be** round

(74) [RP_{Spec} The earth [R must be [Comp round]]]

Other examples of relators are prepositions, as in (76) and (77).

(75) They take him **for** a fool

(76) They regard him **as** a strong president (DEN DIKKEN, 2006, p. 15)

Having clarified the concept of relator, I will now show why Sibaldo claims that que-FSCs have the structure of an RP. Let us peruse the structure of the que-SCL in (78).

(77) Que linda a sua roupa!
'how beautiful your clothes'

What do we know so far about que-SCLs? First, that both the subject and the predicate cannot be located below TP (p.104-105) and that their predicate must be located in an A'-position (p.113). Logically, we can conclude that the subject must be in Spec, TP. Based on the observations and the RP structure, the result Sibaldo arrives at is the one below.

(78) [CP [DegP Que linda]_i C [TP [DP a sua roupa]_j T+Rt [RP t_j [R' t_i t_i]]]]

(SIBALDO, 2015, p. 129)

Here I will take the liberty of deriving this sentence step-by-step following Sibaldo's explanation.

It starts in (80) when the relator R selects a subject in its specifier and a predicate as its complement (*que linda*). Then the uninterpretable features [+gender] and [+number] of the predicate are checked by T.

(79) [T [RP a sua roupa [R que linda]]]

In (81), R adjoins to T⁴⁰ and the subject is raised to Spec, TP to have its nominative case feature checked.

(80) [TP [DP a sua roupa]_j [T+Rt [RP *t_j* [R' *t* que linda]]]]

Finally, in (82) the predicate *que linda* is raised to Spec, CP to have its [+wh] feature checked.

(81) [CP [DegP Que linda]_i C [TP [DP a sua roupa]_j T+Rt [RP *t_j* [R' *t_i*]]]]

All uninterpretable features have been checked and deleted at this point so the structure is sent to the interfaces.

Sibaldo's analysis seems to present some interesting points and makes very persuasive predictions that he seems to confirm with his data. Nonetheless, what my data seem to show is that there are good reasons and compelling evidence to believe there is no sentential (a CP flavored) structuring here, given the argumentation presented earlier. This is something that still requires some more detailed study and I will leave it open for the moment.

4. Preliminary conclusions

In section 2, I showed a problem with constructions like “*Que linda essa casa!*” demonstrating that they do not accept a *que* morpheme as a possible C⁰. I claimed that the reason for that is that they do not have a sentential status like the other sentential wh-exclamatives that I have analyzed throughout this paper. As a further supporting argument, I demonstrated that other A'-construction types like relatives and interrogatives also allow a *que* morpheme in their C⁰. Additionally, as one could observe in this paper, a filled C⁰ is present in other languages too, such as Italian (*che*), Catalán (*que*), and English (*that*). On top of that, there is the argument taken from Miotto (2001) that says that a filled C⁰ exerts a stronger attraction over items with the same features, in case one argues that the alleged C⁰ of non-sentential wh-exclamatives is filled with a null head.

⁴⁰ The concept of *phase extension* is used by Sibaldo to explain a locality issue when deriving SCLs and que-SCLs, see Sibaldo (2015), p. 128, for more on this topic.

Taking all that into account, one must conclude that if these constructions are regular sentential wh-exclamatives, it is at least odd that they do not accept a *que* morpheme in their C⁰.

On the other hand, in section 3, I showed Sibaldo's proposal for deriving these constructions, which seems to corroborate their analysis as sentential wh-exclamatives. However, although the data he shows seem to indicate that they have a sentential status (data such as their relation with time adverbs) his paper does not explain why que-FSCs (or non-sentential wh-exclamatives) cannot contain a *que* in their alleged C⁰.

As a conclusion, I believe the matter is open at this point, needing further research to confidently state what their sentential status really is. Nevertheless, I believe the analysis conducted here has shed light on many issues regarding non-sentential wh-exclamatives/ que-FSCs and brought up several relevant questions.

FINAL REMARKS

This thesis has approached the topic of sentential and non-sentential wh-exclamatives, providing an analysis of their syntax, semantics, and pragmatics in Brazilian Portuguese. The analysis was conducted under the framework of generative syntax in its minimalist phase (Chomsky, 1995 and subsequent work) and Cartography (Rizzi, 1997 and subsequent work). The criterial system of checking operations was the derivational tool for the analyses conducted here.

The first chapter provided the reader with a historical background of phrase structure, the Minimalist Program and the principles of Cartography, essential information to understand the concepts in the sections that followed. It also showed some issues related to wh-exclamatives and posed five questions to be answered throughout the thesis. Out of the five questions, four were answered in chapter 3 (questions (1), (2), (3) and (5)). One was left for chapter 4 (question 4). Let us remember these questions and their proposed answers.

The first question regarded the structure of sentences containing an exclamative and a relative (see p. 11), and what they could tell us about the Force node in Brazilian Portuguese. The answer seems to be that there are two projections in ForceP: ExclP and RelP. I hope these two recently proposed projections can be accepted as additions to the current cartographic map. The second question simply asked the difference between a free relative and a headed relative (see p. 11-12) concerning my proposal. I showed that both can be accommodated within split ForceP.

The third question dealt with the order relative+exclamative. I argued that the exclamative projection must be higher than the relative because it is ExclP that determines the illocutionary force of the sentence; therefore, it must bear scope over the whole sentence so that it can imprint its illocutionary force over it. Moreover, the structure above (the determiner) selects a relative and not an exclamative.

The fourth question approached the topic of wh-exclamative constructions that do not accept a *que* morpheme in their structure. I claimed that this construction does not have a sentential status like the other wh-exclamatives studied here (see p. 110-115). However, I also showed Sibaldo's analysis that sees them as sentential wh-exclamatives and provides strong arguments in this direction. Nevertheless, I believe the matter is still open for further research.

Finally, the fifth question regarded hanging topics and left dislocated elements that are located higher than ForceP in BP. I showed Benincà's analysis for them in Italian and demonstrated how her analysis befitted BP, with some minor differences. Nonetheless, I argued

that her idea that there is a Discourse Projection above ForceP may be somewhat incomplete because ForceP should be the highest projection of the clause, bearing no material over it. As a solution, I proposed that HT and LD could be located in ForceP.

In conclusion, I believe this thesis has given many contributions to the analysis of wh-exclamatives in Brazilian Portuguese, in addition to contributing to the cartographic map in a broader sense.

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