

The syntax of free relatives with invariable *o que* and of semi free relatives with variable *o que* revisited

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Abstract

In this text I revisit the syntax of free relatives introduced by the invariable *o que* and of semi free relatives introduced by the variable *o que* in Portuguese, in a comparative perspective. I will adopt the view that in free relatives the constituent *o que* is the result of reanalysis / incorporation, as defended by Medeiros Júnior (2016), here analysed as an operation of Agree. As for semi free relatives with the variable *o que*, I will propose that they are “restrictive relatives in disguise”, with a NP layer and a null N, following Citko (2004) for some types of light-head relatives in Polish. This explains both the impossibility of reanalysis and the possibility of Pied Piping of a PP. The nature of the relative *que* as an underspecified *wh* morpheme (not the complementizer) will be crucial for the analysis.

Keywords: Free relatives, semi free relatives, light-headed relatives, reanalysis, relative *o que*, Portuguese.

Resumo

Neste texto revisito a sintaxe das relativas livres introduzidas pelo constituinte *o que* invariável e a sintaxe das relativas semilivres introduzidas pelo constituinte *o que* variável em português, numa perspetiva comparada. Adoto a ideia de que nas relativas livres o constituinte *o que* é resultado de reanálise / incorporação, como defendido por Medeiros Júnior (2016), operação aqui analisada como um caso de Concordância. Em relação às relativas semilivres com o constituinte *o que* variável propõe-se que são “relativas restritivas disfarçadas”, com uma camada SN e um N nulo, seguindo Citko (2004) para certas relativas de antecedente leve do polaco, o que explica a impossibilidade de reanálise e o movimento de SP. A natureza do relativo *que* como um morfema Q não especificado (e não o complementador) será crucial para a análise.

Palavras-chave: Relativas livres, relativas semilivres, relativas de antecedente leve, reanálise, relativo *o que*, português.

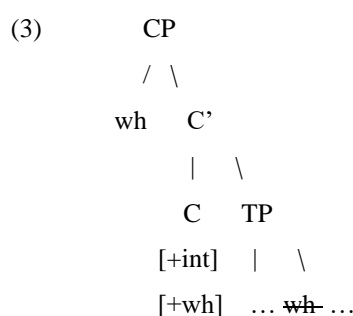
1. Introduction

As it is well known, partial embedded interrogatives, as in (1) and free relatives or headless relatives¹, as in (2), share *wh* forms in several languages, as it is the case of *quem* ‘who’, in Portuguese.

¹ Free or headless relatives are relative clauses that have no head, either external, as in most of Indo-European languages (see the example in English (i) *I returned the book [(that) you finished reading [e] to your children] to the library*, or internal, as in Japanese (ii) [*John-ga ronbun-o kaita-no*]-ga *Linguistic Inquiry-ni nota* (John-nom article-acc wrote-NM-nom Linguistic Inquiry-loc appeared / ‘The article that John wrote appeared in Linguistic Inquiry’), both examples from Riemsdijk (2007, p. 339).

- (1) Pergunto quem chegou.
ask1.SG who arrived
'I ask who arrived.'
- (2) Admiro quem chegou.
admire1.SG who arrived
'I admire who arrived.'

Partial embedded interrogatives (as in (1)) have sentential properties, while free relatives, (as in (2)), have nominal properties², which justifies a different syntactic analysis (see Veloso (2013), Matos & Brito (2018), Miotto & Lobo (2016), among others). As a consequence, partial embedded *wh* interrogatives are classically described as CP, where *wh* movement occurs to the left periphery (Spec of CP), as described in (3):³



However, it is not easy to determine the syntax of free relatives, which have been the object of several different proposals. In the seventies, Bresnan and Grimshaw (1978) argued that the *wh* morpheme belongs to the matrix sentence, as described in (4b) for (4a) (the so-called *head hypothesis*, followed by a deletion process):

- (4a) What you have finished reading is interesting.
- (4b) [_{TP} [_{DP} [_{DP} what_i] [_{CP} you have finished reading [e_i]]]]

In the eighties, Groos and Riemsdijk (1981) proposed the *COMP Hypothesis*, as described in (5) (in current terms *wh* is in Spec of COMP):

- (5) [_{TP} [_{DP} [_{DP} e] [_{CP} what_i you have finished reading [t_i]]].....]

After that, Riemsdijk (2007) argued for the “grafting analysis” in a multidimensional approach to syntax, where the *wh* morpheme belongs, at the same time, to the matrix sentence and to the embedded sentence.

For Brito (1991) and Mória (1992, 1996), for Portuguese, free relatives have a null antecedent, a null pro. However, nominal properties of free relatives may be explained by another analysis, the one where they have a

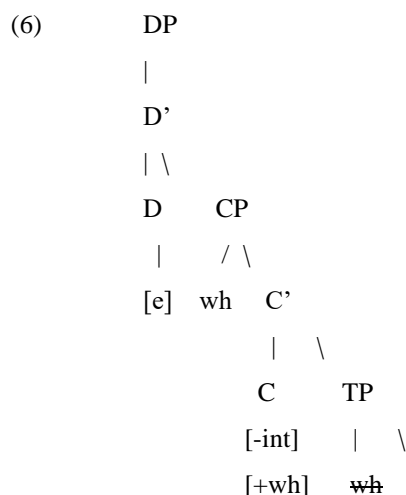
² Some free relatives have adverbial properties, like the ones introduced by *onde* in Portuguese:

(i) *Vou onde me apetece* (I will go where it suits me). There are also prepositional free relatives:
(ii) *Dei o quadro a quem me agradou*. (I gave the picture to whom it pleased me).

They will not be studied here. See Brito (1991), and Brito and Duarte (2003) for a general presentation.

³ I will not use here Rizzi's analysis (Rizzi, 2004), where there is a split CP, with different functional layers.

DP layer, where a silent / null D directly selects a CP (Cf. Alexiadou *et al.* (2000), Caponigro (2002),⁴ Medeiros Júnior (2016)), as described in (6):



In minimalist terms, an alternative analysis is the one by Cecchetto and Donati (2010, 2015), who propose that the CP or the DP nature of a given construction can be deduced from formal labeling conditions, mainly linked to the nature of head or maximal projection of the moved *wh* constituent. Being a head, as *what* and *who* in English, the structure can be interpreted as a subordinated interrogative (CP) or as free relative (DP); see (7a) and (7b):

(7a) I ask what you have done.

(7b) I appreciate what you have done.

If it is a phrase, namely a PP, as in (7c), it can only receive the CP label and it is a subordinated interrogative.⁵

(7c) I ask with what you cooked the cake.

In the list of the so called “relative” and “interrogative pronouns” in Portuguese there is one constituent that deserves a particular attention, *o que*, literally ‘the that’. Besides an interrogative *wh* word *o que*, as in (8) and (9), Portuguese has a non-interrogative / relative *wh* word *o que*, illustrated in (10)–(12).⁶

⁴ Caponigro (2002): “(...) the covert D occurs in FRs for purely syntactic reasons, like some sort of expletive determiner.”

⁵ For some criticisms to this framework see Matos and Brito (2018). Notice that the presence of a PP in English free relatives is governed by matching requirements; see (7d): (7)(d) * I like with what you cooked the cake.

⁶ *O que* may also introduce independent exclamatives, as in (i) *O que tu foste fazer!* (What you have done!) and embedded exclamatives, as in (ii): (ii) *É incrível o que tu foste fazer!* (It is incredible what you have done! (on embedded exclamatives see Barbosa (2013))). As the syntax of exclamatives involves syntactic and semantic considerations that are out of the goal of this text, I will not consider them here. There is also the use of *o que* in appositive relatives, like in (iii) *O país foi invadido, o que surpreendeu os observadores.* (The country was invaded, what surprised the observers). This use will not also be studied here.

- (8) O que fizeste?
the that did2.SG.
'What have you done?'
(9) Pergunto o que fizeste.
ask1.SG the that did2.SG.
'I ask what you have done.'
(10) Admiro o que tu fizeste.
admire1.SG. the that you did2.SG.
'I admire what you have done.'
(11) Já li o / a / os / as que me indicaste (speaking, for instance, about books and novels).
already read1.SG. theM.SG. / theF.SG. / theM.PL. / theF.PL. that me indicated
'I already read the one / the ones you have indicated to me.'
(12) Já li o que me indicaste.
already read1.SG. the that / what me indicated.2.SG.
'I have read *what / the one* you indicated to me.'

The *wh* interrogative *o que* is traditionally considered a single constituent, a variant of *que*.⁷

In free relatives, as in (10), the invariable *o* is traditionally considered a demonstrative pronoun, equivalent to *aquilo*; in what we will call semi free relatives or light-headed relatives, the variable *o, a, os, as* is also considered a demonstrative determiner, equivalent to *aquela, a, es, as*, followed by the relative pronoun *que* (Cunha & Cintra, 1984, pp. 340–341, 347). In certain examples, as in (12), as the translation in English already shows, *o que* is an “ambiguous” constituent, between the variable *o que* (‘the one’) and the invariable *o que* (‘what’).⁸

Brito and Duarte (2003, pp. 682–683) already distinguished the two combinations, suggesting that there are two different constituents: an invariable *o que* ‘what’ in free relatives (as in (10)) and a variable *o que*, introducing semi-free relatives, as in (11).⁹

⁷ In some generative approaches to *wh* interrogatives and free relatives, *o que* was considered a constituent (see, among others, Brito (1991), Mória (1992)). As it will be clear later, Brito and Duarte (2003) suggested the hypothesis of a reanalysis between the invariable *o* and *que* in one of the possible contexts of free relatives. Matos and Brito (2018) briefly suggest a reanalysis of the two parts of the interrogative *o que*. See also Brito (2022).

⁸ Mória (1992) was one of the first linguists that noticed that there are differences between *aquilo que* and *o que*, related with the behavior of prepositions. See his examples (more or less synonymous):

- (i) *Aquilo com que o presidente não contava era (com) a subida das taxas de juro*
(that with that the president did not count was the rise in interest rates)
'What the president did not count with was the rise in interest rates';
- (ii) **Com aquilo que o presidente não contava era (com) a subida das taxas de juro*
(with that that the president did not count was the rise in interest rates);
- (iii) *Com o que o presidente não contava era com a subida das taxas de juro*
(with the that the president did not count was the rise in interest rates);
- (iv) **O com que o presidente não contava era com a subida das taxas de juro*
(the with that the president did not count was the rise in interest rates) (pp. 12–13).

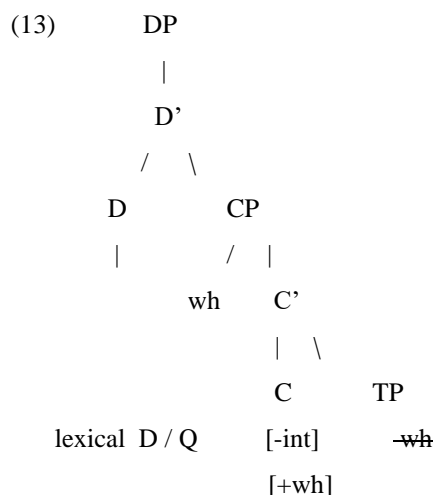
As we will see later, *aquilo*, being a heavy form of the demonstrative, is the antecedent of a normal restrictive relative clause and it is why the preposition must precede *que*, while *o que* forms a unity and cannot be interrupted by the preposition. Mória noticed, indeed, that the constituent *o que* “is a relative pro-NP that occurs in Spec of COMP”, also considering the hypothesis of “an internal structure of that NP” (p. 13, my translation)

⁹ Starting from German and Dutch, de Vries (2002, p. 43) also proposes a difference between true free relatives, as in (i), and false free relatives, the ones I have been calling semi free relatives or light-headed relatives, as in (ii):

- (i) Was er sagte, kam mir unglaublich vor. ('What he said appeared to me impossible')
- (ii) Einer, der zu spät kam, wurde gestraft. ('One who came late has been punished')

In this text, we will start from the analysis already suggested above, according to which free relatives are DPs containing CP.

For semi free relatives we will start from the proposal by Rebushi (2001) for Basque and by Citko (2004) for most of free relatives in Polish, where D is not empty and is occupied by a lexical D or a Q, as described in (13):



Having all this as background, our main and related questions of research are the following:

- (i) Is there a *wh* constituent *o que* that normally moves to the Spec of CP or, alternatively, is there a definite article *o* in the D position of the matrix clause and *que* in some position of CP and do the two elements undergo a reanalysis / incorporation?
- (ii) If there is reanalysis / incorporation, which are the conditions and the motivation for this process?
- (iii) Is the syntactic structure of a semi free relative or a light-headed relative in Portuguese as in (13)?
- (iv) Which is the nature of the relative *que*, a *wh* morpheme or the complementizer?

In order to answer these questions, the paper is organized as follows: in the paragraph 2. we will analyse free relatives with the invariable *o que*, arguing for a reanalysis / incorporation of *o* and *que*, building on Medeiros Júnior (2016); in the paragraph 3. we will analyse semi free relatives / light-headed relatives with the variable *o que* and we will argue that they have a NP layer and a null N of the type of English *one*; in 4. we will make a brief comparison between Portuguese and other languages, some of them having semi free or light-headed relatives, in order to better understand the conditions for the incorporation between the determiner that forms the antecedent and *que* / *wh* forms; and in 5. we will present the main conclusions of this study.

2. The invariable relative *o que* in free relatives

As already suggested above, Portuguese has two *o que* constituents, an invariable *o que*, underspecified as for ϕ features (in fact, its MASC and SING features represent the neutral) and a variable *o que*, with explicit ϕ features of number and gender in the definite article.

Let us analyse first what happens with the invariable relative *o que*.

One of the main properties of this invariable *o que* is the impossibility of a preposition between *o* and *que*, suggesting that in some way the two parts of the combination form a unity (see also Mória (1992, p. 13 and footnote 10)):

- (14a)*Vou ensinar-te o em que acredito.
I will teach you the in that believe1.SG.

Brito and Duarte (2003, p. 683) noticed that “as a non-interrogative morpheme, in the presence of *o*, *que* may or not undergo a process of reanalysis (...) if it does not undergo reanalysis, a preposition may occur between them as in *Já tenho o de que me falaste* (...)” (my translation)

Developing this suggestion, Medeiros Júnior (2016) proposes that the Portuguese relative *o que* in free relatives is the result of a movement of *que* to the D *o*, that he calls a reanalysis / incorporation process and that allows the creation of an unique constituent. According to the same author, in the XVI century a preposition still could intervene between *o* and *que*, as illustrated in (15):

- (15) “(...) nisto seguirei o de que sou notado entre eles.” (Couto, XVIth century)
thus shall follow the of that am seen amidst them
‘Thus I shall follow what makes me seen amidst them’ (Medeiros Júnior, 2016, p. 311).

As (15) and similar examples are ungrammatical in Contemporary Portuguese, Medeiros Júnior (2016: 311) proposes that there was a change: the structure of (15) is still roughly (16), with two separate elements, where a preposition may interfere.

In Contemporary Portuguese, however, there are two possible different structures, (16) and (17). (17) is the structure with reanalysis and where the separation between *o* and *que* by a preposition is impossible. It seems that (17) is the dominant structure in Brazilian Portuguese, according to Medeiros Júnior (2016, p. 311):¹⁰

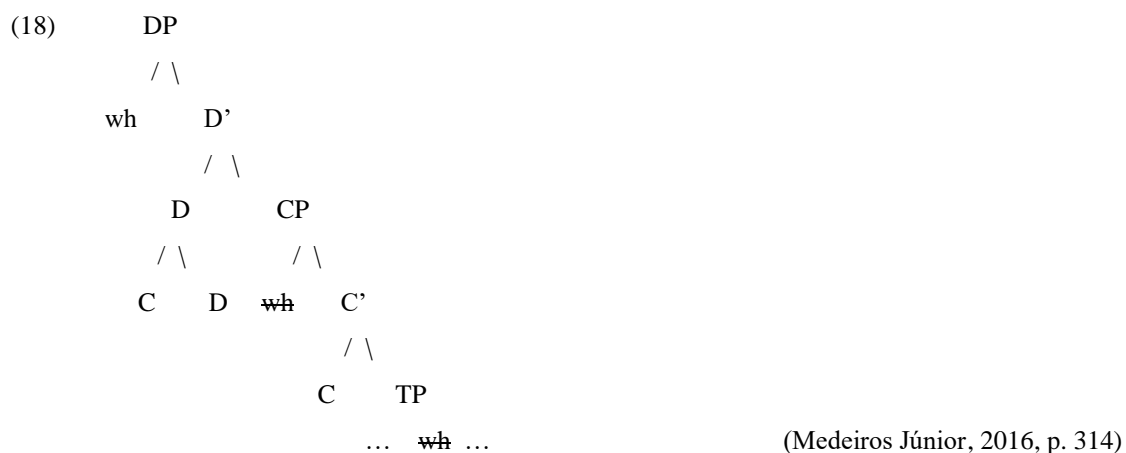
- (16) [DP o [CP que]]

- (17) [DP o que [CP]]

Starting from Caponigro (2002) for Italian and Marchesan (2008) for Portuguese, Medeiros Júnior (2016) accepts the view that in free relatives in general a silent D selects a CP. However, when *o* and *que* are present in the structure, the D position is occupied by *o*, the definite article. He proposes then a reanalysis / incorporation of C and D, deriving the following structure:

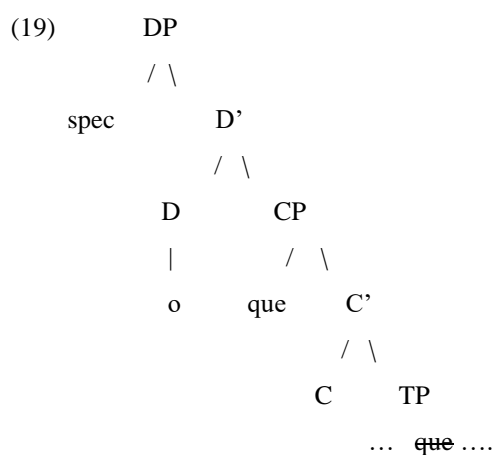
¹⁰ The fact that in Brazilian Portuguese the reanalysis / incorporation of *o que* is the dominant strategy, with no preposition, may be related to the tendency of preposition dropping. In Brazilian Portuguese, much more than in European Portuguese, chopping relatives are dominant:

- (i) Nova Iorque é uma cidade que você respira Gershwin (NY is a city that you breath Gershwin) (Tarallo, 1983);
(ii) Este é o livro que você estava precisando (This the book that you were needing) (Kato & Nunes, 2009).



In order to motivate the incorporation described in (18) in a checking theory of movement proposed by the Minimalist Program, the author argues that “wh-phrases integrating this kind of structure present a double nature: they are elements with features of C and features of D and might hence need a specific configuration for a perfect checking operation. Spec-DP in such a configuration is the Spec of a complex head containing all the required features” (Medeiros Júnior, 2016, p. 315), explaining in this way the feature *wh* in the Spec of DP, as described in (18).

As already said before, in Portuguese there are two situations: one where there is incorporation and another one where there is no incorporation. Medeiros Júnior proposes, besides (18), another structure, the one that corresponds to semi free relatives or light-headed relatives, as in (19), where a D does not incorporate with *que*. In both analysis the author suggests that *que* is a *wh* morpheme (despite the proposal in p. 315 that *que* has features of C):



Although I agree with Medeiros Júnior as for the idea that there is an incorporation / reanalysis that gives origin to the invariable combination *o que*, some comments and proposals must be done:

- (i) as the effect of incorporation, the final sequence would be D *o* + C *que* and not the contrary (see (18));
- (ii) it seems difficult to motivate for a supplementary movement of the *wh* constituent from spec CP to Spec DP (see (19)).

To propose an alternative analysis, some points must be discussed.

First of all, it is important to analyse the nature of the relative *que*. Brito (1991), developing a proposal by Kayne (1976) for French *que*, argues that in SU and DO restrictive relative clauses *que* is the complementizer, it is in C and there is a movement of a relative null empty operator to Spec of CP. One of the reasons invoked by Brito (1991) for this proposal is the uniformity of this form, more specifically its insensitivity to the human / non-human nature of the antecedent, as illustrated in (20), where *que* is chosen even if the antecedent is human:

- (20a) O homem *que* está ali é meu amigo.
the man that is there is my friend
'The man who / that is there is my friend.'
- (20b) O homem *que* vê ali é meu amigo.
the man that you see there is my friend
'The man (who / that) you see there is my friend.'

Differently, in Pied Piping of PPs in the same type of construction, *que* is conceived by the author as a true *wh* constituent, a relative operator, sensitive to the semantic nature of the antecedent and it is why (21a) is ungrammatical, contrary to (21b) with *quem*, which is grammatical: with *o qual* the sentence (21c) is also grammatical, because *o qual* is a neuter form as for the semantic nature of the antecedent:¹¹

- (21a) *O homem a *que* falei é meu amigo.
the man to that I spoke 1.SG. is my friend
- (21b) O homem a *quem* falei é meu amigo.
the man to whom I spoke 1.SG. is my friend
'The man to whom I spoke is my friend.' / 'The man (whom) I spoke to is my friend.'
- (21c) O homem ao *qual* falei é meu amigo.
the man to which I spoke 1.SG. is my friend
'The man to which / to whom I spoke is my friend.' / 'The man (which / whom) I spoke to is my friend.'

Developing this analysis but differing from it in some aspects, Espírito-Santo (2022, p. 80) gives examples of Pied Piping of PPs where *que* occurs even when the antecedent has human features, based on the judgments of many young native speakers:

¹¹ *O qual* is also formed by the definite article and a *wh* form, a strong form, and therefore the incorporation / reanalysis is impossible. Therefore, *o qual* and its correspondent feminine and plural forms belong to the lexicon. It is also important to note that, besides Pied Piping of PPs, *o qual* may be used as SU and DO in appositive relatives, the ones that Cinque (2008), for Italian, calls "marked appositive relative clauses", which have a clear nominal nature.

- (22) Encontrei o(s) rapaz(es) com que ela saiu ontem.
 met1.SG. theM.SG/PL boy(s) with that she left yesterday
 ‘I met the boy(s) with whom she left yesterday.’

This means that the tendency for the choice, by the speakers, of “richer *wh*-operators” (also evoked by Veloso, 2013, p. 2083) may be changing in Contemporary Portuguese and that the use of underspecified *wh* elements is dominating.¹²

What is important now is to consider that the use of *que* for human and non-human antecedents in SU and OD relative clauses does not mean that this form is the complementizer (as defended by Brito 1991) and it may reinforce the view that *que* is an underspecified *wh* morpheme, as argued by Faria and Duarte (1989). Brito’s proposal has also a theoretic problem related to the notion of null operator. In Minimalist Program, where movement is related to feature checking or evaluation, it is difficult to understand a null operator movement.

Kato and Nunes (2009), Veloso (2013), Rinke and Aßmann (2017) and Espírito-Santo (2022) propose that in relative clauses *que* is a relative determiner or, at least, has a D feature.¹³

I will not develop all the details of these analyses and I will accept the view that *que* is an underspecified relative / *wh* morpheme in SU and DO relative clauses, in Pied Piping of PPs and in free and semi free relatives.

Let us then come back to the invariable *o que* combination in free relatives.

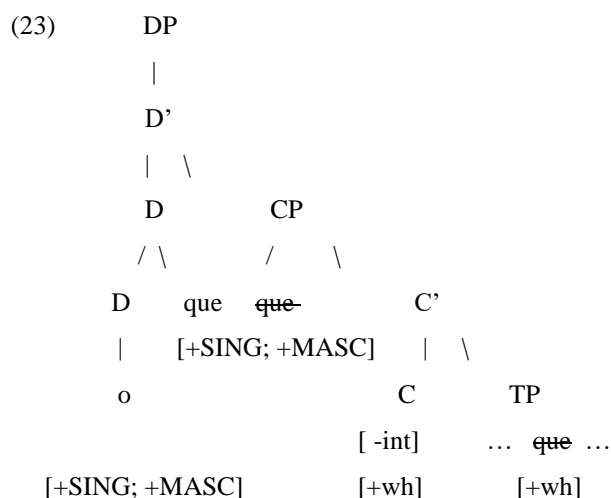
I propose that there is a DP level, with the difference that in this case D is not silent, but it is filled by *o*, a D and a weak head, a clitic; its features are [+MASC] and [+SING], in fact, neutral features and it is why it seems invariable. In the CP level there is *wh* movement to Spec CP; *que* as an operator moves to Spec of CP, a position normally reserved for maximal projections. But *que* is underspecified as for categorial features (it has features of C, of D and of N), has no visible ϕ features and has no semantic features (we have seen the nowadays tendency to use it with human and non-human antecedents in Pied Piping of PPs in restrictive relative clauses). So, the structure obtained by *que* movement to Spec of CP is not well formed. Therefore, *que* moves to D in an *agree* operation, in order to evaluate its features, as described in (23).¹⁴

We have seen that Medeiros Júnior argues for a supplementary *wh* movement from Spec CP to Spec DP. Alternatively, we may propose that there is a *wh* feature percolation from the D head to the DP maximal projection, which captures the main intuition of Bresnan and Grimshaw (1978) and of Riemsdijk (2007), according to whom, despite formal differences between the two analysis, the *wh* morpheme that fronts the CP in free relatives behaves as if it belongs to the main clause and to the embedded clause.

¹² Another reason to discuss Brito’s proposal about the complementizer nature of the relative *que* comes from a broad comparison with other Romance languages and varieties: there are Romance varieties where there are complementizers with inflexion marks and relative pronouns without those marks (see Poletto & Sanfelici (2019) on Marebbano, a dialect spoken in Marebbe, Val Badia, Italy). It is why Poletto and Sanfelici argue that relative morphemes are not always divided into uniform morphemes, similar to complementizers, and variable morphemes.

¹³ Rinke and Aßmann (2017) refer to relative *que* as an (in)transitive *wh* determiner. The two authors argue that the relativizer *que* is a D-element, with properties of demonstratives and interrogative determiners. I quote: “In appositive as well as restrictive indirect object or prepositional relative clauses, where *que* is interchangeable with *o qual*, *que* can be analyzed as an intransitive demonstrative (...). In restrictive subject and object relative clauses, on the other hand, *que* is a transitive demonstrative and selects for a silent nominal complement” (Rinke & Aßmann, 2017, p.21).

¹⁴ Chomsky (2001) introduces the notion of evaluation of features; a non-evaluated feature must acquire a value through an *Agree* relation with a category that has this feature with a specified and interpretable value. My proposal is an attempt to justify the reanalysis / incorporation under a minimalist checking theory of movement, different from Medeiros Júnior (2016) approach (see above).



As for the incorporation, it is important to notice that some conditions are necessary: (i) D is a weak head; (ii) *que* is an underspecified weak form; (iii) no violation of a locality condition occurs.¹⁵

Notice also that, as a definite article, *o* is always a proclitic element, which explains the order *o que* and not the contrary (**que o*).

We will see later that, when the matrix D has explicit ϕ features, as when we have the “variable” *o que* (*a que*, *os que*, *as que* and other variable forms), there is no possibility of forming a word, there is no motivation for the incorporation.¹⁶

Also, when the language (or the construction) has no weak form of D, as with strong demonstratives, there is no condition for the incorporation with *que* / *che*, as illustrated by the examples from Portuguese (24) and (25), and Italian (26):

- (24) *Aprecio sempre aquilo que tu lês.*
 appreciate1.SG. always thatDEM that you read
 ‘I always appreciate what you read.’
- (25) *Aprecio sempre aquilo com que te identificas.*
 appreciate1.SG. always thatDEM with that you are identified
 ‘I always appreciate what you are identified with.’
- (26) *Ti insegnerò quello in cui credo.* (Cecchetto & Donati, 2010, pp. 555–556)
 youDAT will teach1.SG. thatDEM in that believe1.SG.
 ‘I will teach you what I believe in.’

Even if we consider that *aquilo* and *quello* are Ds, as argued by Postal (1969), and that they occupy a D position, they are not weak forms, they are not clitics, and there is no place for reanalysis / incorporation; what

¹⁵ Where locality may be defined in the following way: a feature F in a category A establishes an Agree relationship with an identical F feature in a c-commanding category B if and only if there is no other category C with an identical feature intervening between A and B (see Chomsky (1995, 2001)).

¹⁶ As we will see in paragraph 3., the non-incorporation is the consequence of a *structural* difference between free and semi free relatives: free relatives have no NP layer, semi free relatives have a NP layer. Therefore, the existence or non-existence of ϕ features is not a condition for the incorporation, just a consequence of the difference in structure.

we have in (24), (25) and (26) are, in fact, restrictive relative clauses with strong demonstratives as antecedents.¹⁷

Summarizing: in Portuguese there is a type of relative clause that has the main properties of free relatives or headless relatives because it has no external nor an internal head and whose main syntax is similar to other free relatives like those which begin by *quem*, ‘who’, among other *wh* forms: those that contain the invariable relative *o que*, with [+SING] and [+MASC] features in *o* that correspond to the neutral features. Indeed, even though the D position is occupied by *o*, there is a reanalysis / incorporation between *o* and *que*, which allows to create a single *wh* word, explaining the non-interference of a preposition. We have developed Medeiros Júnior (2016) analysis, but we have differed in some technical details. We may propose that there is a *wh* feature percolation from the D head to the DP maximal projection, dispensing the supplementary *wh* movement proposed by Caponigro (2002) and Medeiros Júnior (2016) for free relatives.

3. The variable *o que* in semi free or light-headed relatives

Let us analyse now the “variable” *o que* and the syntax of what I am calling here semi free relatives or light-headed relatives.

By “variable” *o que* we want to refer to the combination where there are explicit ϕ -features of gender [+/-MASC] and of number [+/-SING] in what traditionally was considered a demonstrative pronoun, but what is here also considered a determiner, the definite article.

As Brito and Duarte (2003) notice, in the constructions like (27)), the separation between *o* and *que* by a preposition is grammatical:

- (27) Já li o / a / os / as de que me falaste (speaking, for instance, about books or novels).
already read1.SG. theM.SG. / theF.SG. / theM.PL. / theF.PL. about meDAT spoke2.SG.
‘I already read the one / the ones about which you have spoken to me’.

We have seen that with the “invariable” *o que*, that is to say, the combination where *o* is underspecified as for ϕ features and corresponds to “aquilo”, the presence of a preposition between the two parts of the constituent is impossible, as in (14), here renumbered as (28):

- (28) *Vou ensinar-te o em que acredito.
I will teach you the in that believe1.SG.

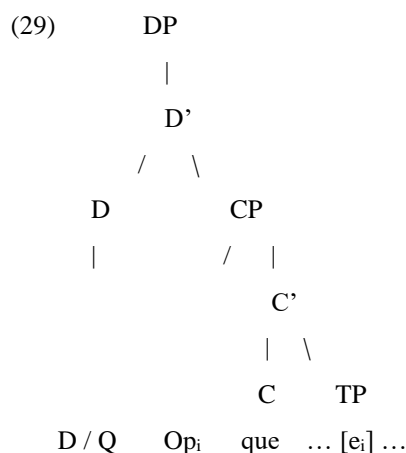
This justifies again an analysis where the D belongs to the head of the relative clause, according to Rebuschi (2001) for semi free relatives of Basque¹⁸ and Citko (2004) for most of free or light-headed relatives of Polish, among others. See (13), here renumbered as (29):¹⁹

¹⁷ See also an example of archaic English (as cited in Cecchetto & Donati (2010, p. 556)), where *that* and *which* co-occur, showing that (i) is a restrictive relative clause with antecedent: (i) *That which we call a rose / By any other name would smell as sweet. (Romeo and Juliet II, ii, 1–2)*

¹⁸ For French, Rebuschi (2001) suggests that they may have a NP layer above CP and below DP, where the level NP is empty, occupied by features or by a personal pronoun (see below for Portuguese and Polish). The author argues that similar facts happen in English with personal pronouns as antecedents, following the idea of Postal (1969) that personal pronouns are intransitive determiners: (i) *He who helped the blinds*, an example of Quirk *et al.* (1985), and that corresponds to (ii): (ii) *The one who helps the blinds*.

¹⁹ This structure already shows that semi free relatives / light-headed relatives are more similar to headed relatives than to free or headless relatives in several points:

(A) the absence of matching effects: as for case matching, although these effects are not really visible in Portuguese, we could always have different case marking, as in (i) *OS_{NOM} que_{ACC} eu vi são meus amigos* (the_{NOM} that_{ACC} I saw are my friends), a semi free relative, similar to a free relative: (ii) *Quem_{NOM/ACC} eu vi são meus amigos* (who_{NOM/ACC} I saw are my friends). In Portuguese there are matching effects related to prepositions: (iii) ? *Vi de quem tu gostas* (I saw of who you like) is worse than (iv) *Vi quem tu admiras* (I saw who you admire).



Notice that the behavior of this type of relatives as for the choice of the *wh* morpheme is like in normal restrictive relative clauses: as for SU and DO relatives, they only accept *que* (30a, 30c) and not *quem*, even when the antecedent is [+human] (30b, 30d) (cf. Brito, 1991, chap. 4; Silva, 2021, p. 72):

- (30a) Os que vieram são meus amigos.
 theM.PL. that came are my friends
 ‘Those that / who came are my friends’
- (30b) * Os quem vieram são meus amigos.
 theM.PL. who came are my friends
- (30c) Os rapazes que vieram são meus amigos.
 the boys that came are my friends
 ‘The boys that/who came are my friends’
- (30d) * Os rapazes quem vieram são meus amigos.
 theM.PL boys who came are my friends

When there is Pied Piping of PPs, that is to say, when PPs move to the spec of CP, the *wh* morpheme is sensitive to the nature of the antecedent: we choose Prep+*que* when the antecedent is [–human] and Prep+*quem* when the antecedent is [+human], not only in normal restrictive relative clauses, as in (31) but also in semi free relatives, as in (32) (Silva, 2021, p. 66):²⁰

(B) As for the choice of *wh* morphemes, light-headed relatives only admit *que*, while free relatives admit *o que*, *quem*, *onde* in certain circumstances (see iv).

(C) Other reason for the approximation between semi free relatives or light-headed relatives and headed relatives is semantic: the two may be definite / demonstrative / indefinite / universal according to the D / Q in the antecedent. Free relatives may be definite (v) *Quem tu vês ali é meu amigo* (who is you see there is my friend); universal (vi) *Quem muito espera desespera* (whoever waits a lot despair), as in proverbs and idioms; only in transparent free relatives the indefinite reading may appear: (vii) *Vimos o que parecia ser um avião* (we saw what appears to be an airplane). See Brito (2022) about transparent free relatives.

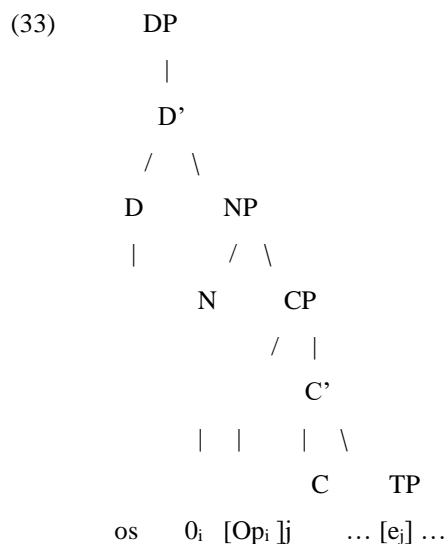
²⁰ According to a reviewer, the examples similar to (31a), that is to say, with *que* and not *quem*, would be better with other prepositions, such as *com* ‘with’ and *de* ‘of’, ‘about’:

- (i) O homem com que falei é meu amigo;
 (ii) O homem de que (te) falei é meu amigo.

- (31a) * O homem a que falei é meu amigo.
the man to that I spoke is my friend
- (31b) O homem a quem falei é meu amigo.
the man to who spoke1.Sg. is my friend
'The man to whom I spoke is my friend.'/'The man (whom) I spoke to is my friend.'
- (31c) O homem ao qual falei é meu amigo.
the man to which spoke1.Sg. is my friend
'The man to which I spoke is my friend.'/'The man (which) I spoke to is my friend.'
- (32a) O único lugar que está por preencher é o de que agora abdica.
the only place that is to fill is the.Masc.Sg. up he is now gives
'The only place he has yet to fill is the one he is now giving up.'
- (32b) As únicas pessoas que valorizas são as de quem/que falaste.
the only people that value2.Sg. are the.Fem.Pl. about who talked
'The only people you value are the ones you talked about.'

There is another behavior that is crucial for the understanding the syntax of what we are classifying semi free relatives or light-headed relatives: the possibility of interference of a preposition, largely described above, that, in our view, is the consequence of the non-existence of reanalysis / incorporation between *o* and *que*.

This difference suggests that the syntactic structure of semi free relatives or light-headed relatives and the one of free relatives must be different. For reasons that will be clearer in next paragraph, Citko (2004, p. 113) proposes that some light-headed relatives in Polish are not true free relatives but "headed relatives in disguise", as described in (33), with a NP layer and where 0 represents a null N (similar to *one* in English) (see also Silva, 2021, p. 66 for Portuguese):



There are here probably phonological and lexical conditions that must be carefully analysed. The preposition *a*, being the dative marker in contexts like the one in (31), seems to require more strongly a human relative form. Also it is phonologically weaker than *com* or *de*. All this requires a future investigation.

If we adopt this structure for free relatives or light-headed relatives with a variable *o que* antecedent, we can explain not only the use of *que* in SU and DO exhibited in (30), but also the Pied Piping of PPs as in (31) and (32) and therefore the possibility of a preposition between the determiners / quantifiers and *que*.

Thus, my proposal is that the syntactic structure for Portuguese semi free relatives / light-headed relatives is (33), not (29) (see also Silva (2021) for Portuguese); this explains the impossibility of movement of *que* to D, because a head, a N, interferes; such a movement would constitute a locality violation. In this way, the possible presence of prepositions between the D and *que* (as in (27)) is explained by a normal Pied Piping of PP to the Spec of CP.

Summarizing so far: in EP, the constructions which contain a “variable” *o que*, where the definite article *o*, *a*, *os*, *as* or other determiners and quantifiers exhibit ϕ features and that are generally called semi free relatives or light-headed relatives are characterized by the same restrictions on the use of *que* / *quem* in SU, DO and Pied Piped PPs as in normal restrictive relative clauses. The fact that a preposition may interfere between the two parts of this sequence shows that no reanalysis / incorporation between the D and *que* operates and that they are “headed relatives in disguise”, using the terminology of Citko (2004), being characterized by the presence of a NP layer with a null N, similar to *one* in English.

4. Some comparative data: is there a reanalysis / incorporation in free relatives in other grammars?

A very brief comparative study is important in order to define the conditions that govern the reanalysis / incorporation between the visible determiner and the *wh* word in free relatives.

German and Dutch have the possibility of combining a determiner with a full *wh* form, like *was* or *wat*, as illustrated in the following examples:

- (34a) Mary isst das, was (auch) John isst. (German)
 Mary eats that what also John eats
 ‘Mary eats what John eats.’
- (34b) Marie eet dat wat Jan eet. (Dutch)
 Mary eats that what also John eats
 ‘Mary eats that what also John eats (as cited in Citko, 2004, p. 97)

But here there are no conditions for incorporation / reanalysis, because the *wh* forms are heavy and complex, as well as the antecedents.²¹

Let us see now what happens in Romance languages. Let us begin with Spanish.

Spanish has the neutral demonstrative *lo*, as in (35):²²

- (35a) Lo que sueles hacer.
 what used2.SG. do
 What you are used to do’

²¹ In general, in English there is no condition for reanalysis / incorporation between the D / Q and the *wh* form. However, according to Kayne (1994), the forms with *ever* (*whatever*, *whenever*, *however*...), like in (i) and (ii) (examples from Riemsdijk, 2007), are obtained by incorporation, admitting that *ever* is the reduced form of *every*: (i) They tend to live in *whatever town* their parents used to live. (ii) She will make you *however happy* your ex made you. The *wh* pronoun raises to D and incorporates to *ever*. The impossibility of light-headed relatives with *ever* in English would be explained because *ever* and the antecedent are competing for the same position, D.

²² A reviewer notices that *lo* cannot be used in *wh* interrogatives: *(*lo) que hiciste?*, which reinforces the CP nature of *wh* interrogatives, differently from free relatives, that are nominal, that is to say, complex DPs containing CP.

- (35b) Escuché lo que dijo.
hear1.SG the that say3.SG.
'I heard what he said.'

And there are variable forms *el*, *la*, *los*, *las*, as in (36):

- (36a) El que la hace la paga. (Bosque & Demonte, 1999, p. 401)
the that itF.SG. does pays
'The one who does it pays it.'
- (36b) La que visitamos en Polonia era espectacular. (Bosque & Demonte, 1999, p. 446).
theF.SG. that visited in Poland was spectacular
'The one which we visited in Poland was spectacular.'
- (36c) He visto a la que me presentaste. (as cited in Citko 2004, p. 97)
have1.SG. seen to the that meDAT introduced2.SG.
'I have seen the one that you have introduced to me.'

Both forms *el* and *lo* are heads and clitics, therefore there would be reasons to propose an incorporation with *que* in the same circumstances as in Portuguese. However, in semi free relatives with Pied Piping of PPs, Spanish rarely allows sequences like "ese de que me habló" (I found one occurrence in the CORPES XXI). What is frequent is some sort of "doubling" of the antecedent, or better, the presence of demonstrative determiner in the antecedent and the definite article incorporated to *que*, as in (37):

- (37) Ya he leído **ese del que** me hablaste.
already have1.SG this of.the that me spoke2.SG.
'I have already read the one about which you have spoken.'

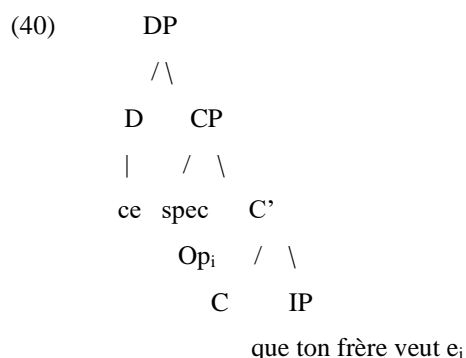
In (37) the sequence *el que* (included in the *wh* PP *del que*) occurs at the Spec of CP. So, there are no reasons to propose an incorporation in Spanish.

In French, when the relevant *wh* form is [-anim], both free relatives and subordinated *wh* interrogatives are initiated by *ce que*, as in (38) and (39)), what justifies the proposal by Konrad (2019) that they are all basic DPs:²³

- (38a) J'aime ce que tu as cuisiné.
(38b) * J'aime que tu as cuisiné.
(39a) Je me demande ce que ton frère a acheté.
(39b) * Je me demande que ton frère a acheté.

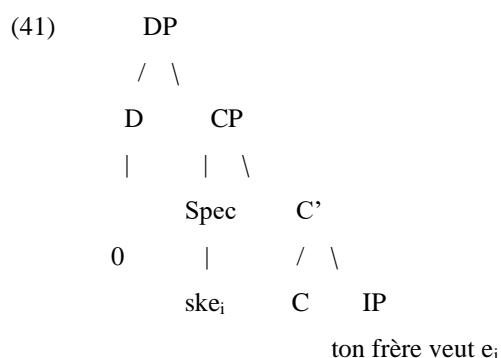
Therefore, Konrad (2019, p. 26) starts from the structure in (40):

²³ Konrad considers that in Romance languages, *que* / *che* is the complementizer, what is under discussion in this text, at least for Portuguese. Nevertheless, as French is not the main point of this study, I will maintain Konrad's explanation in the text.

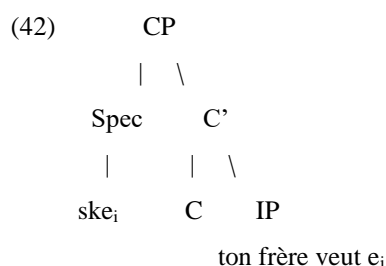


However, accepting the classical view that embedded *wh* interrogatives are CP selected by a matrix interrogative predicate and that free relatives are complex DPs, Konrad argues that the structure (40) is only adequate for free relatives. Being *ce* obligatory in both contexts, something must be proposed. The author assumes that a mechanism of incorporation must operate, joining *ce* and *que* in a sole form *ceque* pronounced [ske] and that this form occupies the Spec position of CP as a lowering; in these circumstances, there are two possibilities of configuration:

- (a) if the null D is retained in the structure, it is a free relative, as in (41):



- b) if the null D is not retained in the structure, it is an indirect question, an embedded *wh* interrogative, as in (42):



According to Konrad, the main difference between French and English seems to be that [ske] has a weak *wh* feature, explaining the ungrammaticality of (43a); English *what* has a strong *wh* feature, explaining the grammaticality of *what* questions, as (43b):²⁴

- (43a) * *Ce que tu aimes?*
 (43b) What do you want?

In Polish, studied by Citko (2004), there are different types of light-headed relatives. In general, there are no complex forms like *ktory* ‘which’ and instead short and simple forms like *co* are used.²⁵ When the light-headed relative contains a demonstrative, we obtain a sequence like *to co*, as in (44):

- (44) Jan czyta to, co Maria czyta.
 Jan read this what Maria reads
 ‘Jan reads what Maria reads.’ (Citko, 2004, pp. 96, 98).

When the light-headed relative contains an indefinite, as in (45) something more must be said.

- (45) Czytan cos, co lubie.
 Read1Sg something that like1Sg
 ‘I am reading something I like’

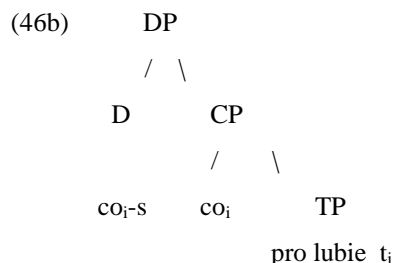
Citko proposes that the structure is (46a), with the suffix *-s* occupying D:

- (46a) DP
 / \
 D CP
 | / \
 -s co_i TP
 pro lubie t_i

²⁴ As it is well known, French also admits semi free relatives with *celui*, *celle*, *ceux*, *celles*, as antecedents, that is, variable and heavy demonstrative forms.

²⁵ According to Citko (2004, p. 96), *co* ‘what’ is simpler than *ktory* ‘which’ because *what* is possible isolated (*what did you see?*) or with a nominal (*what book did you see?*), but impossible with ‘one’ (**what one did you see?*); *which* is only possible with a nominal restriction (*which book / one did you see?* / **which did you see?*). Citko, therefore, assumes that *what* already contains an indefinite part (if we analyse *wh* pronouns as being composed of a *wh*-part and an indefinite part).

and a process of movement of *co* to D operates, as described in (46b):

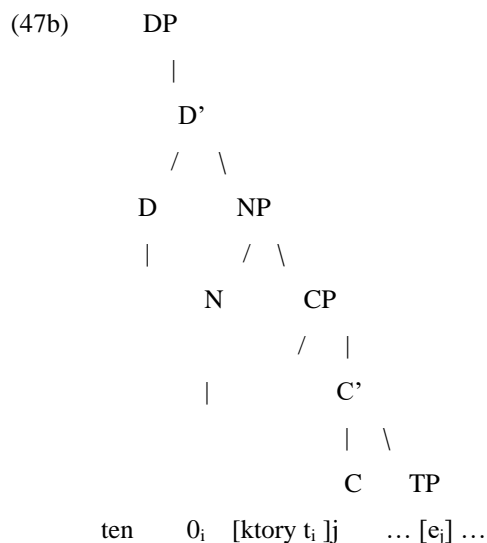


Assuming the theory of movement by copy (Chomsky, 1995; Nunes, 2004; among others), the author explains the coexistence of *cos co*, as well as the morphological reanalysis (Citko, 2004, pp. 120–121).²⁶

The third type (and less common) of light-headed relatives in Polish are more complex, with the sequence *ten, ktory* ... as in (47):

- (47a) Ten, który skonczy pierwszy, dostanie nagrode.
 this which finishes first will.get prize
 ‘The one who finishes first will get the prize’.

Then, the structure (47b), already suggested above, the one that the author calls “headed relative in disguise”, with a NP layer and a null N, is justified.



²⁶ Citko explains the necessity of copy here, proposing that “after reanalysis (...) the highest copy (...), being buried inside the reanalysed (thus syntactically opaque) word, no longer c-commands the copy in [Spec, CP]. If linearization can only delete copies in chains whose links are in a c-commanding relationship, the right results follow.” (2004, p. 121). Notice that in the case of (46) *co* left-adjoins to the suffix; but there is also the possibility of right-adjoining, as with the negative *ni* prefix (ni-co ‘nothing that’). Citko (2004, p. 118, footnote 17) explains the presence of *-ni* in the DP, proposing that a DP may contain functional categories such as QP and NEGP.

Summarizing:

Germanic languages like German and Dutch allow semi free relatives / light-headed relatives with full *wh* forms and, as expected, no incorporation occurs.

Spanish, like Portuguese, has a variable determiner (*el, la, los, las que...*) and an invariable determiner in combination with *que* (*lo que...*) in semi free relatives. The main difference from Portuguese is Pied Piping of PPs, with some sort of “doubling”: *el* “doubles” the antecedent amalgamated to the preposition in Spec of CP (as in *esse del que...*).

Portuguese, French and Polish have a process of incorporation between the D and the *wh* form in free relatives under similar conditions: the head, the neutral and the weak form not only of the antecedent but also of the *wh / que* form. But with some differences in the three grammars: in Portuguese the *que* form moves to D, creating the invariable *o que*; in French, there is a lowering of *ce* to the Spec of CP creating the form [*ske*]; in Polish a movement by copy may operate when an indefinite occupies the antecedent of the free relative, explaining the sequence *co’s co*.

Polish and Portuguese also exhibit semi free relatives / light-headed relatives that are “headed relatives in disguise”, where a NP layer and a null N are justified: in Portuguese they are characterized by variable determiners and quantifiers as antecedents, no incorporation and they may exhibit a preposition between the D / Q and *que*. In Polish the possibility of a heavy and complex *wh* form may occur, explaining the sequence *ten, ktory*.

5. Conclusions

In this text, I have analysed, in a comparative perspective, the syntax of Portuguese free and semi free relatives or light-headed relatives introduced by *o que*. Portuguese has two different relative constituents *o que*: with the invariable *o que*, a reanalysis / incorporation occurs, no preposition may interfere, the constituent *o que* behaves as a *wh* word and consequently the construction behaves as a true free relative. There are reasons to assume that *que* is an underspecified *wh* word (not the complementizer) and moves to the D *o* to evaluate its (neutral) ϕ features in an agree operation.

With the variable *o que*, with clear ϕ features of number and gender in the determiner, there are two different constituents that do not amalgamate one to another, a preposition may interfere and we have semi free relatives or light-headed relatives. Following a suggestion of Citko (2004) for Polish I proposed, following Silva (2021), that they are “headed relatives in disguise”, with a NP layer and a null N (similar to *one* in English), explaining the impossibility of movement of *que* to D and the possibility of presence of prepositions between the D and *que*.

A brief comparative analysis with some languages which also justify a reanalysis between the antecedent (the D) and the *que / wh* form in free relatives, in particular French and Polish, shows that the conditions for such reanalysis are similar: the head and weak form not only of the antecedent (the D) but also of the *wh / que* form.

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