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working title: The left-peripheral syntax of Brazilian Portuguese *cadê*

Abstract: The heterogeneity of *wh*-words in Romance is expectedly strong. This extends beyond the advances of the Cartographic Program (Rizzi 1997, 2013), and the distinction between interrogatives that trigger subject-verb inversion (FocP) and those that do not (IntP), as proposed in Rizzi (2001). To date, there has been relatively little work having explored non-canonical interrogative elements. In this paper, we explore the syntax of *cadê* in Brazilian Portuguese, a reanalyzed functional item from the string (*O*) *que é de...?* (da Silva Menon 2014). We show that the distribution of *cadê* feeds an interpretation of a null-copular construction in that it may not be used with a verb. Instead, it selects a lone DP argument which whose interpretation may be understood as ‘Where is/are (X)?’. We briefly discuss comparable functional items in Romance and elaborate on an analysis that shows that *cadê* has several verbal properties which allow us to consider a syntactic approach that mirrors  $v^0$ - $T^0$ - $C^0$  verb movement.

Key words: interrogative, null-copula, syntax, cartography

## 1 Introduction

The heterogeneity of *wh*-words in Romance is expectedly strong, extending beyond the advances of the Cartographic Program (Rizzi 1997, 2013), and the distinction between interrogatives that trigger subject-verb inversion (FocP) and those that do not (IntP), as proposed in Rizzi (2001). Curiously however, to date, there has been relatively little work exploring non-canonical interrogative elements like the one we examine in the current chapter. Brazilian Portuguese boasts two distinct locative interrogative expressions: the canonical locative interrogative *onde*, and a special locative interrogative *cadê*. The canonical interrogative must appear with a predicate (1a), but *cadê* may not (1b).

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- (1) a. *Onde* *\*(está)* *a mãe?*  
where be.PRS.3SG the mom  
b. *Cadê* *\*(está)* *a mãe?*  
where be.PRS.3SG the mom  
'Where is mom?'

In the following sections, we examine the syntactic properties of *cadê* in Brazilian Portuguese, making explicit comparisons to similar phenomena in Romance as well as non-Romance languages, in addition to their accompanying syntactic proposals in the formal, generative literature. In our syntactic analysis, we attempt to account for the tenseless nature of sentences in which *cadê* appears. We show that the distribution of *cadê* feeds an interpretation of a null-copular construction in that it may not be used with a verb but, instead, selects a lone DP argument which may be understood as 'Where is/are...?'. We briefly discuss comparable functional items in Romance and elaborate on an analysis that shows that *cadê* has several verbal properties which allow us to consider a syntactic approach that mirrors  $v^0$ -T<sup>0</sup>-C<sup>0</sup> verb movement.

## 2 Syntactic distribution of *cadê*

In comparison with canonical *wh*-elements, *cadê* has a limited syntactic distribution. Standard expressions are those in which *cadê* selects a DP, either singular (2a) or plural (2b), of varying types such as indefinites (2c) and quantified (2d) DPs.

- (2) a. *Cadê a mãe?*  
where the mother  
'Where is mom?'  
b. *Cadê os meninos?*  
where the boys  
'Where are the boys?'  
c. *Cadê um namorado quando se precisa de um?*  
where one boyfriend when se require.PRS.3SG of one  
'Where is a boyfriend when you need one?'

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- d. *Cadê cada um de vocês?*  
where each one of you.PL  
'Where is each one of you?'

*Cadê* also permits topicalization, when doubled by a personal pronoun (3a) and when discourse linked to a subordinate clause (3b).

- (3) a. *A desgraça do João, cadê ele?*  
the disgrace of-the João where he  
'That disgraceful João, where is he?'
- b. *Quando acho que tou engordando, cadê?*  
when find.PRS.1SG COMP be.PRS.1SG fatten.PROG where  
'When I notice I'm getting fat, where is it (=the fat)?'

As mentioned previously above, the most notable aspect of the syntax of *cadê* is the fact that it never appears with a verb of any kind. This is in direct contrast to the behavior we see from the standard locative interrogative *onde*.

- (4) a. *\*Cadê está / vai / trabalha seu irmão?*  
where be.PRS.3SG go.PRS.3SG work.PRS.3SG his brother  
Intended: 'Where is his brother/his brother going?'
- b. *Onde está / vai / trabalha seu irmão?*  
where be.PRS.3SG go.PRS.3SG work.PRS.3SG his brother  
'Where is his brother/Where is his brother going/Where does his brother work?'

Regardless of the DP selected by *cadê*, it must always bear nominative Case. As only local personal pronouns (i.e., 1<sup>st</sup>- and 2<sup>nd</sup>-person) in the singular show Case discrimination, we see that *cadê* selects the nominative (*eu* and *tu*) rather than the accusative/oblique (*mim* and *ti*).<sup>1</sup>

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<sup>1</sup> Admittedly, the 1<sup>st</sup>-person example is odd without the appropriate context, owing to the fact that this question is likely rhetorical. A lyric from the Brazilian pop group Maiara & Maraisa provides an appropriate scenario where this may be a plausible utterance:

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- (5) a. *Cadê eu / \*mim?*  
where I me  
'Where am I?'
- b. *Cadê tu / \*ti?*  
where you.NOM you.OBL  
'Where are you?'

In the same manner that *cadê* only selects arguments bearing nominative Case, it may only have a present-tense interpretation. Notably, this may not be overridden by the use of adverbs which might otherwise anchor the speech act to the past or future.

- (6) a. *\*Cadê meu Gustavo ontem?*  
where my Gustavo yesterday  
Intended: 'Where was my Gustavo yesterday?'
- b. *\*Cadê vocês o ano que vem?*  
where you.PL the year that come.PRS.3SG  
Intended: 'Where will you guys be next year?'

The final data point worth mentioning at this juncture is *cadê*'s ability to be embedded (6). Even in contexts set in the past, there is an obligatory [+PRESENT] reading.

- (7) *Tava procurando o livro<sub>i</sub> mas não sei cadê*  
be.IMPV.1SG search.for.PROG the book but NEG know.PRS.1SG where  
'I was looking for the book, but I don't know where it is.'

The sentence in (7) is reminiscent of the distribution of null copulas in Semitic languages, a focus of much work that has been present in the generative literature since the 1980s (\*cite

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(i) *E nessa eu parei pra pensar, cadê eu?*  
and in-that I stop.PST.1SG for think.INF where I  
'And in that I stopped to think, where am I?'

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here\*). In (8) (Benmamoun 2008:1150), we see that the embedded clause in Arabic with a null copula has a present-tense interpretation even under past-tense embedding.

- (8) *qal*                    *bəlli* *Omar* *ø* *f-d-dar*  
say.PST.2SG    COMP   Omar   *ø*   in-the-house  
‘You said that Omar is in the house.’

Within Western Iberian Romance, we also find a surprising variety of apparent null-copular constructions with locative interrogatives. We examine similar verbless interrogatives in Galician (§2.1) and Asturian (§ 2.2), but as we will see, these interrogatives exhibit critical differences. In §3, we attempt to sketch out a unified analysis of these difference interrogative constructions that brings the syntax of *cadê* in line with that of null-copular constructions in several key aspects, namely the presence of an obligatory present-tense interpretation and the possibility of being embedded.

## 2.1 Interrogative *u* in Galician

Author 1 & Author 2 (2020) analyze another null-copular structure found in Galician, often referred to as the *U-lo* construction, which they label as *verbless DP interrogative constructions* (VDICs). This construction is composed of the locative adverb *u* and a determiner clitic of various specifications (Uriagereka 1996; Author 1 2021) that introduces an overt or covert DP referent.

- (9) a. *U-lo*                    *can?*  
          where-CL.M.SG dog  
          ‘Where is the dog?’
- b. *U-las*                    *pícaras que*    *xogaban*            *no*    *pendello?*  
          where-CL.F.PL girls    COMP   play.IMPV.3PL on-the   carport  
          ‘Where are the girls that were playing under the carport?’
- c. *E*            *a*    *navalla?*    *U-la?*  
          and    the knife            where-CL.F.SG  
          ‘And the knife? Where is it?’

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Much like *cadê*, *U-lo* boasts a non-canonical syntactic distribution that contrasts with that of the more common *onde*. Notably, it may not be paired with a verb (10) and it always has a present-tense interpretation (11).

- (10) a. \**U-los*            *puxeches?*  
          where-CL.M.PL put.PST.2SG  
          Intended: ‘Where did you put them?’
- b. \**U-la*            *está?*  
          where-CL.F.SG be.PRS.3SG  
          Intended: ‘Where is she/it?’
- c. \**U-lo*            *vai?*  
          where-CL.M.SG go.PRS.3SG  
          Intended: ‘Where is he going?’
- (11) a. \**U-los*            *pais*    *onte?*  
          where-CL.M.PL parents yesterday  
          Intended: ‘Where were our parents yesterday?’
- b. \**U-la*            *a*    *vindeira*    *semana?*  
          where-CL.F.SG the coming    week  
          Intended: ‘Where will she be next week?’

Setting aside the differences between DP selection (see Author 1 & Author 2, 2020:99 for further details), there are two significant differences that we claim to have direct implications for our theoretical analysis in the next section. First, Galician *U-lo* may never be embedded, unlike what we showed for *cadê* (12; cf. 7).

- (12) \**Non*    *vexo*                    *u-lo*                    *meu*    *nenho*  
      NEG    see.PRS.1SG    where-CL.M.SG my    boy  
      Intended: ‘I can’t see where my boy is.’

Second, *U-lo* does not permit topicalization, unlike what we showed for *cadê* (13; cf. 3).

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- (13) \**Os cartos, u-los?*  
the money where-CL.M.PL  
Intended: ‘The money, where is it?’

We claim that the lack of embedding and topicalization in Galician *U-lo* is indicative of a distinct syntactic derivation from that of *cadê*. In the subsequent subsection, we use data from a similar interrogative structure in Asturian to bridge the gap between BP *cadê* and Galician *U-lo* in our analysis.

## 2.2 Asturian *ú*

Author 1 & Author 2 (2022) compare the fixed interrogative construction shown in §2.2 to that found in Asturian. In Asturian, there also exists a null-copular construction comprised of *ú* and a lone DP.

- (14) *Ú'l coche?*  
where car  
‘Where is the car?’

However, unlike in Galician, *ú* in Asturian may be paired with a verb (15a), may be embedded (15b), and may remain *in situ* (15c). That is, in addition to its ability to license the null-copular structure in (14), it mirrors all uses of its canonical interrogative counterpart *donde*.

- (14) a. *Ú / Donde taba'l coche?*  
where be.IMPFV.3SG-the car  
‘Where was the car?’  
b. *Vimos ú / donde taba al salir de la fiesta*  
see.PST.1PL where be.IMPFV.3SG upon leave.INF of the party  
‘We saw where he was upon leaving the party.’  
c. *Dexasti la llave ú / donde?*  
leave.PST.2SG the key where  
‘You left the key where?’

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Importantly, the null-copular construction found with *ú* in Asturian permits topicalization, a behavior that stands in contrast to what we have shown for Galician.

- (15) *Los bolígrafos que te pidí, ú-los?*  
the pens COMP CL.2.SG ask.PST.1SG where-CL.M.PL  
'The pens I asked you for, where are they?'

We believe that the patterns of cross-linguistic variation between *cadê* and *ú* in Asturian are no coincidence. Specifically, we claim that there is a direct correlation between the availability of topicalization, the ability to be embedded, and the presence of T°. As we discuss in the following section, this directly contrasts with what we find in the data (and theory) in accounting for Galician *U-lo*. This is the line that we shall pursue in the next section in accounting for our theoretical proposal.

### 3 On obligatory present tense

Accounting for tense cross-linguistically has proved to be a challenge for generativists. Within natural language, there is notable variability in accounting for concepts related to tense, aspect, and mood, both with respect to languages that are truly tenseless (e.g. Chinese) as well as those that have seemingly tenseless constructions, ultimately separating them from their morphologically overt counterparts (e.g. Arabic). Work by Lin (2012), *i.a.* has postulated that the lack of a syntactic tense in Chinese should lead us to assume no T° at all in this language. Based on the assumptions of this author, one could easily extend the idea of the lack of morphosyntactic tense in a given construction to the absence of all tense-related functional projections in the respective derivation. On the other hand, work by Sybesma (2007) does not equate the presence or absence of overt tense morphology as a telltale sign of the respective functional projections that must account for tense in a given language, as shown in his analysis comparing Dutch and Chinese. Following this line of investigation, he shows that the presence of tense morphology is not necessarily indicative of the actual interpretation of the tense in a given clause. These varying concepts and investigative approaches to tense support the expansion of supporting tense-related projections beyond that which is overtly shown by the morphosyntax and encourages us to seek other avenues by which we may account for tense in natural language.



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Subsequently, we outline two comparative approaches in accounting for tense and seek to answer how the obligatory present-tense of *cadê* is derived syntactically.

### 3.1 No functional projections and default present tense

In Author 1 & Author 2 (2020), we explored an idea that directly linked the pragmatic nature of *U-lo* in Galician to the lack of all TAM-related functional projections. More specifically, we posited that *U-lo* shares the same syntax as true imperatives (cf. Platzack & Rosengren 1997) in that both derivations lack all projections related to tense, aspect, and mood. Instead, it is their “here and now” interpretation that lends to the obligatory present tense interpretation of these constructions. For imperatives, this is expected due to the fact that the utterance time is intrinsically tied to the time of the speech act. For *U-lo*, we showed that the interpretation is very much the same. Therefore, a sentence such as that in (16) is understood as ‘Tell me where my money is.’

(16) *U-los            meus   cartos?*  
      where.CL.M.PL my    money  
      ‘Where is my money?’

There are other striking similarities, the most important one being that imperatives, like *U-lo*, may only be licensed in matrix clauses.<sup>2</sup>

As we saw in §2, *cadê* may be embedded. In combination with the fact that *cadê* permits topicalization while *U-lo* does not, we may tentatively posit that *U-lo* and *cadê* do not project the same clausal syntax. An additional piece of evidence comes from the interpretation of small clauses (17).

(17) *An ass, that guy at the next table*  
      (Paul 2008)

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<sup>2</sup> There are, however, exceptions to this cross-linguistic generalization. For cases of embedded imperatives, see Platzack (2007). As these marginal cases neither pair with our data here nor are present in the languages in question, we leave these aside.

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By default, we may imagine that small-clause structures have a present tense interpretation. However, Gutiérrez-Rexach & González-Rivera (2013:9) note that these structures may also bear a past-tense interpretation based on proximal/distal deixis, as in (18).

- (18) *Muy sabio, aquel escritor*  
very wise that writer  
'Very wise, that writer.' (= 'Very wise, that writer was.')

It is not clear to us that deixis is the limiting factor, however. Instead, it seems that anaphoric tense is what we find in small clause predication. Consider the context given in (19).

- (19) Context: The speaker tells a story about his grandfather (now dead) that killed a lot of people during the war. The interlocutor remarks:  
*Qué hombre más siniestro, tu abuelo*  
what man more evil your grandfather  
'What an evil man, your grandfather.' (= 'What an evil man your grandfather was.')

The example in (19) bears a past-tense interpretation due to the previous discourse context. The exact same utterance would be a suitable response, for example, in a context in which the speaker's grandfather was still alive. This type of strategy results in an unacceptable response with a question headed by *cadê*, however.

- (20) Context: The speaker discusses a robbery she saw take place on a trip she took last summer. The interlocutor asks:  
*#Cadê você?*  
where you  
Intended: 'Where were you?'

Because *cadê* has an obligatory present tense reading, which may not be modified via any previous discourse context, the response in (20), while grammatical out of context, is

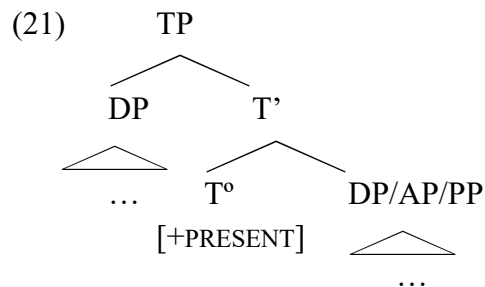
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pragmatically illicit within this particular context, as it may only refer to the location of the speaker at the time of the utterance and has no bearing on the story just told.

Both syntactic aspects explored thus far, in particular the link between embedding/availability of the left periphery and discourse-based anchoring via anaphoric tense, strongly suggest that the explanatory power of a tenseless account of *cadê* is inadequate. In the next subsection, we shall explore the idea that *cadê* projects a phonologically-null T<sup>o</sup>, as in Semitic languages.

### 3.2 Phonologically null T<sup>o</sup> and more

In accounting for null copular distribution across clauses, it has been a salient stance in the literature that T<sup>o</sup> is projected along with a corresponding tense feature (e.g. [+present]). In this way, the present tense interpretation in these structures is straightforwardly accounted for and predicted even in situations in which embedded copulas may be deleted under past tense matrix predicates.



Author 1 & Author 2 (2022) noted that, even for languages with null copulas in canonical declarative sentences, not all languages permit copula deletion under embedding. In (22a), we see that Libyan Arabic permits embedded null copula in addition to matrix clause null copula. However, in (22b), we see that Tagalog, a language that licenses null copulas under many of the same conditions as Arabic, does not allow null copula in embedded contexts.

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(22) *Libyan Arabic*

- a. *hūwa*      *lagi*                      *l-žəww*                      *ml̥h*      *fa*  
he              find.ACT.PTCP.SG.M      DEF-ambience.SG.M      good.SG.M so  
*gāfəd*                      *yādi*  
stay.ACT.PTCP.SG.M      there

‘He found that the ambience is good, so he is staying there.’

(Pereira 2008: 402 *apud* Camilleri & Sadler 2019: 13)

*Tagalog*

- b. *Ayo-ko*                      *na-ng*      *\*(maging)*      *nasa*      *gitna*  
NEG.want-1              now-LI      INF.NOM.BE      PRED.LOC      middle

‘I don’t want to be in the middle anymore.’

(Richards 2009: 182-195)

What we must take note of with respect to *cadê* is the manner in which it is able to be licensed under embedding. Let us compare the following examples.

- (23) a. *Tava*                      *procurando*                      *o livro<sub>i</sub>*      *mas*      *não*      *sei*  
be.IMPV.1SG      search.for.PROG      the book      but      NEG      know.PRS.1SG  
*cadê*

where

‘I was looking for the book, but I don’t know where it is.’

- b. *\*Quero*                      *sair*                      *de*                      *férias*,                      *mas*                      *não*                      *sei*                      *cadê*  
want.PRS.1SG      leave.INF      of                      holidays      but                      NEG                      know.PRS.1SG      where

Intended: ‘I want to go on holiday, but I don’t know where.’

The sentence in (23a), repeated from (7), bears an important property that distinguishes it from (23b): the ellipsis undergone with *cadê* cannot be a case of sluicing (e.g. Merchant 2006), but is simply a case of nominal elision or *pro*, as in (24a, elided constituents in angled brackets; cf 24b).

- (24) a. *Tava* *procurando* *o livro<sub>i</sub>* *mas* *não* *sei*  
be.IMPV.1SG search.for.PROG the book but NEG know.PRS.1SG  
*cadê* <*o livro*>  
where <the book>  
'I was looking for the book, but I don't know where it is.'
- b. \**Quero* *sair* *de férias*, *mas* *não* *sei* *cadê*  
want.PRS.1SG leave.INF of holidays but NEG know.PRS.1SG where  
<*quero* *sair* *de férias*>  
want.PRS.1SG leave.INF of holidays  
Intended: 'I want to go on holiday, but I don't know where.'

It is worth noting that (24b) is not a substitution for the grammatical sentence in (25).

- (25) *Quero* *sair* *de férias*, *mas* *não* *sei* (*pra*) *onde*  
want.PRS.1SG leave.INF of holidays but NEG know.PRS.1SG for where  
'I want to go on holiday, but I don't know where [to go].'

These data confirm our original observation in §2 that *cadê* selects a lone DP argument as its complement.<sup>3</sup> However, it also raises the question of what type of syntactic element *cadê* is. Specifically, we have shown that *cadê* is not simply a *wh*-element in that it may not freely substitute *onde*. We have also shown that *cadê* does not license phrasal ellipsis of the type found in sluicing phenomena but, instead, may only elide a DP complement.<sup>4</sup> We wish to claim that, due to its syntactic distribution and non-canonical behavior, *cadê* is in fact a verbal element. From this perspective, we are able to explain not only the seemingly null-copular nature of *cadê* and its syntactic position within the clause, but also conflate it with the theory often applied to null copulas in order to account for their present-*vtense* nature.

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<sup>3</sup> We would like to thank Cilene Rodrigues for bringing to our attention the possibility of *cadê* as a case of sluicing.

<sup>4</sup> Whether one considers the absence of a DP complement in (6)/(21a) to be movement out of a complement clause or the presence of *pro* bears nothing on our analysis here. What is important, however, is that in the case of the latter DP omission pairs with what has been discussed in the literature concerning the licensing of *pro* in Brazilian Portuguese as a semi-null-subject language (Holmberg, Nayudu & Sheehan 2009, Greeson 2021, *a.o.*).

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Although it is not the centerpiece of our analysis, we believe that a brief diachronic consideration puts our submission of *cadê* as a verbal element in perspective. Recall that *cadê* is a reanalyzed form of the phrase *(O) que é de...?*<sup>5</sup> An important assertion made by da Silva Menon (2014) is that there is no true difference between *cadê* and its precedent phrasal form. However, we believe that there are two primary pieces of evidence that suggest otherwise. First, *(O) que é de...?* licensed oblique Case, as seen in (26).

(26) \*Cite Sá de Miranda text; 16<sup>th</sup> century\*

*Q'ê*                    *de mi*            *se não*    *sou*            *lá*        *e*        *cá*  
what-BE.PRS.3SG of me.OBL if NEG be.PRS.1SG there and COMP  
*comigo não vou?*  
with-me NEG go.PRS.1SG

‘Where am I if I am not there and rather that I am not going?’

As we showed in (5), repeated below for convenience, *cadê* licenses nominative Case.

(27) a. *Cadê eu* / \**mim?*

where I me

‘Where am I?’

b. *Cadê tu* / \**ti?*

where you.NOM you.OBL

‘Where are you?’

Second, we have shown that *cadê* may license a null argument when discourse appropriate (7, 23a). However, Brazilian Portuguese does not permit preposition stranding as would be expected under these circumstances.

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<sup>5</sup> We recognize that this is not the only evolution of this structure. The numerous Portuguese-speaking informants that we have consulted have confirmed the presence of *Quêde?* in Portugal as well as parts of Brazil. Due to space limitations, we leave this particular expression for future research.

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- (28) \**Tava procurando o livro mas não sei*  
be.IMPV.1SG search.for.PROG the book but NEG know.PRS.1SG  
*o que é de*  
the what be.PRS.3SG of

Intended: 'I was looking for the book, but I don't know where it is.'

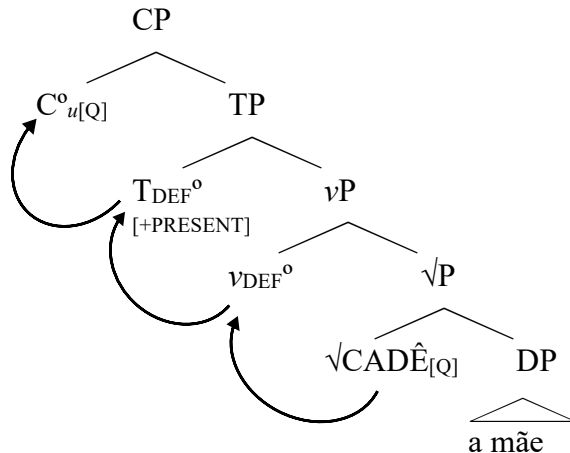
These two data points make it clear that *cadê* and its predecessor are significantly different from one another in both their selectional and distributional properties. However, they both share significant similarities.

- (29) a. *(O) que é de...?*  
i) OBL Case  
ii) [Q] (*(o) que*)  
iii) [+V] (*é*)  
b. *Cadê*  
i) NOM Case  
ii) [Q]  
iii) [+V]

Considering the formal differences in (29), we claim that the multi-word reanalysis to the present-day form resulted in two changes: OBL to NOM Case assignment and XP to X<sup>o</sup> status. Assuming the bundle of characteristics in (29b), we may say that *cadê* should be considered a 'morphologically defective' verb in the sense of Morin (1986). We have seen that *cadê* shows no tense-related morphological alternation based on the  $\phi$ -features of the DP it agrees, much like Morin shows for *voilà* and *voici* ('behold') in French. On the surface, what distinguishes our proposal from that of Morin is the fact that, in our analysis, *cadê* also has a [Q] feature, which we claim to be responsible for its obligatory movement to C<sup>o</sup>. There is, however, precedent for functional elements of this kind that have been posited to undergo v<sup>o</sup>-T<sup>o</sup>-C<sup>o</sup> movement. Zanuttini's (2017) work on the presentative *ecco* in Italian proposed that this reanalyzed

functional item displays the hallmarks of head movement along the clausal spine. We feel that the same applies to BP *cadê*. Consider the implementation of this particular proposal in (30).<sup>6</sup>

(30) *Cadê a mãe?* (repeated from (2a))



In (30), we claim that  $\sqrt{\text{CADÊ}}$  undergoes movement from its base-generated position to the verbalizing head  $v^o$ . As *cadê* does not assign Case to or undergo agreement with its internal argument, we label this head as  $v_{\text{def}}^o$ . From here, we assume that  $v_{\text{def}}^o$  undergoes incorporation to  $T^o$ , which we also label as defective ( $T_{\text{def}}^o$ ). If Preminger’s (2019) proposal of agreement is on the right track and abstract agreement of the type largely supported since Chomsky (1981) is not agreement *qua* agreement, we should not expect the  $T^o$  that selects *cadê* to bear  $\phi$ -features or have any overt morphological exponent related to the noun it selects.<sup>7</sup> This does not, however,

<sup>6</sup> Outside of the [Q] feature that brings *cadê* from  $T^o$  to  $C^o$ , our model of the derivational movement of *cadê* differs from that of *ecco* for Zanuttini in another way. For her, *ecco* is base generated as a purely functional item in  $v^o$ . While nothing about our analysis here would change were *cadê* to be considered the same type of element, we suggest that it is more probable that *cadê* has a  $\sqrt{\text{-}}$ -based origination within the syntax due to the fact that it also may be found in a metalinguistic negation/discursive use as in (i). We put aside a proper evaluation of this flavor of *cadê*, as it is orthogonal to our strict interrogative analysis here.

(i) *Cadê que o Aquiles não bebeu?*  
 where COMP the Aquiles NEG drink.PST.3SG  
 ‘The Hell Aquiles didn’t drink!’

<sup>7</sup> Preminger’s (2019:11) *no-null-agreement generalization* hypothesis states that  $\phi$ -feature agreement must be morpho-phonologically detectable on some level. From this perspective, we may postulate that  $v^o$  (or a similar head) which selects *ecco* in Italian bears some  $\phi$ -feature specification, as *ecco* is commonly found with patterns of cliticization. If cliticization is an instantiation of Agree (e.g. Deal 2021), we may easily prove that agreement has



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have undesirable ramifications for the lone argument selected by *cadê* in terms of, e.g. Case. Regardless of whether one assumes abstract Case assignment, default Case, or a dependent Case theory, nominative Case is predicted with *cadê* and this is indeed borne out. Finally, movement to  $C^{\circ}$  is the result of the checking procedure involving the [Q] feature on  $\sqrt{CADÊ}$  and its  $u[Q]$  probe on  $C^{\circ}$ . These derivational movements also reveal something about the obligatory movement of *cadê* in contrast with, e.g. *onde*, as *cadê* may not remain in-situ (i.e., the subject may not appear above it). Each derivational step, thus, appears to be motivated by a supplemental [EPP] feature, including that of the  $T^{\circ}$ - $C^{\circ}$  movement.

Our statement here regarding the derivationally high position of *cadê* and the assumed low position of the DP subject entails that the examples of topicalization presented in §2 (repeated below for convenience) are cases of movement-based topicalization as postulated by Quarezemin & Ordóñez (2022). We believe that the evidence we have shown in support of *cadê* obligatorily raising to  $C^{\circ}$  constitutes evidence against claims (e.g. Kato & Duarte 2014) that the type of subject doubling found in Brazilian Portuguese is an instance of the highest DP pronounced being in [Spec, $T^{\circ}$ ]. Quarezemin & Ordóñez propose that both the DP and personal pronoun form a unit in which the pronoun is generated as the head of a KP and selects a DP complement.

(31) [<sub>KP</sub> *ele* [<sub>DP</sub> *o João*]]

As Quarezemin & Ordóñez show, the DP complement may undergo movement to the specifier of the personal pronoun, giving rise to patterns like those in (32).

(32) ***O menino ele viajou pra São Paulo***  
***the boy he travel.PST.3SG for São Paulo***  
'The boy traveled to São Paulo.'

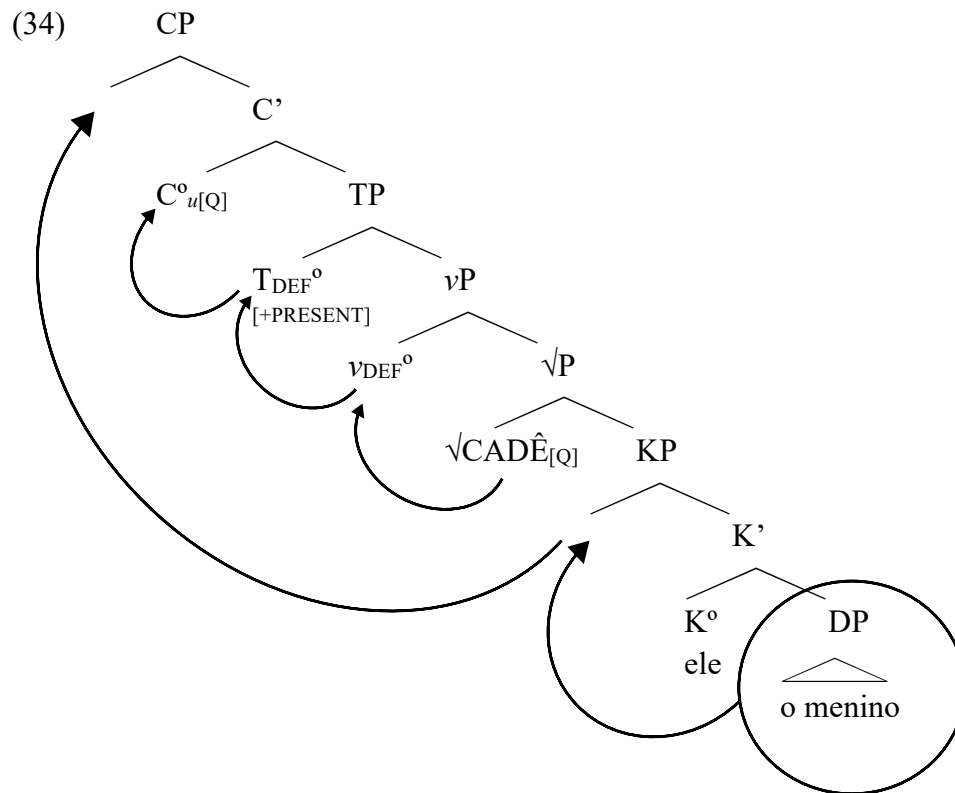
This combination of the DP and a personal pronoun can appear with *cadê*, as in (33).

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taken place. The limitations of the type of argument *cadê* may select, however, leaves us without explicit evidence for agreement to have been realized.

- (33) *O menino, cadê ele?*  
 the boy            where he  
 ‘The boy, where is he?’

Following the proposal in Quarezemin & Ordóñez, we may assume that the complement DP moves to the specifier of K° before undergoing further movement to the left periphery above *cadê*.<sup>8</sup>



When a KP consisting of a DP plus a doubled strong pronoun is selected by *cadê*, a curious asymmetry results: the DP double must either remain *in situ*, as complement of K° (35a); however, if the DP moves to the specifier position of K°, it must undergo further movement to a left-peripheral, Topic-related projection; it may not remain (35b).

<sup>8</sup> We remain agnostic with respect to whether the entire DP raises to [Spec,T°] as in the declarative examples shown by these authors, as nothing in our proposal hinges on this. It should be noted that *wh*-questions in BP do not undergo subject-verb inversion, which has been claimed to involve a lack of T°-to-C° movement (Tescari Neto 2013), leaving the subject in a structurally higher position than the verb. As we claim *cadê* is the verbal element in these structures, which we have shown must move to C°, the position of the subject in these constructions is an outstanding matter here.

- (35) a. *Cadê ele, o menino?*  
where he the boy  
'Where is he, the boy?'
- b. \**Cadê o menino, ele?*  
where the boy he  
Intended: 'Where is the boy, he?'

It is unclear to us at present what the precise reasons are for this remarkable asymmetry, but if Bošković (2014) is on the right track, and the highest projection of the extended domain of a lexical category may be a phase, then it would seem that  $K^{\circ}$  is a phase head in (34). This state of affairs would explain why [*o menino*] may not remain at phase edge (i.e. [Spec, $K^{\circ}$ ]) and must continue to move for reasons related to its topical interpretation, similar to explanations of object shift in Chomsky (2001, 2008). Further investigation may reveal additional connections between head movement along the clausal spine and left-peripheral movements such as topicalization in Brazilian Portuguese.<sup>9</sup>

#### 4 Concluding remarks

In this chapter, we have attempted to sketch out a syntactic analysis for the Brazilian Portuguese interrogative *cadê*. We have shown that while *cadê* is not the only non-canonical *wh*-element in Romance, upon comparing it to Galician *U-lo* and Asturian *ú*, we see that it has syntactic properties that distinguish it from those previously studied. In particular, we have shown that *cadê* has a syntax that mirrors that of verbal movement to  $C^{\circ}$ . We equate its obligatory present-tense interpretation to what is found in Semitic languages and argue for the same clausal structure containing a phonologically-null  $T^{\circ}$  with a [+PRESENT] feature. We claim that *cadê* undergoes  $\nu^{\circ}$ - $T^{\circ}$ - $C^{\circ}$  movement, checking this feature in addition to the  $u[Q]$  on  $C^{\circ}$ . Additionally, we have shown that Quarezemin & Ordóñez's (2022) account of topicalization accompanied by strong pronoun doubling offers important insight into the analysis of possible complements of

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<sup>9</sup> This might reveal structural similarities to phenomena in Scandinavian languages, also known as Holmberg's Generalization (Holmberg 1999).

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*cade*. Initial examination reveals that data examined squares well within a phase-based syntactic theory. Finally, we have speculated on future directions for cross-linguistic comparison.

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