

**SLUICING AND FOCUS RELATED PARTICLES IN BRAZILIAN PORTUGUESE AND NUPE<sup>1</sup>***SLUICING E PARTÍCULAS ASSOCIADAS A FOCO EM PORTUGUÊS BRASILEIRO E NUPE*Gesael Mendes<sup>2</sup>Jason Kandybowicz<sup>3</sup>**ABSTRACT**

We argue that the C-element *que*, following fronted *wh*-elements and fronted focused elements more generally in Brazilian Portuguese, is realized as Fin, rather than Foc (MENDES & KANDYBOWICZ, 2021; *pace* MIOTO, 2001; MIOTO & KATO, 2005). We put together three observations from the literature: (i) the appearance of *que* is contingent on *wh*/focus fronting; (ii) *que* introduces a finite clause, and (iii) *que* disappears under sluicing. We present novel evidence that Nupe's focus particle is a left-periphery element and that Nupe provides a concrete counterexample to Merchant's (2001) sluicing-COMP generalization. A comparison between Nupe and Brazilian Portuguese regarding the presence of nonoperator material in sluicing constructions is crucial to establishing sluicing as FinP ellipsis (BALTIM, 2010; ABOH, 2010), instead of TP ellipsis, as standardly assumed, as well as *que* as a Fin element. We offer an analysis that captures all of the Brazilian Portuguese distributional facts, according to which *que* is a Fin head with a [FINITE] feature and an uninterpretable [uFOC] feature that must be licensed by Agree with a higher focus head.

**KEYWORDS:** Left periphery. Brazilian Portuguese. Nupe. Sluicing-COMP generalization. FinP ellipsis.

**RESUMO**

Argumentamos que o elemento *que*, que se segue a constituintes-*wh* fronteados e constituintes focalizados fronteados em português brasileiro, é realizado em Fin, e não em Foc (MENDES & KANDYBOWICZ, 2021; *pace* MIOTO, 2001; MIOTO & KATO, 2005). Nós combinamos três observações da literatura: (i) a presença do *que* depende do fronteamto *wh* ou de foco; (ii) *que* introduz uma oração finita; e (iii) *que* desaparece em *sluicing*. Novas evidências são apresentadas para o posicionamento da partícula de foco do nupe na periferia esquerda e para a tomada do nupe como um contraexemplo concreto para a Generalização Sluicing-COMP de Merchant (2001). A comparação entre o português brasileiro e o nupe em relação a possibilidade de realização de material diferente do operador em *sluicing* é crucial para o estabelecimento de *sluicing* como elipse de FinP (BALTIM, 2010; ABOH, 2010), ao invés de TP, como assumido geralmente, e para o estabelecimento de *que* como a realização de Fin. Oferecemos um análise que captura a distribuição de *que* na qual esse elemento possui um traço [FINITO] e um traço não interpretável de foco, [uFOC], que precisa ser licenciado por meio de Agree com um núcleo de Foco mais alto.

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The Nupe data discussed in this article come from fieldwork on the dialect spoken in Lafiagi, Nigeria. Abbreviations used in the glosses of Nupe examples are as follows: COMP = complementizer; FOC = focus particle; FT.NEG = pre-verbal floating High tone for negation; FUT = future; NEG = negation; PL = plural; PRT = particle; PST = past; REL = relativizer/relative clause particles; SG = singular.

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**PALAVRAS-CHAVE:** Periferia esquerda. Português brasileiro. Generalização Sluicing-COMP. Elipse de FinP.

## Introduction

In Brazilian Portuguese, fronted *wh*-phrases (and focused phrases more generally), are optionally followed by the particle *que* (1) (MIOTO, 2001; MIOTO & KATO 2005, among others). In the central Nigerian language Nupe, *wh*/focus-fronting triggers the appearance of the sentence-final particle *o*, glossed as FOC (KANDYBOWICZ, 2008, and references therein):

- |    |   |                  |
|----|---|------------------|
| 1) | Quem <b>(que)</b> a        Maria viu <i>t</i> ? | [Br. Portuguese] |
|    | who        QUE   the        Mary saw            |                  |
|    | ‘Who did Mary see?’                             |                  |
| 2) | Ké    Musa        pa <i>t</i> * <b>(o)</b> ?    | [Nupe]           |
|    | what Musa        pound.PST        FOC           |                  |
|    | ‘What did Musa pound?’                          |                  |

In this article, we investigate the nature of these particles, following up on previous literature (e.g. MIOTO, 2001; MIOTO & KATO 2005; KANDYBOWICZ 2008; MENDES & KANDYBOWICZ, 2021).

Rizzi’s (1997) influential work on the articulation of the left periphery divides the CP domain into different layers according to the following dominance scheme:

- 3) ForceP > TopP\* > FocP > TopP\* > FinP > TP

The distribution of left peripheral material in this domain has been the topic of much research ever since (MIOTO, 2001; ABOH, 2004; HAEGEMAN, 2012; among many others). For further discussion of subsequent developments and refinements, (see RIZZI & BOCCI, 2017).<sup>4</sup>

We argue that the C-element *que* in Brazilian Portuguese is realized as Fin, rather than Foc (MENDES & KANDYBOWICZ, 2021; *pace* MIOTO, 2001, MIOTO & KATO, 2005). In support of this analysis, we put together three observations from the literature: (i) the appearance of *que* is contingent on *wh*/focus fronting; (ii) *que* introduces finite clauses, and (iii) *que* disappears under sluicing. Turning to Nupe, we present novel evidence that the language’s focus particle *o* is indigenous to the left-periphery and that Nupe provides a concrete counterexample to Merchant’s (2001) Sluicing-COMP Generalization. We demonstrate that a comparison between Nupe and Brazilian Portuguese regarding the presence of nonoperator material in sluicing constructions is

<sup>4</sup> The discovery of functional projections has a long and notable tradition in Generative Grammar. One of the biggest achievements of classical transformational grammar was the discovery of Infl (CHOMSKY, 1957). Subsequent work in the 60’s and 70’s used functional categories to analyze the distribution of elements associated with negation (KLIMA, 1964) and the left periphery (BRESNAN, 1970), which were later integrated into Chomsky’s (1970) X-bar template (CHOMSKY, 1986; LAKA, 1990). The IP and CP domains, among other functional categories, were then argued to be more articulated, corresponding to multiple syntactic layers (POLLOCK, 1989; RIZZI, 1997; CINQUE, 1998; among many others).

crucial to establishing sluicing as FinP ellipsis (BALTIM, 2010; ABOH, 2010) rather than TP ellipsis, as standardly assumed, as well as identifying *que* as a Fin element. We offer an analysis that captures all of the Brazilian Portuguese distributional facts, according to which *que* is a Fin head with both a [FINITE] feature and an uninterpretable focus feature [uFOC] that must be licensed by Agree with a higher focus head, as schematized in (4).<sup>5</sup>

- 4) [FocP quem **Foc** [FinP **que**<sub>[FINITE, uFOC]</sub> [TP a Maria viu t ]]]?  
           who                          QUE                          the                          Maria saw

We begin, in section 1, by reviewing the analysis and observations made in Mito (2001) and Mito & Kato (2005) regarding the distribution of *que* in Brazilian Portuguese. In section 2, we review Mendes & Kandybowicz's (2021) argumentation for both treating sluicing as FinP ellipsis and analyzing *que* as a Fin head, conclusions which are based on the comparison between Brazilian Portuguese and Nupe (as well as other languages) regarding the availability of nonoperator material in sluicing constructions. In this section, we also provide further evidence that Nupe's focus particle is truly a left peripheral element. In section 3, we present a more detailed formal analysis of *que* and its interaction with ellipsis. Section 4 concludes with a brief summary of the article and considerations for future research directions.

## 1. The distribution of *que*: initial considerations

Mito (2001) presents an important contribution to the understanding of the Brazilian Portuguese left periphery. Two empirical observations made by Mito are important here. The first is the dependency of *que* on finite clauses. That is, *que* is impossible in non-finite contexts (5b, 6b):

- 5) a. O que fazer? [Br. Portuguese]  
       the what do.INF  
       ‘What to do?’  
    b. \*O que **que** fazer?  
       the what QUE do.INF  
       Intended: ‘What to do?’
- 6) a. O João perguntou o que fazer. [Br. Portuguese]  
       the João asked the what do.INF  
       ‘João asked what to do.’  
    b. \*O João perguntou o que **que** fazer.  
       the João asked the what QUE do.INF  
       Intended: ‘João asked what to do.’

<sup>5</sup> The idea that left peripheral heads can enter into non-local Agree relations is by no means an innovation of the present work, (see e.g. RIZZI, 2017; SHLONSKY, 2021), among many others.

The examples in (5b) and (6b) could, in principle, be ruled out by an obligatory haplology rule converting sequences like ‘*que que*’ into ‘*que*’, a possibility we reject momentarily. The second observation is the dependence of *que* on *wh*/focus movement. The particle *que* cannot appear in *wh-in-situ* clauses (7b):

- 7) a. A Maria fez o que? *wh-in-situ* [Br. Portuguese]  
 the Maria did the what  
 ‘What did Maria do?’  
 b. \***Que** a Maria fez o **que**? *wh-in-situ*  
 QUE the Maria did the what  
 Intended: ‘What did Maria do?’

Compare the *wh*- movement examples in (8), in which peripheral *que* may optionally appear, with the *wh-in-situ* baseline examples in (7), in which the particle may not surface:

- 8) a. O que a Maria fez t? *wh-movement* [Br. Portuguese]  
 the what the Maria saw  
 ‘What did Maria do?’  
 b. O que **que** a Maria fez t? *wh-movement*  
 the what QUE the Maria saw  
 ‘What did Maria do?’

The comparison between (8b) and (5b) also demonstrates that the haplology analysis alluded to before for (5b) is untenable, as the sequence ‘*que que*’ in (8b) is perfectly acceptable.

There is thus a clear relation between the presence of *que* and both finiteness and *wh*/focus movement. Miotto (2005) suggests that *que* is a Foc head, which justifies its appearance only when *wh*/focus fronting occurs. Furthermore, Miotto & Kato (2005) claim that *que* selects a finite clause – more specifically, a FinP whose head has a [FINITE] feature. Miotto & Kato’s analysis is quite elegant and accounts for the distribution of *que* in the examples above using only a few standard analytical tools.

Before moving on, we briefly consider and reject an alternative analysis of post-*wh*/focus *que*. First, observe that the subordinator introducing finite non-interrogative clauses is also realized as *que* in Brazilian Portuguese:

- 9) O João disse **que** a Maria chegou. [Br. Portuguese]  
 the João said that the Maria arrived  
 ‘João said that Mary arrived.’

Miotto (2001) shows that subordinative *que* and focus *que* can both appear together in a single clause, as illustrated in example (10):

- 10) O João disse **que** com Pedro (**que**) a Maria dançou.  
 the João said that with Pedro QUE the Mary danced  
 ‘João said that it was with Pedro that Mary danced.’

For Mioto, while the *que* that appears right-adjacent to the focused element is an instance of Focus, the subordinative *que* that introduces embedded finite clauses is an instance of Force. Thus, the two can be combined in a single articulated CP-system.

- 11) O João disse [<sub>ForceP</sub> **que** [<sub>FocP</sub> com o Pedro **que** [<sub>TP</sub> a Maria dançou ]]]  
 the João said that with the Pedro QUE the Maria danced  
 ‘João said that it was with Pedro that Mary danced.’

An alternative analysis for our baseline examples would be to assume that we are dealing with bi-clausal structures with copular deletion (see LOPES-ROSSI, 1996, for an analysis along these lines), where *que* and the fronted constituent do not belong to the same CP domain. One possibility would be to represent this process as follows:

- 12) a. Quem **é que** a Maria vai ver? *input structure*  
 who is that the Mary will see  
 ‘Who is it that Mary will see?’  
 b. Quem ~~é~~ **que** a Maria vai ver? *copula deletion*  
 who is that the Mary will see  
 ‘Who is it that Mary will see?’

Under this approach, post-*wh*/focus *que* would not be related to *wh*/focus fronting at all. Instead, this instance of *que* would be merely the subordinative *que* that introduces embedded finite clauses, as in (9). This analysis appears to receive some support from the fact that copular deletion constructions are independently attested in Brazilian Portuguese *wh*-questions:

- 13) a. Qual **é** o seu nome? [Br. Portuguese]  
 what is the your name  
 ‘What is your name?’  
 b. Qual ~~é~~ o seu nome? *copula deletion*  
 what is the your name  
 ‘What is your name?’

Despite its initial appeal, this approach is unsound, as copula deletion in Brazilian Portuguese in these environments is highly limited. Specifically, it is restricted to specificational *wh*-questions, which in Brazilian Portuguese are limited to the *wh*-phrase *qual* ‘which’ (see BARROS, 2010, for detailed discussion). With every *wh*-phrase other than *qual*, copular deletion fails. The data in (14)

and (15) illustrate with two *wh*-items.<sup>6</sup>

- 14) a. Quem é o presidente? [Br. Portuguese]  
 who is the president  
 ‘Who is the president?’  
 b. \*Quem ~~é~~ o presidente? \*copula deletion  
 who is the president  
 Intended: ‘Who is the president?’
- 15) a. O que é isso? [Br. Portuguese]  
 the what is it  
 ‘What is it?’  
 b. \*O que ~~é~~ isso? \*copula deletion  
 the what is it  
 Intended: ‘What is it?’

Crucially, the particle *que* can appear after any type of *wh*- phrase, including those where copula deletion is impossible. Here are two examples:

- 16) Quem **que** a Maria viu *t*? [Br. Portuguese]  
 who QUE the Mary saw  
 ‘Who did Mary see?’
- 17) O que **que** o João comeu *t*? [Br. Portuguese]  
 the what QUE the João ate  
 ‘What did João eat?’

We also refer the reader to Miotto & Figueiredo-Silva, 1995, for further discussion of potential problems with the bi-clausal analysis of *wh*/focus-*que* constructions in Brazilian Portuguese.

We thus agree with Miotto (2005) and Miotto & Kato (2005) that in [DP *que* ...*t*...] constructions, the fronted DP and *que* belong to the same CP domain. In the next section, however, we question the status of *que* as a Foc particle, examining sluicing data from a cross-linguistic perspective, specifically considering the possibility of non-operator material accompanying *wh*- remnants in these constructions.

<sup>6</sup> In contrast with (15), a reviewer provides the following example, with a missing copula:

Que isso?  
 what this  
 ‘What this?’

We suspect that in this example, the copula (underlyingly /ε/) is not deleted but has phonologically coalesced with *que* ‘what’ (underlyingly /ke/). When fronted, the *wh*-element *que* ‘what’ can be prosodically weakened and participate in several post-lexical rules, such as vowel neutralization as well as diphthongization, *e*-deletion, and external sandhi with the following word when that word begins with a vowel (VIEIRA, 2022). ‘Que é isso?’ /ke ε iso/ in (i), can thus be derived by the application of both *e*-deletion and vowel reduction: /ke ε iso/ → kε iso → [ke iso]. Since the presence of the article preceding *que* ‘what’ in (i) seems to block the joint application of these process, as shown in (15b), they are likely to be subject to further syntactic or prosodic constraints, which we leave for future research.

## 2. Brazilian Portuguese, Nupe and the Sluicing-COMP generalization

In this section, we make two arguments. First, we argue that Brazilian Portuguese *que* appearing after *wh*/focus fronted phrases is an instance of *Fin* rather than *Foc*.<sup>7</sup> Second, we argue that sluicing is an instance of *FinP* ellipsis, rather than *TP* ellipsis, as standardly assumed. Our discussion is based on the argumentation presented by Mendes and Kandybowicz (2021), though we expand on it in several ways. The empirical motivation for this analytical move comes from crosslinguistic patterns regarding the possibility of the survival of non-operator material in sluicing constructions, in particular, the differences between Brazilian Portuguese, Nupe, and English.

Consider the following crosslinguistic generalization, presented by Merchant (2001), dubbed the ‘Sluicing-COMP generalization’:

- 18) In sluicing, no non-operator material may appear in COMP.

Brazilian Portuguese and English can be used to exemplify this generalization. Specifically, in English matrix *wh*-questions, the auxiliary moves to the CP domain (19), but in sluicing constructions, the auxiliary is obligatorily deleted (20b).

- 19) Who will Mary kiss?  
 20) a. Mary will kiss someone.  
       b. Who (\*will)?

<sup>7</sup> This analysis has two precedents worth noting, namely, Ribeiro & Torres-Morais 2012 and Ribeiro 2011. Ribeiro & Torres-Morais (2012) analyze XP-*que* constructions in Old Portuguese and Modern Portuguese. Ribeiro and Torres-Morais’ analysis adapts Roberts’s (2004) proposal for V2, according to which *Fin* must be phonologically realized. They claim that when split-CP is activated in Brazilian Portuguese, as in our example (10), *Fin* is realized as *que* instead of triggering V-to-*Fin* movement in V2. Ribeiro (2011) places *que* in *Fin* by noting the possibility of lack of adjacency between the fronted element and *que*, which implies that these elements are not in a Spec-head configuration:

- i) **O João**, segundo a Maria, **que** continuou o trabalho.  
 the João according the Maria that continued the work  
 ‘I was João that, according to Maria, continued the work.’

A reviewer, however, points out that sometimes the fronted *wh*-/focused phrase and *que* seem to appear in obligatorily adjacent positions (see also QUAREZEMIN 2009, for further data), which could be taken as supporting a Spec-head configuration.

- ii) a. \*Pra quem esse livro **que** você já recomendou várias vezes.  
 to who this book QUE you already recommended several times  
 ‘Who did you recommend this book several times.’  
 b. Pra quem **que** esse livro você já recomendou várias vezes.  
 to who QUE this book you already recommended several times  
 ‘Who did you recommend this book several times.’

In (iia), ‘this book’, an apparently low topic, cannot intervene between the fronted *wh*-phrase and *que*. To rule out examples like (iia) under the analysis defended in this article, we must assume that ‘esse livro’ this book cannot reach the low TopP position from Rizzi’s original proposal. In fact, Benincà (2001), using Italian data, challenges Rizzi’s claim that there is a low TopP projection between *FocP* and *FinP*, suggesting that some apparently fronted elements below *FocP* may not actually reach the left periphery. Haegeman (2012), while not abandoning low TopP, discusses several examples showing that *FocP* and low TopP cannot in general be activated at the same time in English (e.g. ‘\*To Robin this book I gave’). We assume that *esse livro* ‘this book’ in (iib) must be lower than *FinP*, either adjoined to TP (... [*FinP* [*TP* esse livro [*TP* ... t ...]]) or in the specifier of a maximal projection below *FinP* (... [*FinP* [*XP* esse livro X [*TP* ... t ...]])], and defer further discussion about the contrast between (i) and (ii) for future work.

Likewise, in Brazilian Portuguese, the particle *que* can appear in between the fronted *wh*- phrase and the rest of the clause, but *que* is obligatorily deleted if sluicing obtains:<sup>8</sup>

- 21) Quem (que) saiu? [Br. Portuguese]  
 who COMP left  
 ‘Who left?’
- 22) a. Alguém saiu. [Br. Portuguese]  
 someone left  
 ‘Someone left.’  
 b. Quem (\*que)?  
 who COMP  
 ‘Who?’

Two additional illustrative examples are presented in (23) and (24):

- 23) a. O João viu um dos fillos da Maria.  
 the João saw one of.the sons of.the Maria  
 ‘João saw one of Maria’s sons.’  
 b. Qual deles (\*que)?  
 which of.them QUE  
 ‘Which of them?’
- 24) a. O João comprou muitos livros.  
 the João bought many book  
 ‘John bought many books.’  
 b. Quantos (\*que)?  
 how.many QUE  
 ‘How many?’

As shown by Merchant, this effect is crosslinguistically robust and can be found, for instance, in Danish, Norwegian, Frisian, Dutch varieties, Irish, Yiddish and Icelandic. Several apparent counterexamples, however, have been documented in the literature, some of them already noted by Merchant, including Hungarian, Japanese, Slovenian, Gungbe, Korean, Tuki, Basaa, Nupe, and French (MERCHANT, 2001; BALVIN, 2010; ABOH, 2010; YIM, 2012; BILOA & BASSONG, 2015; MARUŠIČ *et al.* 2015; MENDES & KANDYBOWICZ, 2021; SHLONSKY, 2022).

Let’s first consider Gungbe. In Gungbe, *wh*- question formation involves fronting of a Q-marked *wh*-phrase and the insertion of a focus particle between the *wh*-phrase and the remainder of the clause (ABOH, 2010):

<sup>8</sup> There might be some dialectal variation here, an issue to which we return in the final section.



- 25) Nú-tɛ̀ wɛ̀ Kòfi xó tʔ [Gungbe]  
 thing-Q FOC Kofi buy  
 ‘What did Kofi buy?’

In contrast to Brazilian Portuguese, however, the focus particle survives sluicing (ABOH, 2010; LIPTÁK & ABOH, 2013):

- 26) Kòfi ná yró mè dɛ̀ bó ùn kànbíó dʒó ménù wɛ̀ [Gungbe]  
 Kòfi FUT call person IND but/and I ask that person.Q FOC  
 ‘Kofi will call someone and I wonder who.’

Since in Gungbe the focus particle is typically adjacent to the fronted *wh*/focus phrase, one might entertain the idea that the focus particle is not the realization of Foc in the clausal spine (27a), but instead the realization of a focus feature or head attached to the fronted operator element itself (27b). In this case, Gungbe would not serve as a counterexample to the Sluicing-COMP Generalization.

- 27) a. [<sub>FocP</sub> **XP** [<sub>Foc'</sub> wɛ̀ [... t ...]]]  
 b. [<sub>FocP</sub> [**XP wɛ̀**] [<sub>Foc'</sub> FOC [... t ...]]]

Ginsburg (2009), for instance, argues that in several languages (Sinhala, Okinawan, Pre-Modern Japanese, Sateré-Mawé, Assurí, and Ewen), question particles can be both generated in the left periphery (28a) and in a TP-internal position directly attached to the focused element (28b). As an illustration, consider the Sinhala data provided by Ginsburg (KISHIMOTO, 2005 apud GINSBURG, 2009):

- 28) a. Chitra ee potə kieuwa dəʔ [Sinhala]  
 Chitra that book read.A Q  
 ‘Did Chitra read that book?’  
 b. Chitra [ee potə]-də kieuwe?  
 Chitra that book-Q read.E  
 ‘Was it that book that Chitra read?’

Similarly, Cable (2007) presents thorough argumentation for this type of attached *wh*-particle analysis in Tlingit, a *wh*-fronting language like Gungbe. One must therefore be extra cautious in drawing firm conclusions about the Sluicing-COMP Generalization from data like (26).

Nupe, on the other hand, provides clearer counterexamples to the Sluicing-COMP Generalization since the focus particle accompanying *wh*/focus movement appears obligatorily in a high left peripheral sentence-final position (29) (KANDYBOWICZ, 2008), and thus cannot possibly form a constituent with the fronted element at the surface level:

- 29) **Ké** Musa pa *t* **\*(o)?** [Nupe]  
 what Musa pound.PST FOC  
 ‘What did Musa pound?’

Crucially, the focus particle *o* obligatorily survives sluicing, counterexemplifying (18):

- 30) a. Musa pa ejan ndoci. [Nupe]  
 Musa pound.PST thing certain  
 ‘Musa pounded something.’  
 b. **Ké** **\*(o)?**  
 what FOC  
 ‘What ~~did~~ Musa ~~pound~~?’

One counter-analysis would be to say that Nupe’s focus particle is not a left peripheral element, but instead a particle that forms a constituent with the fronted element, but only in its base-generated position. This would be analogous to P-stranding in languages like English.<sup>9</sup>

- 31) **Who<sub>i</sub>** is John jealous [**of** *t<sub>i</sub>* ]?

On this analysis, the focus particle in Nupe would then be obligatorily stranded in the base position of the fronted element in non-elliptical sentences (e.g. [...*t* Foc]), while it would be obligatorily pied-piped with the fronted element in cases of sluicing. The latter effect could plausibly be attributed to the identity condition on ellipsis, which typically cannot cope with new lexical material within the ellipsis site that is not already present in the antecedent (CHUNG, 2006; MERCHANT, 2013; RUDIN, 2018; see also RANERO, 2021, for a more fine-grained view on this issue, and ROSEN, 1976, for initial discussion). The following English examples illustrate.

- 32) a. John is jealous **of** someone, but I don’t know **who** ~~John is jealous~~ [**of** *t*].  
 b. **\*John is jealous**, but I don’t know **who** ~~John is jealous~~ [**of** *t*].  
 c. John is jealous, but I don’t know [**of** who] ~~John is jealous~~ *t*.

In (32b), the preposition ‘of’ cannot remain within the ellipsis site because it does not have a correlate in the antecedent. In such cases, pied-piping the preposition is obligatory (32c). Since, in Nupe, the focus particle is never contained in the antecedent, it would be obligatorily pied-piped in sluicing constructions under a counter-analysis of the sort described above.

The first challenge for this approach is that it requires the stranded focus particle to appear in the very same position of the trace of the fronted element. The distribution of Nupe’s focus particle, however, does not pattern according to this expectation. In the following example involving a *wh*- subject, the focus particle appears clause-finally, far removed from the pre-tense/verb trace of the *wh*- subject:

<sup>9</sup> We thank Marcel den Dikken for suggesting this type of alternative analysis for Nupe’s focus particle, as well as some of its specific implementations that we discuss in the remainder of this section.

- 33) **Zě** t à pa eci o? [Nupe]  
 who FUT pound yam FOC  
 ‘Who will pound yam?’

To maintain a stranding analysis as stated above, one would have to further stipulate that the stranded focus particle must be displaced to clause-final position. Furthermore, the nature of the obligatory stranding of the focus particle in non-elliptical constructions as well as how this restriction is overcome if sluicing takes place would also require extra assumptions.

A second challenge to the idea that the Nupe focus particle merges directly with *wh*- phrases comes from multiple *wh*- questions, where only the highest interrogative element moves to the left periphery. As shown in example (34), the focus particle appears only once despite there being two *wh*- phrases in the clause. A similar observation is made for Gungbe by Aboh (2004).

- 34) **Zě** t à si ké o? [Nupe]  
 who FUT buy what FOC  
 ‘Who will buy what?’

Locating Nupe’s focus particle high, in the left periphery, also straightforwardly predicts that it will follow high middle-field particles like modals and negation, which as documented by Kandybowicz (2008), can appear in postverbal positions in the language. The example in (35) demonstrates that this prediction is borne out.

- 35) Eci Musa (') pa t wô à yin o. [Nupe]  
 yam Musa FT.NEG pound can NEG PRT FOC  
 ‘It’s a yam that Musa cannot pound.’

It is worth noting that modal particle *wô* in (35) can have both a deontic and an epistemic interpretation. While deontic modality is often taken to scope low in the clausal spine, epistemic modals, on the other hand, are said to scope very high (CINQUE 1999; HACQUARD 2006, among others). If that is the case, example (35) provides independent evidence for treating Nupe’s focus particle as a left peripheral element, and not merely a TP-internal remnant left behind by *wh*/ focus movement. Another example that makes the same point is given in (36). In this sentence, the clause-initial adjunct forces an exclusively epistemic reading of the modal particle, which is once again followed by the focus marker as expected under a left peripheral analysis of *o*.

- 36) Bè ejan na yi: kpe na yin, zě (') t dzò eyi  
 with thing REL 1.PL know REL PRT who FT.NEG plant.PST corn  
 wô tsúwó à yin o?  
 can yesterday NEG PRT FOC  
 ‘According to what we know, who couldn’t have planted corn yesterday?’

To maintain the stranding analysis, two lines could be pursued. The first, which we call “split movement” would be to say that the focus particle and the *wh*/focus phrase form a constituent in the position from which the *wh*/focus movement is launched (see BAE, 2020 for an analysis along these lines for *amwu*-phrases in Korean), but then both move independently in cases where sluicing does not take place. Specifically, while the *wh*/focus phrase moves leftwards to the left periphery, the focus particle right-adjoins to some constituent in the clausal middle field. A second possibility, which we call “base generation”, would be to assume that the “stranded” focus particle is actually base-generated right-adjoined to some constituent in the clausal spine lower than CP. This approach would be in line with some analyses of quantifier float, in which the floating quantifier is base-generated as an adjoined adverbial element (DAVID & BRODIE, 1984; BOBALJIK, 1995; DOETJES, 1997; among others). Given the considerations made above about the position of the focus particle in relation to modal elements, the focus particle could conceivably right-adjoin to the TP. Though in both cases, more would have to be said about how the placement of the focus particle is determined in sluicing, so that the particle is only pied-piped with *wh*/focus phrases in sluicing constructions, there are independent empirical reasons to reject both of these approaches.

Against the “split movement” approach, consider the following example:

- 37) **Zě** Musa (') gàn [ gànán **u:** nì enyà ] à o?  
 who Musa FT.NEG say.PST COMP 3.SG beat.PST drum NEG FOC  
 ‘Who didn’t Musa say beat a drum?’  
 NOT: ‘Who did Musa say didn’t beat a drum?’

Given a “split-movement” analysis, in this example, the focus particle would be base-generated in the embedded clause alongside the resumptive pronoun (which is there to circumvent a COMP-trace violation<sup>10</sup>), but would have to move rightwards past the matrix negation marker *à* across a finite clause boundary, in violation of the Right Roof Constraint (ROSS, 1967). A “split-movement” analysis would thus wrongly predict structures like (37) to be ungrammatical. Notice that this rightward movement of the focus particle would have to be syntactic, as displacement operations at PF are unlikely to be able to dislocate the focus particle that far (EMBICK & NOYER, 2001) - see also example (33). Furthermore, the fact that the focus particle appears high in the matrix clause rather than in the embedded clause would require further stipulations for either of the stranding accounts we are considering.

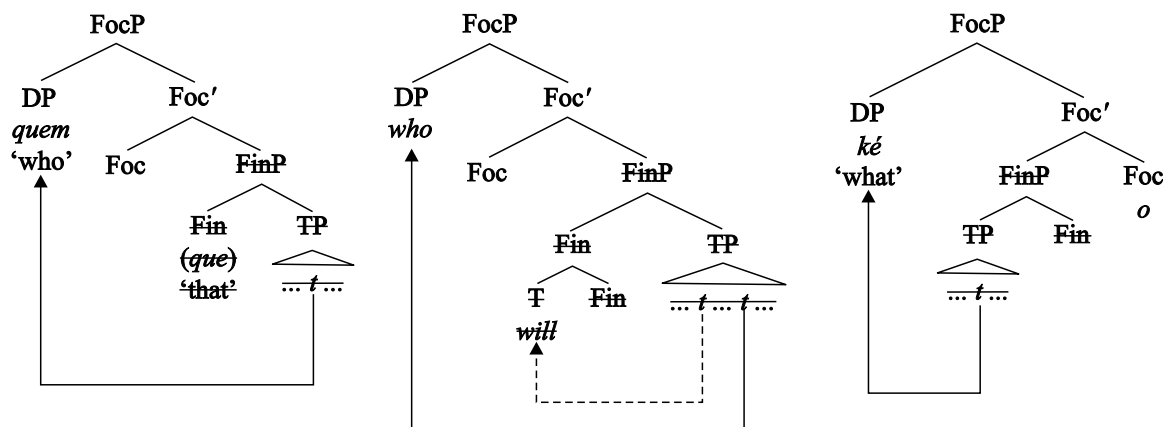
Finally, both the “split movement” and the “base generation” approaches would have problems accounting for the fact that the focus particle must follow right-adjoined TP adverbials:

<sup>10</sup> Evidence that movement is implicated even in the presence of the resumptive pronoun in constructions like this comes from the fact that it does not ameliorate island violations. We refer the reader to Kandybowicz, 2008, section 4.3.1, and Mendes & Kandybowicz, 2021, for data and further discussion.

- 38) a. Ké Musa dzò t tsúwó o?  
 what Musa plant.PST yesterday FOC  
 ‘What did Musa plant yesterday?’  
 b. \*Ké Musa dzò t o tsúwó?  
 what Musa plant.PST FOC yesterday
- 39) a. Zě t à dzò eyì èsun o?  
 who FUT plant corn tomorrow FOC  
 ‘Who will plant corn tomorrow?’  
 b. \*Zě t à dzò eyì o èsun?  
 who FUT plant corn FOC tomorrow

If the focus particle adjoins to TP, either via movement or base-generation, there is no obvious principled way to enforce the requirement that the focus particle appear as the final adjunct.

We thus conclude that the Nupe focus particle is base generated in the left-periphery, more specifically, in Foc, and that Nupe represents a conclusive counterexample to the Sluicing-COMP Generalization. To account for the difference between languages like Brazilian Portuguese and English, on one hand, and Nupe type languages on the other, Mendes and Kandybowicz (2021) (following BALTIN, 2010; see also ABOH, 2010), argue that sluicing involves FinP ellipsis, not TP deletion, as standardly assumed. Cross-linguistic variation is thus derived from differences in the placement of nonoperator material in the left periphery:<sup>11</sup>

40) *Brazilian Portuguese**English**Nupe*

<sup>11</sup> Works within the cartographic tradition often adopt Antisymmetry theory (KAYNE, 1994), according to which, in general terms, precedence is a reflex of asymmetric c-command. Under the Antisymmetric view, phrase markers are never head-final in the base, and surface head-final structures always involve further movement of the head's complement to a higher position inverting the asymmetric c-command relation (e.g. [XP (...) [Y t<sub>XP</sub>]]). While we do not adopt this view and assume a head-final structure for Nupe's FocP, our claims about the positioning of Nupe's focus particle as a Foc head and sluicing as FinP ellipsis are entirely consistent with Antisymmetry theory (see KANDYBOWICZ, 2008, section 1.3.1, and SHLONSKY, 2022, for a more detailed discussion on this point and possible Antisymmetry-compliant derivations of sentence-final particles; see also BIBERAUER & SHEEHAN, 2013, for a more nuanced take on the LCA and ABELS & NEELEMAN, 2012, for a critical view of the LCA).

In languages that comply with Merchant's Sluicing-COMP Generalization, non-operator material in the left periphery is positioned below FinP and thus cannot appear outside the ellipsis site in sluicing constructions. In languages like Nupe, by contrast, where the focus particle is located higher than FinP in Foc, the particle lies outside the ellipsis site (FinP), and therefore survives sluicing.<sup>12</sup>

With this background in place, we now turn to our analysis of the distribution of *que* in Brazilian Portuguese, putting together the conclusions from this section and section 1.

### 3. Brazilian Portuguese: formal analysis

In this section, we present the technical implementation of our analysis of Brazilian Portuguese *que* to account for the generalizations we have observed, which are repeated below:

- 41) a. *Que* only appears when there is *wh*/focus movement.  
 b. *Que* only appears in finite clauses.  
 c. *Que* disappears in sluicing constructions.

In the last section, we argued that *que* is positioned in Fin. Since sluicing is taken to be FinP ellipsis, *que* disappears if sluicing takes place, in contrast with Nupe's focus particle in sluicing contexts. This accounts for the generalization in (41c). Since *que* is positioned in Fin, it is easy to account for the generalization in (41b). We simply say that *que* is lexically specified as [FINITE]. Finally, we implement the connection between the appearance of *que* and *wh*/focus fronting by assuming that *que*, alongside the [FINITE] feature, also has an uninterpretable focus feature [uFOC] that needs to be licensed under Agree against a c-commanding<sup>13</sup> Foc head. This leads to the following lexical representation:

<sup>12</sup> A possible alternative would be to say that the syntactic object targeted by sluicing is not cross-linguistically stable. For instance, one could contend that Nupe has TP ellipsis and thus the focus particle located in C survives sluicing (e.g. [<sub>CP</sub> XP [<sub>C'</sub> C [<sub>TP</sub> ... *t* ...]]]), whereas languages like Brazilian Portuguese and English have C'-deletion and this is why nonoperator material located in the C-layer disappears in sluicing (e.g. [<sub>CP</sub> XP [<sub>C'</sub>  $\bar{C}$  [<sub>TP</sub> ... *t* ...]]]). The C'-deletion approach to sluicing has in fact been proposed in the literature (see e.g. THOMS, 2010; MESSICK & THOMS, 2016), but there has been debate on whether intermediate projections can be affected by transformations (see e.g. CHOMSKY & LASNIK, 1993; CHOMSKY, 1995, chapter 4; and URIAGEREKA, 1998). Although a thorough empirical discussion on such a restriction is scarce, evidence that such a constraint obtains comes, for instance, from movement restrictions and the licensing of ellipsis itself, which is often taken to involve a head-complement configuration (LOBECK, 1995; MERCHANT, 2001; AELBRECHT, 2010, and subsequent literature):

- i) a. [<sub>AP</sub> Too [<sub>A'</sub> good to be true]] though it was *t*, he nonetheless believed it.  
 b. \*<sub>A'</sub> Good to be true] though it was [<sub>AP</sub> too *t*], he nonetheless believed it.  
 (Adapted from URIAGEREKA, 1998, p. 181)
- ii) a. Mary thinks she should play the piano, but I don't think she [<sub>TP</sub> should [<sub>VP</sub> plays the violin]]  
 b. \* Mary thinks she should play the piano, but I don't think she [<sub>TP</sub> should [<sub>VP</sub> plays the violin]]

While Thoms (2010) interprets examples like (ii) in a different way and provides a promising licensing theory, it should be noted that his analysis is too strict, as it predicts that sluicing will consistently involve C'-deletion across languages and thus that no counterexamples to the sluicing-COMP generalization, like Nupe, should be found.

<sup>13</sup> We assume that upward Agree is also available in the grammar. For further discussion we refer the reader to (BAKER, 2008; BJORKMAN & ZEIJLSTRA, 2019), and references therein.

$$42) \text{ que}_{\text{FIN}} : \begin{bmatrix} \text{CAT}[\text{FIN}] \\ \text{INFL} \begin{bmatrix} \text{FINITE} \\ \text{uFOC} \end{bmatrix} \\ \text{Sel}[\text{T}] \end{bmatrix}$$

Let's consider now some sample derivations. In the object *wh*-fronting structure represented in (43), FocP projects, hosting the *wh*-phrase, and the [uFOC] feature on Fin is checked against the Focus head. The derivation thus converges.

$$43) \begin{array}{l} [\text{FocP quem Foc} \overbrace{[\text{FinP que}_{\text{finite, uFOC}}]} [\text{TP a Maria viu } t \text{ }]]? \\ \text{who} \quad \quad \quad \text{QUE} \quad \quad \quad \text{the} \quad \text{Maria} \quad \text{vIU} \quad t \\ \text{'Who did Maria see?'} \end{array}$$

Turning now to *wh-in-situ* structures, we assume that in this case the Focus head does not project, at least not in the overt syntax (see LASNIK & BOŠKOVIĆ 1999 for a proposal along these lines for *wh-in-situ* in French). If FocP does not project, the [uFOC] feature on *que* will not be checked and the derivation will fail to converge:

$$44) \begin{array}{l} *[\text{FinP que}_{\text{finite, uFOC}}] [\text{TP a Maria viu quem}]? \\ \text{QUE} \quad \quad \quad \text{the} \quad \text{Maria} \quad \text{vIU} \quad \text{quem} \\ \text{'Who did Maria see?'} \end{array}$$

A convergent derivation for *wh-in-situ* constructions requires a null Fin head without the [uFOC] feature (45), a head that is used in a variety of different environments in the language (46-48):

$$45) \emptyset_{\text{FIN}} : \begin{bmatrix} \text{CAT}[\text{FIN}] \\ \text{INFL}[\text{FINITE}] \\ \text{Sel}[\text{T}] \end{bmatrix}$$

$$46) \begin{array}{l} [\text{FinP } \emptyset_{\text{finite}}] [\text{TP a Maria viu quem}]? \quad \text{wh-in-situ, null Fin} \\ \text{the} \quad \text{Maria} \quad \text{vIU} \quad \text{quem} \\ \text{'Who did Mary see?'} \end{array}$$

$$47) \begin{array}{l} [\text{FocP quem} [\text{FinP } \emptyset_{\text{finite}}] [\text{TP a Maria viu } t \text{ }]]? \quad \text{wh-movement, null Fin} \\ \text{who} \quad \quad \quad \text{the} \quad \text{Maria} \quad \text{vIU} \quad t \\ \text{'Who did Mary see?'} \end{array}$$

$$48) \begin{array}{l} [\text{FinP } \emptyset_{\text{finite}}] [\text{TP a Maria viu o Pedro}]. \quad \text{declarative, null Fin} \\ \text{the} \quad \text{Maria} \quad \text{vIU} \quad \text{o} \quad \text{Pedro} \\ \text{'Maria saw Pedro.'} \end{array}$$

Finally, we consider derivations involving ellipsis. We assume that ellipsis is triggered by an E-feature, which in the case of sluicing will be uniformly merged into Foc. For concreteness, we adopt the following formalisms adapted from Merchant (2001, 2004, 2013):

- 49) a. Syntax of [E]:  $E_{[uFOC]}$  *sluicing*  
 (merge [E] with a Foc head)
- b. Phonology of [E]:  $XP \rightarrow \emptyset / [YP Y_{[E]} \_ ]$   
 (do not pronounce the complement of the head with an E-feature)
- c. Semantics of [E]:  $\llbracket [E] \rrbracket = \lambda p : e\text{-GIVEN}(p).p$ , where an expression is e-GIVEN iff  $\alpha$  has a salient antecedent A such that, modulo  $\exists$ -type shifting,  $\llbracket [A] \rrbracket \rightarrow F\text{-clo}(\llbracket [\epsilon] \rrbracket)$  and  $\llbracket [\epsilon] \rrbracket \rightarrow F\text{-clo}(\llbracket [A] \rrbracket)$ .  
 ( $\exists$ -type shifting is an operation that existentially binds open variables. F-clo(sure) is an operation that replaces F-marked material with existentially bound variables of the same type)
- d. No New Lexeme:  $\forall m[(m \in M_E \wedge m \neq t) \rightarrow \exists m'(m' \in M_A \wedge m = m')]$   
 where  $M_E$  is the set of lexemes in the elided phrase marker and  $M_A$  is the set of lexemes in the antecedent phrase marker.  
 $(\llbracket [M_E - t] \rrbracket \subseteq M_A)$   
 (Any non-trace lexeme  $m$  that occurs in an elided phrase must have an equivalent overt correlate  $m'$  in the elided phrase's antecedent.)

Consider now the following example:

- 50) a. A Maria viu alguém.  
 the Maria saw someone  
 'Mary saw someone.'
- b. Quem (\*que)?  
 who QUE  
 'Who did Maria see?'

Let's first consider following derivation without *que* in the Fin head, but instead with null Fin (45), a possible derivation for the sluice in (51b):

- 51)  $[FocP \text{ quem } Foc_{[E]} [FinP \text{ } \emptyset_{[finite]} [TP \text{ a Maria viu } t ]]]?$   
 who the Maria saw  
 'Who did Maria see?'
- a. *e-GIVENness is satisfied:*  
 $\llbracket [FinP_A] \rrbracket = F\text{-clo}(\llbracket [FinP_A] \rrbracket) = \exists x.saw(Maria, x) \leftrightarrow$   
 $\llbracket [FinP_E] \rrbracket = F\text{-clo}(\llbracket [FinP_E] \rrbracket) = \exists x.saw(Maria, x)$
- b. *No New Lexeme is satisfied:*  
 $M_A = \{\emptyset_{[finite]}, Maria, viu, alguém\} \supseteq$   
 $M_E - t = \{\emptyset_{[finite]}, Maria, viu\}$



Now let's consider what would happen if the ellipsis site had *que* in Fin. Notice that *que* is not in the antecedent and as mentioned in the last section, the ellipsis site typically cannot contain material that is not in the antecedent. This is ensured by the 'No New Lexeme' requirement in (49d).

- 52) a. John is jealous **of** someone, but I don't know **who** ~~John is jealous [of t]~~.  
 $[M_E - t = \{John, be, T_{pres}, jealous, of\}] \subseteq M_A = \{John, be, T_{pres}, jealous, of, someone\}$
- b. \*John is jealous, but I don't know **who** ~~John is jealous [of t]~~.  
 $[M_E - t = \{John, be, T_{pres}, jealous, of\}] \not\subseteq M_A = \{John, be, T_{pres}, jealous\}$
- c. John is jealous, but I don't know [**of** who] ~~John is jealous t~~.  
 $[M_E - t = \{John, be, T_{pres}, jealous\}] \subseteq M_A = \{John, be, T_{pres}, jealous\}$

Under the assumptions that we made about ellipsis, there are two ways to deal with this issue. The first is to say that *que* is indeed never allowed within the ellipsis site in sluicing constructions. The second possibility would be to say that the identity condition, including the 'No New Lexeme' requirement, is computed at LF. At LF, only formal features matter. Once the [uFOC] feature on *que* is checked and deleted, the featural difference between  $que_{Fin}$  and  $\emptyset_{Fin}$  is neutralized, thereby sidestepping the 'No New Lexeme' requirement (e.g.  $que_{[finite, uFOC]} \sim \emptyset_{[finite]}$ ).<sup>14</sup>

- 53) [<sub>FocP</sub> quem Foc<sub>[E]</sub> [<sub>FinP</sub> ~~que<sub>[finite, uFOC]</sub>~~ [<sub>TP</sub> ~~a Maria viu t~~ ]]]?  
 who QUE the Maria saw  
 'Who did Maria see?'  
 a. *e-GIVENness is satisfied:*  
 $[[FinP_A]] = F-clo([[FinP_A]]) = \exists x.saw(Maria, x) \leftrightarrow$   
 $[[FinP_E]] = F-clo([[FinP_E]]) = \exists x.saw(Maria, x)$
- b. *No New Lexeme is satisfied:*  
 $M_A = \{\emptyset_{[finite]}, Maria, viu, alguém\} \supseteq$   
 $M_E - t = \{que_{[finite, uFOC]}, Maria, viu\}$

<sup>14</sup> While we will not pursue these issues further, these mechanics can also provide a handle on the possible ellipsis/antecedent mismatches in English matrix sluices:

- i) a. Mary will kiss someone.  
 b. Who (\*will)?

If sluicing is derived by FinP ellipsis, the ellipsis site will plausibly contain T-to-Fin movement, a movement that doesn't happen in the antecedent. If T-to-Fin movement is triggered by a [uT] feature on Fin, once Fin receives T, this feature is checked and deleted, thus neutralizing the difference between Fin in the antecedent (e.g.  $Fin_{[finite]}$ ) and Fin in the ellipsis site (e.g.  $Fin_{[finite, uT]}$ ). As a result, the 'No New Lexeme' requirement is neutralized:

- ii) a. [<sub>FinP</sub> Fin [<sub>TP</sub> Mary will kiss someone]].  
 b. Who Foc [<sub>FinP</sub> ~~will+Fin<sub>[uT]</sub>~~ [<sub>TP</sub> ~~Mary t kiss t~~]]?

Recently, Landau (2020) has argued that Subject-Aux inversion doesn't take place in English matrix sluicing. Evaluation of the evidence presented by Landau, however, goes beyond the scope of this article. If Landau's claim turns out to be correct, the analysis proposed here can be accommodated by saying that the relevant feature checking mechanism can be accomplished at a distance in the syntax and that T-to-Fin movement itself is enforced at PF and thus bled by ellipsis. We refer the reader to Lasnik, 1999, for discussion of different ways in which ideas along these lines could be implemented.

#### 4. Conclusion and future research

We have argued that post-*wh*/focus fronted *que* in Brazilian Portuguese is an instance of Fin, and thus cannot appear outside the ellipsis site in sluicing constructions, which we take to be uniformly FinP deletion (rather than TP ellipsis). For Nupe, we argued that the focus particle *o* is placed higher than Fin in Foc, and thus survives sluicing because it occupies a position above the ellipsis site. We also provided a formal of two Fin heads in Brazilian Portuguese, namely  $que_{Fin}$  and  $\emptyset_{Fin}$ , and discussed how they interact with the identity condition on ellipsis.

While our Brazilian Portuguese language consultants, who come mainly from Southern Brazil, consistently reject all possible sluices that do not comply with the sluicing-COMP generalization (tested with different types and sizes of *wh*- phrases), it should be noted that Rodrigues, Nevins, and Vicente (2009) claim that in some dialects Brazilian Portuguese sluices do not need to comply with the Sluicing-COMP Generalization. The examples they provide, however, were rejected by all of our consultants.<sup>15</sup> We believe that we are dealing with a case of micro-variation which should be further investigated. Apart from investigating the acceptability of such examples across dialects, another possible line of inquiry on this would be to conduct a corpus-based study to probe whether such examples are indeed attested. For this, we suggest *Corpus do Português* (DAVIES, 2016-). The *Corpus of Portuguese* is composed of three sub-corpora: (i) *Genre/Historical* (41 million words) with text from 1300-1900; (ii) *Web/Dialects* (1 billion words) with texts from webpages from Brazil, Portuguese, Angola, and Mozambique; and (iii) *NOW* (1.1 million words) with magazines and page newspapers also from four Portuguese speaking countries from 2012-2019.

Although our discussion has been centered on Brazilian Portuguese and Nupe, it has broader consequences. Whether a sluicing phenomenon in a language represents a true counterexample for the Sluicing-COMP Generalization is not always easy to determine. We hope to have made the case that this is indeed so for Nupe. Furthermore, we believe that the various tests we applied in the article, e.g. (i) multiple *wh*-questions, (ii) scope of negation and epistemic modality, (iii) long distance extraction, and (iv) the ordering of TP adjuncts, can make for a useful toolkit to be applied in other languages to investigate the exact position of sentence final particles associated with *wh*/focus fronting, and to establish whether a given language represents a true counterexample to the Sluicing-COMP generalization.

Finally, another important issue raised by the material we presented has to do with the licensing of ellipsis, an issue that is still poorly understood (see e.g. ZAGONA, 1982; LOBECK, 1995;

<sup>15</sup> The following example is provided by Rodrigues, Nevins, and Vicente (2009):

- i) a. O João falou com alguém.  
       the João talked with someone  
       b. Será (com) quem que?  
       will.be with who that

They suggest that this complementizer retention might be due to prosodic cliticization of the complementizer *que* onto the *wh*-phrase. Under the analysis pursued here, another possibility would be to say that, in these dialects, *que* is a Focus particle akin to Nupe's marker *o*.

JOHNSON, 2001; MERCHANT, 2001; AELBRECHT, 2010, THOMS, 2010). Assuming that ellipsis is triggered by the presence of an E-feature, the question is whether in sluicing structures the E-feature should be placed uniformly in Foc, triggering FinP ellipsis, or on some other head in the C-system. We believe that addressing this issue will help pave the way for a more restrictive theory of licensing, and that our data and analysis can indeed contribute in this way.

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