

RESEARCH

On EPP effects and the properties of Core Functional Categories

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In this paper I argue that EPP effects are not special to T but reflect more general formal properties of the Core Functional Categories (CFCs) C, T, and v. I argue that CFCs require a specifier that matches their formal features and provide cross-linguistic evidence that this requirement can be satisfied in similar ways in all three CFCs. I also suggest that this requirement is motivated by the need for Agree operations to apply in a uniform way, with an unvalued feature always functioning as a probe and a feature that enters the derivation already valued always serving as a goal. Finally, I explore the consequences of this approach for our understanding of EPP effects in null subject languages.

Keywords: EPP; functional categories; A-movement; A'-movement; Agree; *pro*-drop

1 Introduction: On the nature of the EPP

The Minimalist Program has constituted a thorough revision of most of the theoretical constructs present in the Government and Binding Theory. The deep and surface structure levels of representation were eliminated in favor of a more derivational approach to syntax, the Case filter was reduced to an interface legibility condition, and the Control module was removed from the theory, to name a few examples (cf. Chomsky 1995; Epstein et al. 1998; Epstein & Seely 2006).

One of the syntactic principles of Government and Binding was the Extended Projection Principle (EPP). This principle required that all clauses have a subject, or more specifically, that Tense heads project a specifier. Within the Minimalist Program, there have been numerous attempts to provide empirical support for the hypothesis that the EPP can be accounted for by other principles of the grammar, thus leading to the possible elimination of the EPP as a feature (cf. Martin 1999; Bošković 2002a; Epstein & Seely 2006; Boeckx 2008; Sigurðsson 2010; Richards 2016). Epstein & Seely (2006: 9), for example, note that the EPP is “redundant with numerous other independently motivated mechanisms of the grammar” and Boeckx (2008: 173) claims that “the EPP is not a feature in the technical sense.”

To illustrate, consider (1) below (trace and indices used for expository purposes only):

(1) John_i will arrive t_i.

Let us assume, as is standard, that *John* originates in the complement position of the unaccusative verb *arrive* and then undergoes A-movement. Before movement takes place, all thematic requirements have been satisfied, since *arrive* only requires one argument, and insertion of *will* provides the information about Tense that is presumably necessary in a

matrix clause. The question that arises then is what aspect of the grammar is responsible for this EPP effect, that is, why A-movement to Spec-TP is still required in (1). While appeal to an EPP feature on T would generate (1) and account for this EPP effect, it is also true that this movement seems to be related to requirements on Case and agreement features that are independently motivated.

The body of research cited above primarily focuses on what properties of T and its features may be responsible for EPP effects and, in what follows, I also reject the idea that EPP effects should be explained by appealing to a dedicated EPP feature on T. I argue, however, that EPP effects are by no means special to T but reflect more general formal properties of the Core Functional Categories (CFCs) C, T, and ν (see Chomsky 2000 for the related suggestion that all CFCs may contain an EPP feature). More specifically, I will propose that CFCs are subject to the following requirement:

- (2) *Matching Feature Requirement* (preliminary version)
A CFC that contains a formal feature requires Merge of a constituent with a matching feature.

As will be shown, (2) requires that T and ν project a specifier whose feature make-up matches their ϕ -features (that is, DPs mostly), while C will be required to project a specifier when containing a wh-feature. As will be made clear in the sections below, feature matching does not necessarily involve agreement; it is the type of feature that needs to match, not necessarily the value of the feature (see Boeckx 2008 for a similar distinction). In Section 5, I will argue that the reason why it is wh-features on C and ϕ -features on T and ν that are subject to this requirement (and not, say, categorial features) is that the Matching Feature Requirement (henceforth MFR) is a device that ensures that Agree (Chomsky 2000; 2001; Bošković 2011) applies in a uniform way, with an unvalued feature always functioning as a probe and a valued feature always serving as a goal, so only the unvalued features involved in Agree are subject to this requirement.¹

This paper is organized as follows. In Section 2 I review previous approaches to the elimination of the EPP as a feature. In Section 3 I examine EPP effects across CFCs and the different ways in which the MFR may be satisfied for each CFC, including cases of CFCs that do not project a specifier and would in principle seem to challenge the MFR. In Section 4 I focus on EPP effects on T and ν when they are ϕ -defective and discuss whether the MFR applies in those cases. In Section 5 I provide a possible theoretical motivation, based on the properties of Agree, for why the formal features of CFCs are subject to the MFR. Section 6 discusses EPP effects (or lack thereof) in null subject languages. Section 7 concludes the present study.

2 EPP effects without an EPP feature

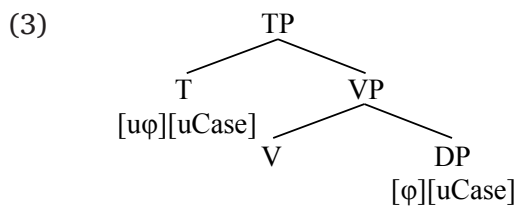
One of the general conclusions that can be drawn from the line of research mentioned in the introduction is that EPP effects are not the result of checking a syntactic EPP feature. Syntacticians disagree, however, on how exactly EPP effects arise. Since T is the locus of both Case and agreement, approaches to the elimination of the EPP have capitalized on the role of either Case or ϕ -features.²

Epstein & Seely (2006) (henceforth E&S), which constitutes one of the most comprehensive attempts to eliminate the EPP, argue that while T can value its ϕ -features in situ by

¹ A question that arises is whether the MFR applies to C with respect to its other features, since CPs also contain ϕ -features (albeit perhaps default third person singular) and some languages even display complementizer agreement. See Section 5 for discussion.

² See Richards (2016) for a PF-based approach to EPP effects.

means of Agree (Chomsky 2000), Case cannot be valued in situ and thus A-movement of the subject DP to Spec-TP is required. To illustrate, consider (3):³



For E&S, the unvalued ϕ -feature of T can get a value by agreeing with the DP that it c-commands without any movement, as evidenced by existential clauses in English, for example (*there are indeed many people here*). In order to account for the fact that A-movement of the DP needs to take place in (3), they argue that Case can only be valued under what they call derivational sisterhood, which requires that the DP move to Spec-TP.⁴ E&S also propose that derivational sisterhood is required when both features are uninterpretable, as both instances of Case are in (3). Structural Case checking, then, is the main driving force for A-movement under their approach.⁵

This approach raises a number of problems. First, consider VP ellipsis facts in *for* infinitives in English:

- (4) He does want to quit smoking, but it's not easy [_{CP} C for [_{TP} him_T to <quit smoking >]].

If Saito & Murasugi (1990) and Lobeck (1990) are correct in their observation that a functional head licenses ellipsis of its complement only if it undergoes some kind of feature checking with its specifier, the question that arises is what kind of feature checking obtains between *him* and *to* in (4) above, under the standard assumptions that *to* is in T and *him* is in Spec-TP and that *him* receives Case from *for*.⁶ E&S's approach does not offer a straightforward way to account for the movement of *him* to Spec-TP, since this movement does not check the Case feature of *him* (or *to*, under their approach). One could still argue that although the movement itself does not check Case (at least not as in (3)), it does provide the proper configuration for *him* to get Case from *for*. However, the feature checking that takes place between the T head *to* and its specifier *him* and licenses VP ellipsis would nevertheless remain a mystery under their approach. There have been approaches to *for* infinitives in which the DP checks Case in Spec-TP with the complex head *for-to* in T (cf. Watanabe 1993; Bošković 1997); under these analyses, however, *for* would move to C leaving *to* in T, without clear justification for this movement and the excorporation that it entails.

It also seems difficult to extend E&S's approach to other languages. The claim that Case checking requires A-movement is not easy to maintain once languages are examined in which subject DPs can remain in their base positions and check their Case *in situ* (most

³ I am assuming here that T includes a complete set of ϕ -features, leaving open the question of whether this set of features is inherited from C (see Chomsky 2008).

⁴ Derivational sisterhood obtains between x and y iff x-commands y at some point in the derivation and y c-commands x at a later point in the derivation (see Epstein *et al.* 1998).

⁵ For existential clauses, in which the associate DP does not move to Spec-TP, E&S adopt the Belletti (1988) analysis whereby the associate DP gets partitive (rather than nominative) case from the verb *be*.

⁶ Saito & Murasugi's (1990) (see also Lobeck 1990) observation has been widely used to determine whether the head and its specifier agree. Interestingly, E&S themselves use ellipsis data to claim that *to* in ECM and raising clauses checks no features (see Section 4.1 below). See also Martin (2001) for similar conclusions.

notably, post-verbal subject DPs in null subject languages like Spanish or Italian; see below and Section 6 for discussion on how the MFR applies in these languages).

An additional possible conceptual problem for E&S's approach is that even though they argue for an Agree-based system in which the EPP feature on T is eliminated, they still need to claim that T displays an extra formal (Case) feature that needs to be checked, which was indeed the dominant approach to Case and agreement in early Minimalism (cf. Chomsky 1995). Moreover, notice that E&S treat Case features on T as distinct from φ -features even though under Agree it is generally assumed that nominative Case is related to agreement with T, at least in the cases in which the DP does not display inherent Case. As one of the reviewers indicates, however, this should not be taken to be a resolved issue, and it is true that the relation between Case and φ -features is definitely not as straightforward as the standard theory of Agree claims, since cases can be found in different languages in which there are mismatches between Case and agreement of different kinds, failed agreement examples, or different agreement features on a functional head that depend on properties of the DP other than Case (cf. Preminger 2014; Bárány 2017). See the discussion on Spanish existential clauses below, which suggests that Case and agreement should at least not be considered totally independent of each other.

Since T heads, besides displaying their own interpretable Tense features, are also involved in agreement, there have been other approaches to the elimination of the EPP-F that capitalize on the role of φ -features instead, rather than Case.

This is the approach entertained by Boeckx (2008), under which the φ -features themselves would be responsible for attracting the DP to their specifier. More specifically, he argues that while the number feature of T can be valued by means of Agree, the person feature requires an element to be merged in the specifier position. As Boeckx (2008: 173) puts it, "person checking amounts to the EPP effect."

One of the examples that Boeckx uses as evidence for this approach is that of raising over an experiencer in English. Consider (5) (adapted from Boeckx 2008: 139):⁷

- (5) a. There seem to be men in the room.
 b. ?*There seem to Mary to be men in the room.
 c. There seems to Mary to be men in the room.

(5a) shows the expected agreement pattern between *seem* and the associate DP. Boeckx claims that this Agree operation can be blocked by the intervention of an overt experiencer as in (5b). However, this overt experiencer does not block raising of the expletive *there* (5c), which has been argued to display a person feature only (cf. Chomsky 2000).

In principle, these facts could also be accounted for under E&S's approach. Since they take expletive *there* to check Case only, it could be argued that movement for Case purposes is not blocked by the overt experiencer. Boeckx's proposal, however, entails that if EPP effects are the result of movement to Spec-TP to check the person feature of T, it is in principle possible for A-movement to Spec-TP to take place even in the absence of φ -complete features (contra Chomsky 2001), that is, in a situation in which the T head only contains a person feature.

Notice that this analysis would account for the possibility of VP ellipsis in examples like (4) above (repeated here as (6)), which posed a problem for E&S:

⁷ Boeckx (2008) claims that these examples were provided by Howard Lasnik (pc). It should be noted, however, that there are also speakers who find (5b) better than (5c), as one of the reviewers indicates. See Boeckx (2000) for evidence from quirky subjects as well.

- (6) He does want to quit smoking, but it's not easy [_{CP} C for [_{TP} him_T to
<quit smoking>]].

Recall that even though there is no Case checking relation between *him* and *to*, the possibility of VP ellipsis here suggests that they do undergo feature checking. While it is obvious that *to* is a non-finite head, the evidence from VP ellipsis suggests that it may still contain a person feature that would attract *him* to its specifier (but fail to value the Case feature of *him*, since only Agree with φ -complete head results in Case valuation), therefore licensing VP ellipsis. See also Chomsky (2000: 124) for the proposal that φ -defective T has a person feature only.

After this brief review of Boeckx's approach, I would like to discuss independent evidence that seems to favor the view that EPP effects relate to φ -features (person features, if Boeckx is right) rather than Case. Consider an existential clause like (7) in Spanish, which illustrates a very common pattern in many Romance languages:

- (7) Hay muchos niños en esa fiesta.
have many kids in that party
'There are many kids at that party.'

Let us assume that the existential verb *hay* moves from V to T, as it standard, and that the QP *muchos niños* receives partitive case from the verb, as in Belletti's (1988) analysis. As mentioned above, this analysis is also applicable to English existential clauses and it is actually the one that E&S adopt. The question that arises is why no Case feature seems to be present in T that can cause an EPP effect; the order **muchos niños hay en esa fiesta*, where the QP precedes the verb, is ungrammatical (unless *muchos niños* is focused in the left periphery). One could argue that the EPP could be satisfied with a null expletive, but questions would arise as to why the QP cannot satisfy the EPP (see (8) below). These existential clauses can display different Tense features but, crucially, they lack agreement features, since *hay* is a non-agreeing form that is also incompatible with nominative case. Conversely, as can be seen in (8) below, in clauses with a different verb in which agreement features are present, EPP effects can indeed be observed, with the QP appearing preverbally (and marked as nominative regardless of its position). This contrast between (7) and (8) is not easy to explain under the E&S view that EPP effects are related to a Case feature on T and are thus independent of agreement features:⁸

- (8) a. Muchos niños aparecieron en esa fiesta.
many kids appeared.3pl in that party
'Many kids appeared at that party.'
- b. Aparecieron muchos niños en esa fiesta.
appeared.3pl many kids in that party
'There appeared many kids at that party.'

The approach that I discuss here is also an attempt to explain EPP effects without appealing to a syntactic EPP feature, and in the relevant aspects will correspond with Boeckx's claim that EPP effects are related to φ -features, and not Case. However, my approach differs from previous attempts to explain EPP effects in that these should not be understood as an exclusive property of T, but as a more general property of all the three CFCs (C, T, and ν). I will show that CFCs require a specifier with a type of feature that matches the

⁸ See Section 6 for discussion of this optionality of A-movement in null subject languages.

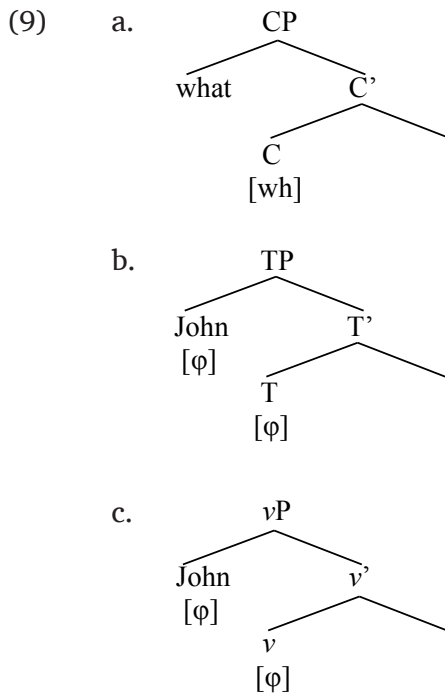
syntactic features involved in Agree, that is, a *wh*-feature in the case of C and φ -features in the case of T and *v*. As will be seen, in the cases in which these heads do not project a specifier, there is evidence that they do not display the relevant feature. Examples of CFCs in which it is less obvious that the MFR has applied, like C heads with apparently no specifier or different examples of φ -defective T and *v*, will also be discussed in detail.

3 EPP effects across CFCs: Is T special?

As mentioned above, one of the purposes of this paper is to examine EPP effects in all the CFCs. I will argue that once all three CFCs are considered, a different picture of EPP effects emerges, namely, one in which T needs a specifier for the same reason that C and *v* need a specifier: to satisfy a syntactic requirement imposed by their formal features. In this section and in Section 4 below I examine how the MFR is satisfied in all the main types of CFCs that have been discussed in the literature.

3.1 CFCs and their specifiers

Consider the three syntactic configurations in (9) below:



These structures represent familiar examples of functional heads projecting to the phrasal level after merger of a specifier. It is undeniable that the reasons involved in the merger of each of the specifiers above seem to be different. In (9a), a *wh*-phrase moves to Spec-CP from its base position to satisfy the *wh*-feature of C and create the proper operator-variable configuration for LF to interpret (9a) as a *wh*-question. In (9b), a DP moves to Spec-TP for reasons discussed in the previous section. In (9c), a DP is merged in Spec-*v*P that will be interpreted at LF as the external argument of the verb.

It should also be noted that the specifier positions in (9a) and (9b) are the result of movement or internal Merge while the specifier position in (9c) is the result of (external) Merge.⁹ As can be seen, there is a really wide range of phenomena illustrated in

⁹ As will be shown in Section 3.4, however, there are cases in which Spec-CP and Spec-TP are also formed by External Merge.

(9), including different syntactic categories, different features, LF-related conditions, θ -positions, A-movement, A'-movement, Merge operations, and Move operations.

All of these structures, however, exhibit a purely syntactic similarity: the specifiers display a formal feature that matches a feature of their corresponding CFC.¹⁰ It is important to point out that feature matching does not necessarily involve agreement; T and the DP do agree in (9b), after matching and φ -feature valuation take place, but the φ -features of ν and the φ -features of the DP in (9c) do not agree. Moreover, I am not taking matching to be a new syntactic operation; the system must be able to detect that two syntactic elements contain the same type of feature, as matching is a prerequisite for φ -feature valuation (see also Boeckx 2008 for more details on the difference between matching and valuation).

All three CFCs, then, seem to obey the following requirement:

- (10) *Matching Feature Requirement* (preliminary version)
A CFC that contains a formal feature requires Merge of a constituent with a matching feature.

The examples in (9) then all exemplify EPP effects that are not special to T. In order to provide evidence for this requirement, I argue below that all CFCs, despite their peculiarities, behave essentially the same way regarding whether the MFR applies or not (Section 3.2), with respect to the use of expletives (Section 3.3), and in terms of whether the MFR can be satisfied by means of Merge or movement (Section 3.4).¹¹

3.2. CFCs and the MFR

In this section I examine the application of the MFR to the different CFCs, including examples in which they actually lack specifiers. As will be shown, whenever a CFC lacks a specifier there is evidence that the CFC does not contain the relevant formal feature.

It is actually not difficult to find cases in which CFCs lack specifiers, especially in the C domain. Examples of C projecting to a CP without a specifier are given in (11) (irrelevant details omitted):¹²

- (11) a. He says [_{CP} C that John will arrive soon].
b. He says [_{CP} C \emptyset John will arrive soon].
c. I don't know [_{CP} C if John will arrive soon].
d. [_{CP} C \emptyset John will arrive soon].

¹⁰ As one of the reviewers indicates, there is a certain risk of circularity in this statement. In the case of C, for example, it is generally assumed that it contains a wh-feature because a wh-phrase is merged as its specifier (this issue is perhaps less controversial in the case of T and ν). Independent evidence for a wh-feature in C may come from the familiar superiority effects that obtain when more than one wh-phrase is present. Actually, multiple wh-fronting in a number of languages (cf. Russian) is not subject to superiority, which has been taken as evidence that no wh-feature is involved (only focus movement). See Bošković (2002b) for discussion of these issues.

¹¹ Since the present study concerns the CFCs only, other functional heads like Aspect or D will not be discussed.

¹² As one of the reviewers points out, there is actually evidence that (11c) contains a null operator in the embedded CP that induces a wh-island effect, an analysis that can be extended to matrix yes/no questions (see Section 3.4). Questions may arise as well regarding the null C examples, although in the case of (11b) at least it is standardly assumed that there is a CP layer. The case of (11d) is slightly more controversial; however, under current work in the Minimalist Program it seems to be standardly assumed that (11d) is headed by a null C.

Notice that the examples above would not refute (10), since these are cases in which C does not display a wh-F. When such a feature is present, a specifier is needed; otherwise, the result is an ungrammatical sentence:

(12) * $[_{CP} C \text{ Did}_{[wh]} \text{ John say what}]?$

It could be argued that wh-in-situ questions in French and more generally wh-in-situ languages provide evidence against the above claim. With respect to French, however, it has been argued that French is not an optional wh-movement language (as is sometimes assumed) and that the in situ strategy in French is actually very restricted and, crucially, only possible in examples in which C is not present in the syntax (see Bošković 2002b for discussion).

The case of wh-in-situ languages is more complex given that they are not a uniform group. Besides, there are a number of different analyses for wh-in-situ phenomena, including movement in the LF component (Huang 1982) and wh-movement of an empty wh-feature (Watanabe 2001), among others. To the best of my knowledge, none of these analyses seem to contradict the MFR.¹³

A phenomenon that does seem to challenge the MFR is that of complementizer agreement. As is well known, in many West Germanic dialects the C head agrees with the subject of the embedded clause, which suggests that C itself also contains agreeing φ -features. In these cases, however, no specifier is merged in Spec-CP, so it seems that φ -features on C are exempt from the MFR, an issue that I discuss in Section 5 below.

As for the T domain, we have already mentioned existential clauses with *hay* in Spanish and other Romance languages, in which T lacks a specifier due to the fact that there are no φ -features present in the derivation. These existential clauses could then be seen as the counterpart of wh-in-situ phenomena in the TP domain. In similar examples with verbs that have agreeing forms, DP movement to Spec-TP may take place, although it is not required (see (8) above). This optionality in null subject languages indeed poses a challenge to the very idea that clauses must contain a specifier. In this respect, it should also be mentioned that there have been attempts to explain the properties of these languages by analyzing them as lacking Spec-TP (most notably Alexiadou and Anagnostopoulou 1998). See Section 6 for discussion.

An interesting issue raised by one of the reviewers concerns subject wh-questions like *who left*. Bošković (2016) provides cross-linguistic evidence that the wh-phrase moves directly to Spec-CP without moving first to Spec-TP, which is taken to provide evidence for the labeling algorithm approach of Chomsky (2013). Notice, however, that under the feature inheritance approach (Chomsky 2008) the φ -features of T actually come from the C head. It is possible then that when the wh-feature of C attracts the wh-phrase, the MFR is also satisfied with respect to the φ -features. This might also help account for well-attested agreement patterns in other languages (see Ouali 2008 for the idea that feature inheritance does not take place in these cases in Berber).

Except for the phenomenon just discussed, the case of English finite clauses is obvious: T with φ -features requires a DP in its specifier position even when the DP is not required by the θ -criterion, as expletives demonstrate. The case of non-finite clauses, however, is much less obvious. As we saw in Section 2 above, *for* infinitives seem to pattern with finite clauses in that T projects a specifier. In Section 4.1 I discuss Control, ECM, and raising clauses.

¹³ For example, under Watanabe's (2001) analysis, wh-movement to Spec-CP would still take place.

Finally, a v head also requires a DP in its specifier position, just as T does (see Section 4 for discussion on φ -defective v heads in passive and unaccusative examples). Again, the standard assumption is that these requirements are completely unrelated: Spec-TP needs to be filled in order to satisfy the EPP (or in order for the DP to check its Case feature, depending on the approach adopted), while Spec- v P needs to be filled to satisfy the θ -criterion, since Spec- v P is the canonical external argument position. I would like to argue here, however, that the fact that both T and v require a specifier when they contain φ -features follows from the MFR, and is thus a syntactic condition that applies to CFCs in the course of the derivation.

It should be stressed that I am not arguing against or denying the validity of the θ -criterion but only claiming that lack of a DP in Spec- v P (also) violates the MFR. In this respect, notice that most approaches do not understand θ -roles as syntactic features, and there are both conceptual and empirical reasons for such a view. Here I briefly comment on two of them.¹⁴

First, it looks like there is no evidence that θ -roles are ever marked morphologically, unlike Case features and φ -features (although which features are realized overtly depends on the morphology of the language). Thus we can easily find morphological realization of, say, nominative case or second person plural agreement, but there seems to be no such thing as an agent morpheme or a theme morpheme (cf. Gallego 2011: 322).

Second, θ -roles are sometimes not assigned by a single head, but by a constituent built by the syntax. A classic example is the contrast between *John broke the window* and *John broke his arm*, in which *John* receives an agent theta role or a patient theta role depending on the interpretation of the VP (cf. Chomsky 1981). This configurational nature of the θ -criterion seems to be at odds with an approach to θ -roles based on syntactic features.

There is no contradiction, then, in saying that the specifier in Spec- v P is merged to satisfy the MFR and at the same time noting that such a merger will be required by the θ -criterion (or that lack of a specifier will violate the θ -criterion at LF), since the MFR is a syntactic condition that applies to the formal features manipulated by the syntax, while the θ -criterion applies at LF.

To summarize, I have shown that CFCs require specifiers that match their formal features and have also argued that in the cases in which no specifier is merged, like the examples in (11) and existential clauses in Spanish, there is no formal feature on the corresponding CFC either.

3.3 The MFR and expletives

It is not surprising that the study of expletives like *there* and *it* have been central to research in syntactic theory, since they constitute examples of syntactic constituents that are not required by semantic considerations (or more specifically, the θ -criterion). As is well known, expletives are definitely possible in (and actually restricted to) specifier positions, which means that they can indeed satisfy the MFR, under the approach developed here. Notice that if expletives are not required by semantic factors, the fact that they can satisfy the MFR seems to provide further evidence that the EPP effects that we observe across CFCs are syntactic in nature.

In this section I show that both C and T can have expletive specifiers, T being the most evident example, while the impossibility of expletive specifiers in v (when v is φ -complete) is accounted for independently by the θ -criterion.¹⁵

¹⁴ This issue is extensively discussed in connection with the PRO vs. Movement approaches to control. The reader is referred to Landau (2003), Boeckx, Hornstein & Nunes (2011), and references therein, for discussion.

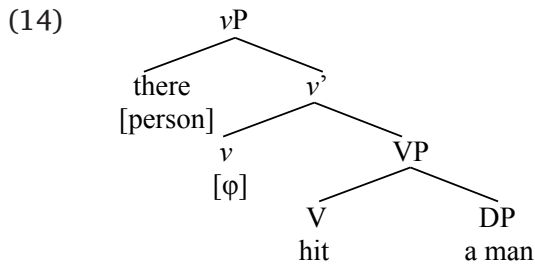
¹⁵ See Section 4.2 for discussion of φ -defective v , whose specifier can actually be an expletive.

Examples of expletives in Spec-TP are provided in (13) below:¹⁶

- (13) a. There was found no evidence for that hypothesis.
- b. There seem to remain several problems.
- c. It seems that John left.
- d. It seems certain that John will leave.

Regardless of whether the expletives are merged directly in Spec-TP or move to that position (see sections 3.4 and 4.2), it seems uncontroversial that they can satisfy the MFR, which entails that *it* and *there* do contain φ -features. This is what is usually assumed for both *it* and *there* under most approaches; expletive *it* has both person and number features (just like pronominal *it*) and *there* is analyzed as having a person feature only (cf. Chomsky 2000; 2001; Boeckx 2008).

Determining whether expletives can also satisfy the MFR in the v domain is complicated by the fact that Spec- v P is a syntactic position associated with the external θ -role, making it incompatible with an expletive at LF. As I argued in the previous section, however, the θ -criterion and θ -role assignment do not drive a syntactic derivation, so it is in principle possible to have a derivation like (14) below in which the MFR is satisfied by means of an expletive (*there* in this case) that is then regarded as illicit at LF:



The resulting sentence **there hit a man* would obviously be ungrammatical, though under the approach I develop here its ungrammaticality is not due to a problem in the syntactic derivation but to the fact that *there* cannot receive a θ -role at LF. As I show in Section 4.2, expletive *there* is perfectly compatible with a φ -defective v head, which does not assign a θ -role to its specifier.

As for the C domain, it has also been argued that there can be expletive elements occupying Spec-CP. Consider the following examples with *what* in English and *qué* in Spanish (similar questions are possible in Catalan, Galician, and some Italian dialects, according to López-Cortina 2009 and Botteri 2015):

- (15) a. What are you, trying to kill me?
- b. What am I, talking to myself here?
- c. Qué vas, al cine?
 what go.3sg to.the cinema
 ‘Are you going to the movies?’
- d. Qué tienes, que ir a la compra?
 what have.3sg that go to the shopping
 ‘Do you have to do the shopping?’

It is clear that the question words in the examples above do not actually behave like *what* or *qué* in regular wh-questions, since these are actually not interpreted as wh-questions,

¹⁶ For simplicity, I am ignoring examples with existential *be*, like *there are many people here*.

but as yes/no questions. There have been a number of attempts to analyze these elements and their different properties in English and in Spanish, all of which reflect on their expletive character (cf. López-Cortina 2009; Fernández-Salgueiro 2013). Other examples of expletives in Spec-CP that have been discussed in the literature include Icelandic expletive topic *það* and partial *wh*-movement examples in German (*wh*-expletive *was*) and Hungarian (cf. McDaniel 1989; Horvath 1997; Richards & Biberauer 2005).

As we have seen, expletives can indeed satisfy the MFR. It is easy to find examples of expletives in Spec-TP and there also seems to be evidence that a *wh*-related expletive can occupy the Spec-CP position in different languages. I have also argued that an expletive can satisfy the MFR in Spec-*v*P but the derivation is ruled out at LF because the expletive cannot receive a θ -role.

3.4 Merge, movement and the MFR

In this section I examine whether the MFR can be satisfied by means of both Merge and movement. In the more familiar cases, Spec-CP and Spec-TP are filled by movement (*wh*-movement and A-movement respectively), while Spec-*v*P results from Merge of the external argument (recall (9) above). As I argue below, however, there are less common examples in which Spec-CP and Spec-TP are also the result of Merge. As for *v*, I argue that the impossibility of movement to Spec-*v*P is related to independent reasons having to do with the θ -criterion and that the MFR provides a new insight into the syntactic properties subsumed under Burzio's (1986) generalization.

We have already discussed examples of movement to Spec-CP, but we have not considered the status of yes/no questions. In principle, it would seem as though there is no specifier at all in these questions, but it has actually been argued that a yes/no question like *will John arrive soon?* contains a null counterpart of *whether* in Spec-CP (at least in English), as in (16) (cf. Roberts 1993; Grimshaw 1997):

(16) [_{CP} (whether)_C will_i John t_i arrive soon]?

Proponents of this type of analysis actually argue that null *whether* does not move to Spec-CP but it is base-generated there (Roberts 1993). Evidence for this sort of analysis comes from the fact that overt *whether* in matrix yes/no questions was certainly possible in earlier stages of the English language, up to the Early Modern English period, as discussed in van Gelderen (2008). This analysis also entails that a non-echo question interpretation ensures when Spec-CP is filled with a *wh*-element and accounts for the fact that Spec-CP in a matrix yes/no question induces an island effect, as one of the reviewers indicates.

Turning now to the T domain, there is evidence that at least some expletives are inserted in Spec-TP directly through Merge. Bošković (2002c) makes such a claim based on evidence from Icelandic multiple subjects and raising over an experiencer in French.¹⁷ Here I reproduce some of the French examples that he discusses:

- (17) a. *Deux soldats semblent au général être arrivés en ville.
 two soldiers seem to.the general to.be arrived in town
 Intended meaning: 'Two soldiers seem to the general to have arrived in town.'
- b. Il semble au général être arrivés deux soldats en ville.
 it seems to.the general to.be arrived two soldiers to town

¹⁷ Bošković (2002c) also discusses verbs like *wager* in English to argue that expletives do not move. See E&S for discussion.

Unlike English, French and other Romance languages typically disallow DP raising over an experiencer, as shown in (17a). Bošković (2002c), however, observes that (17b), in which an expletive is involved, is perfectly acceptable. In order to account for this contrast, he argues that the expletive *il* does not move to Spec-TP but is base-generated in that position. This is relatively surprising considering that most approaches to the syntax of expletives assume that they move, although it should be mentioned that these tend to focus on expletive *there*. If Bošković's proposal is on the right track, it looks like at least some expletives can satisfy the MFR in Spec-TP by means of Merge (see Section 4.2 for further discussion of expletives).¹⁸

Another example of what seems to be merger of an expletive in Spec-TP is that of expletive *there* in regular transitive clauses in Belfast English. As can be seen in the examples below (taken from Radford 2004: 241), *there* can appear in Spec-TP even in a transitive clause, which suggests that it has not moved from any lower position inside the ν P (see Section 4.2).

(18) *Belfast English*

- a. There should some students get distinctions.
- b. There have lots of students missed the classes.

Spec-TP has also been argued to host quirky subjects, although there is disagreement regarding whether they agree with T or move to Spec-TP in the absence of agreement (see Boeckx 2000 and references therein for discussion). Notice that the approach developed here is compatible with both proposals, since matching of features between the quirky subject and the ϕ -features of T would be enough to satisfy the MFR.

A final case that should be discussed with respect to the T domain is that of locative inversion. Although there are analyses of locative inversion that claim that no movement to Spec-TP takes place (see Bruening 2010 and references therein), other analyses do claim that the locative phrase does undergo A-movement to Spec-TP (cf. Collins 1997). Interestingly, proponents of this A-movement analysis argue that the locative phrase is also an extended nominal and crucially displays a defective set of ϕ -features. If this is correct, locative phrases under this analysis and expletive *there* are similar in terms of their feature make-up and satisfy the MFR in a similar way. Moreover, locative inversion would constitute another case in which the MFR is satisfied with a non-agreeing specifier.

As for the ν domain, Spec- ν P seems to differ from Spec-TP and Spec-CP in that it is never the result of movement.¹⁹ This could be taken to be evidence against my claim that all CFCs behave similarly with respect to their specifiers (although strictly speaking it would not contradict the MFR), so the question that arises is why Spec- ν P is special in this respect. The main reason is that movement of a DP to Spec- ν P is understood to violate the θ -criterion at LF, since we would two different θ -roles assigned to the same argument DP. This would mean that in principle the DP complement of the main verb could move to Spec- ν P in the syntax, although this derivation would crash at LF when the ν P is interpreted at the interface. If my approach is correct, a derivation like (19) ultimately yielding the sentence **John saw* would be licit in the syntax but would crash when the θ -criterion applies at LF:

¹⁸ One possibility is that Bošković's claim about expletives only applies to *it*-type expletives (with full ϕ -features). This would mean that expletive *it* in English is merged directly in Spec-TP in examples like these:

- (i) It seems that John left.
- (ii) It's unlikely for it to seem that John left.

¹⁹ The discussion in this section focuses on the Spec- ν P position that is associated with a θ -role (namely, when ν is ϕ -complete). As will be shown in Section 4.2, when ν is ϕ -defective its specifier can be the result of either Merge or movement. I am abstracting away here from the possibility of an extra Spec- ν P position at the Phase edge (cf. Chomsky 2000; 2001).

(19) [_vP John_i [_v [VP saw t_i]]]

An interesting consequence of the approach that I am arguing for here provides us with a way to derive Burzio's Generalization (Burzio 1986). Burzio observed that there was a robust correlation between presence of an external argument and accusative case being assigned to a DP complement. More specifically, accusative case somehow requires the presence of an external argument.²⁰ This connection between Case and θ -roles has always been difficult to formalize, not only because it involves two different constituents in the structure (the external argument and the internal argument) but also because it links two separate aspects of syntactic theory (Case theory and θ -theory).²¹ The first problem was addressed with the introduction of v ; v actually establishes a possible link between the two argument DPs given that it is the head that is understood to contain the φ -features that are associated with accusative case (of the internal argument) and also the head that allows an extra φ -role to be assigned (to the external argument).

However, if I am correct in that the presence of a specifier in Spec- v P is forced by the φ -features of v , Burzio's Generalization immediately follows as a property of the syntactic derivation: accusative case is valued under Agree with the φ -features of v , which are the very same syntactic features that require a specifier according to the MFR. If this reasoning is on the right track, the connection between Case and θ -theory implied by Burzio's Generalization is then merely a by-product of the fact that the DP required by the MFR in the syntax ends up receiving a θ -role in the LF component. As one of the reviewers points out, this version of Burzio's Generalization can accommodate examples that display inherent Case, which were difficult to capture under the original formulation.

4 φ -defective CFCs and the MFR

So far, I have discussed several aspects of how the MFR applies to C and to T and v when they are φ -complete. As has been argued at length in recent years, however, T and v may also enter the derivation with φ -defective features. In this section I examine the properties of these φ -defective CFCs with respect to the MFR.

4.1 φ -defective T

Before we begin discussion of φ -defective CFCs, a clarification regarding terminology is required. Here I use φ -defective T to refer to instances of T that are spelled out as *to* in English, regardless of whether T is selected by C or by V. Thus this section includes discussion of *for* infinitives, non-finite clauses with PRO (arbitrary or controlled), ECM clauses, and raising clauses.²²

²⁰ Here I would like to consider this more specific version of Burzio's Generalization. Burzio's original claim that external argument and accusative case are dependent on each other has actually been challenged by studies on the syntax of ergative languages.

²¹ Notice also that in GB the θ -criterion was taken to apply at D-structure whereas the Case filter applied at S-structure. As Laka (2000: 105), for example, puts it:

“It is not clear what principle of principles could derive B[urzio's] G[eneralization], because there is no explicit connection between external θ -role assignment and Accusative Case assignment besides the very one stated by the generalization itself.”

²² In Chomsky's (2001; 2008) system, a correlation is assumed between C and a full set of φ -features on T that will result in Case valuation (for example, nominative case in finite clauses). Under this approach, control *to* would also be φ -complete (since it would check null case), whereas ECM and raising *to* would be φ -defective because they are not selected by C. The problem is that this correlation does not hold for *for* infinitives, since *to* does not value the Case of the DP even though it is selected by C. For this reason, here I refer to any instance of T that is not associated with nominative case and spelled out as *to* as φ -defective, regardless of whether it contains person features only (infinitives with PRO and *for* infinitives) or no φ -features at all (ECM). See Section 4.1 below for discussion of raising *to*, which may display person features despite not being selected by C.

In Section 2, we already discussed the status of *for* infinitives with respect to VP ellipsis. As we saw above, there is evidence that *him* and *to* enter in a feature checking relation in a sentence like (20), since *quit smoking* can be elided.

- (20) He does want to quit smoking, but it's not easy [_{CP} C for [_{TP} him_T to <quit smoking>]].

Again, this example is problematic for E&S because they take Case checking to be the sole trigger of movement to Spec-TP, but can be accounted for under the Boeckx approach if he is correct in that person feature checking is the trigger for such movement. (20) also conforms to the MFR since defective φ -features are indeed formal features. In order to make my approach compatible with Boeckx's findings and arrive at a more restrictive version of the MFR, I will also assume that the person feature is the relevant one that needs to be matched in the case of T and ν , regardless of whether they are φ -complete or φ -defective.²³ Further evidence for this is provided by the fact that expletive *there*, which by hypothesis displays only person features, can also satisfy the MFR (see Section 3.3).²⁴

Another type of non-finite clauses should be considered is that of clauses containing PRO (arbitrary or controlled), which together with *for* infinitives is the other example of a non-finite T that is selected by a C head (unlike ECM and raising, which are selected by V). It has been shown that VP ellipsis is perfectly possible in examples like those in (21):

- (21) a. John tried C PRO to cook, but Bill didn't try C [_{TP} PRO_T to <cook>].
b. Everyone wants C PRO to excel, but it's not easy C [_{TP} PRO_T to <excel>].

Martin (2001) and E&S, among others, use similar examples to argue that PRO undergoes (Case) feature checking in Spec-TP. The examples in (21), then, provide evidence that PRO satisfies the MFR by moving to Spec-TP in a similar way than the subject of a *for* infinitive does. Although it is not entirely clear what the actual φ -feature make-up of PRO is, it is reasonable to assume that it displays φ -features even in the absence of control, since it can bind an anaphor, as shown in (22):

- (22) a. It's definitely not easy PRO_i to live by yourself_i.
b. It's important PRO_i to prepare oneself_i for the test.

Let us now discuss ECM and raising cases, which are examples of non-finite T not selected by C. Consider first the ECM example in (23), which shows that ECM *to* does not license VP ellipsis (cf. Martin 2001: 154):

- (23) *I consider Pam to like soccer, and I believe Rebecca [_{TP} T to <like soccer> as well].²⁵

²³ See the discussion on raising and ECM examples below, which show that some cases of non-finite T may be completely devoid of φ -features and thus the MFR would not apply.

²⁴ Notice also that expletives *there* and *it* can satisfy the MFR in φ -defective T contexts:

- (i) It's important for it to seem that we're doing a good job.
(ii) It's important for there to be enough jobs.

²⁵ One of the reviewers finds (23) acceptable, which is not the judgment that has been reported in the literature (cf. Martin 2001; E&S). Moreover, the reviewer suggests that if it is true that ECM *to* checks no features, an example like **I believe to be obvious that he is a liar* is at risk of being overgenerated. See Section 4.2 for discussion.

Examples like (23) are used by Martin (2001) and E&S to argue that ECM *to*, unlike control *to*, for example, checks no features. If this is right, the MFR predicts that ECM *to* does not require merge of a specifier. In this respect, notice that *Rebecca* is outside the TP in (23), an analysis for which there is ample evidence (cf. Lasnik & Saito 1991; Martin 2001; E&S).²⁶

The case of raising *to* is actually more complex. Martin (2001: 154), for example, claims that raising and ECM *to* pattern together with respect to ellipsis. However, he only provides control and ECM examples in his article, and he does note that not all speakers find a contrast between control and raising examples. Moreover, Epstein & Seely (2006: 159) note the following contrast (their judgment):

- (24) a. *Bill doesn't seem to be happy, but Mary (certainly) seems to.
b. ??Bill doesn't seem to like baseball, but Mary (certainly) seems to.

The data is not entirely clear (and the contrast in (24) between a regular verb and *be* still needs to be accounted for), but my informants, who find (23) ungrammatical, find raising examples like the ones in (25) acceptable. This would mean that raising *to* contains a person feature (even in the absence of C) and a specifier is then forced by the MFR, in this case the DP undergoing A-movement.

- (25) a. He said he doesn't like her much, but he does seem to <like her much>.
b. He said he wouldn't go, but he's actually rather likely to <go>.

To make things more complicated, VP ellipsis seems to be unacceptable in raising examples with expletive *there* as subject (cf. Bošković 1997), which one of the reviewers indicates provides evidence for Martin's (2001) ambiguous control/raising analysis:

- (26) *He said there wouldn't be a problem, but there's likely to <be a problem>.

It should be noted, however, that an example like (26) involves *be*, which seems to lead to unacceptability, as discussed in (24) above. Moreover, examples with expletive *there* in other non-copula cases are also degraded. Consider the ungrammatical unaccusative example in (27) below, which, to the best of my knowledge, has not been discussed in the literature:

- (27) *They said there would arrive several letters in the mail, but there didn't <arrive several letters in the mail>.

Here, I will continue to assume that raising *to* does allow VP ellipsis, given the acceptability of examples with regular verbs like the ones in (25), leaving the study of examples with copula *be* and *there* expletives and their possible implications for the theory of ellipsis for further research. See Bošković (2015) for further discussion of Martin's (2001) ambiguous control/raising analysis.

The data just discussed seems to provide evidence that clauses containing PRO, *for* infinitives, and ECM examples all conform to what is predicted under the MFR. In the cases in which the non-finite T head is selected by C, the person feature of T does require a specifier; in non-finite clauses containing PRO (be it controlled or arbitrary), PRO moves

²⁶ Notice that *want* does allow VP ellipsis when the subject of the embedded clause is lexical:

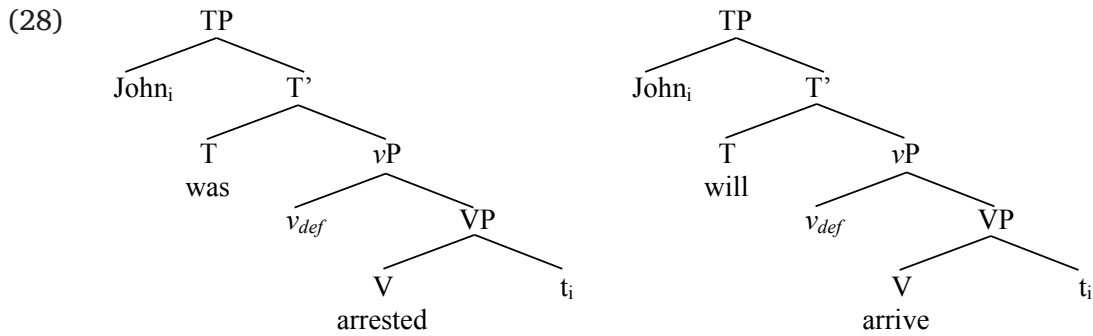
- (i) Mary wants Peter to win, but Sue wants Matt to.

Despite appearances, however, *want* is not a true ECM verb (see Martin 2001 and references therein for evidence).

to Spec-TP and in *for* infinitives, the DP moves to Spec-TP. The T head in ECM, however, does not seem to contain φ -features at all, and no specifier is therefore predicted by the MFR. Raising *to*, on the other hand, seems to contain a person feature even in the absence of C, in the light of the disputed evidence in (25).

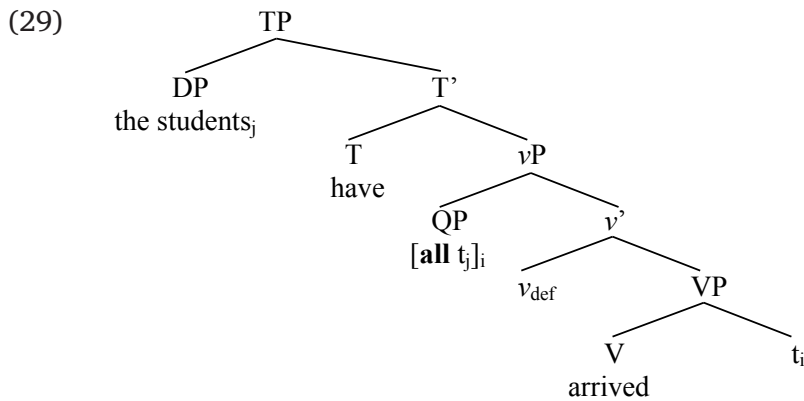
4.2 φ -defective v

The last example of a CFC that needs to be considered is φ -defective v. Here I will follow the standard assumption that φ -defective v is present in clauses that lack an external argument, that is, passive and unaccusative clauses, as shown in (28):²⁷



In principle, it looks like the MFR is not satisfied in (28), since neither vP contains a specifier. Notice that an alternative analysis could be provided, though; one in which the DP moves first to Spec-vP and then to Spec-TP.

Examples with floating quantifiers like those in (29) would seem to suggest that this is the case, under the assumption that a floating quantifier can be stranded after movement of the DP to a higher position (cf. Sportiche 1988; Bošković 2004):



Evidence from floating quantifiers, however, has been shown to be problematic. Bobaljik (2002), for example, notes a number of problems with using this type of evidence to determine trace/copy positions. One of them is that there are differences in meaning between floating quantifiers and their non-floating counterparts. Thus, the use of the floating quantifier in a sentence like *lions, tigers, and bears are all scary*, for example, gives rise to an additional meaning in which those three animals are generally scary. Another problem is that floating quantifiers are generally possible when the DP undergoes A-movement, but not in the case of A'-movement (see Bobaljik 2002 for detailed discussion).

²⁷ I am abstracting away from possible specific differences between passive and unaccusative clauses, like the fact that *be* in passives is probably not base-generated in T (cf. *to be arrested*).

It is also problematic that floating quantifiers can be found in syntactic positions in which evidence from VP ellipsis seems to indicate that there is no specifier. Consider (30) below:

(30) I believe the new students all to be brilliant.

As we saw in the previous section, evidence from VP ellipsis shows that ECM *to* checks no features, which suggest that there is no specifier in that position either. However, the sentence in (30) contains a floating quantifier in that purported specifier position.

To make things more complicated, floating quantifiers are also possible when adjacent to raising *to*, a specifier position for which we seem to have inconclusive evidence (see the discussion of (25) in the previous section):

(31) The new students seem all to be brilliant.

Although the evidence from floating quantifiers seems problematic, it does not invalidate the hypothesis that the DP moves first to Spec- ν P and then to Spec-TP. Moreover, it has been argued independently that A-movement in these cases does target the Spec- ν P position.²⁸

It is also possible, as one of the reviewers suggests, that these specifier positions are filled by the moving DP for reasons that have to do with the nature of successive-cyclic movement, in very much the same way that a *wh*-phrase would move to an embedded Spec-CP in a long-distance *wh*-question, even though this embedded C would not display a *wh*-feature (cf. Bošković 2002a). As the reviewer indicates, McCloskey (2000) actually discusses cases of floating quantifiers in intermediate Spec-CP positions in West Ulster English, a position that does not license ellipsis, as Bošković (2007) shows. If correct, this would indicate that this syntactic requirement on movement should be dissociated from the MFR that the present study is concerned with.

There is much stronger evidence that Spec- ν P in φ -defective contexts can be filled with an expletive. In this respect, consider the following examples:

- (32) a. There remain several difficulties.
 b. *There will several difficulties affect you.
 c. There seem to remain several difficulties.
 d. *There seem to several difficulties affect you.

Examples like those in (32) illustrate that expletive *there* is not merged directly in Spec-TP, but is instead merged as the specifier of Spec- ν P in the cases in which ν is φ -defective. As can be seen, expletive *there* is in complementary distribution with an external argument, which indicates that *there* is satisfying the MFR in φ -defective ν in passive and unaccusative clauses.

Finally, consider the sentence in (33):

(33) I believe *(it) to be obvious that he is a liar.

If it is true that the ECM *to* head is not subject to the MFR (recall the discussion in the previous section) it must be the case that the merge of the expletive *it* is forced by the MFR with respect to the embedded φ -defective ν head, although it may be the case that

²⁸ See Legate (2003) for evidence from reconstruction and parasitic gap licensing that DPs move through Spec- ν P even when ν is φ -defective. Notice, however, that under my approach her claim that all ν P are phases would not necessarily follow.

the expletive moves to Spec-TP before it moves to the domain of the main verb for reasons having to do with locality of movement, as mentioned above.

5 Interim summary and a possible motivation for the MFR

In the previous two sections I have argued that the MFR applies to all CFCs and have provided evidence that the MFR can be satisfied in similar ways in all the three domains: C, T, and ν . In the examples in which no specifier is merged, there seems to be evidence that the CFC does not contain the relevant feature. The Table in (34) summarizes the evidence reviewed above:

(34) *The MFR across CFCs*

<i>MFR satisfied...</i>			
	<i>with expletives</i>	<i>by Merge</i>	<i>by movement</i>
C	– Expletives <i>qué</i> and <i>what</i> (15) (German <i>was</i> and Icelandic <i>það</i> also mentioned)	– Yes/no questions (16)	– Wh-movement (9)
T	– Expletives <i>it</i> and <i>there</i> (13)	– French <i>il</i> (17) – Belfast English <i>there</i> (18) – Expletive <i>it</i> (fn. 14)	– A-movement (9)
ν	– Expletive <i>there</i> * (14)	– External argument (9)	– Movement of the internal argument** (19)
T_{def}	– Expletives <i>it</i> and <i>there</i> (fn. 20)	– Expletive <i>it</i> (fn. 14)	– A-movement (20–21), (25)
ν_{def}	– Expletive <i>there</i> (32) – Expletive <i>it</i> (33)	– Expletive <i>there</i> (32) – Expletive <i>it</i> (33)	– Movement of the internal argument*** (26)

* By hypothesis, allowed in the syntactic derivation; *there* unable to receive a θ -role at LF.

** By hypothesis, allowed in the syntactic derivation; banned at LF by the θ -criterion.

***Evidence inconclusive; movement consistent with the MFR.

As can be seen, the MFR predicts EPP effects in all the three CFCs. As it stands, however, the MFR only constitutes a descriptive generalization concerning how syntactic derivations must proceed when a CFC is inserted. The question that arises, then, is why derivations are subject to the MFR.

5.1 The MFR and the properties of Agree

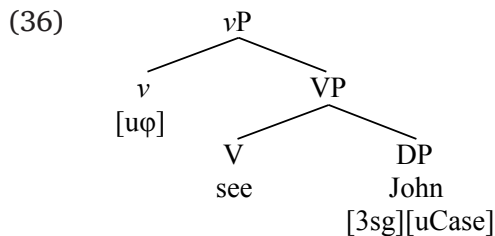
In what follows, I argue that the MFR is a device that ensures that Agree applies in a uniform way, with an unvalued feature always functioning as a probe and a valued feature always serving as a goal. This will help explain why it is necessarily specifiers (and not complements) that end up satisfying the MFR, which would otherwise seem to be a stipulation, as one of the reviewers indicates. More importantly, this will be instrumental in explaining why it is the wh-feature in C and the φ -features in T and ν that are subject to the MFR, as these are the features generally understood to enter the derivation unvalued and be involved in Agree. This allows us to define the MFR in a more precise way, as shown below:

(35) *Matching Feature Requirement*

A CFC that contains an unvalued feature requires Merge of a constituent with a matching feature after Agree applies.

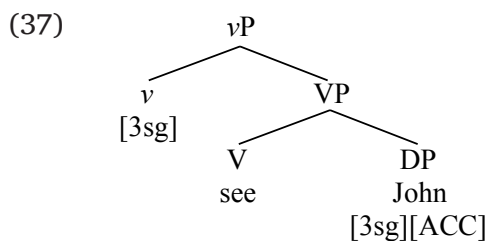
5.2 *The MFR, Agree, and v*

To begin, suppose that a derivation has reached the stage in (36), which is an example of a syntactic configuration in which Agree is predicted to apply:



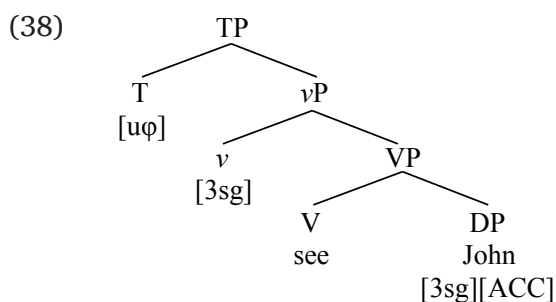
As (36) shows, the ϕ -features of v lack a value when it enters the derivation, while the ϕ -features of the DP are lexically valued. This illustrates an inherent asymmetry that is characteristic of how Agree has been defined since its inception: it is CFCs that agree with DPs. In Chomsky's (2000: 124) words, "to rephrase in traditional terms, verbs agree with nouns, not conversely, and Case is assigned."

Agree would now take place. The unvalued ϕ -features [u ϕ] of v (the probe) would obtain a value after matching the valued ϕ -features [3sg] of the closest DP (the goal), which would in turn value its Case feature as accusative:



It appears that after feature valuation a situation obtains that could potentially be at odds with the inherent asymmetry of Agree just discussed, given that v itself is now valued as third person singular, just as the DP is. This means that the ϕ -features of v , though not lexically valued, could now provide a higher agreeing functional head with a value for its still unvalued ϕ -features.²⁹

Suppose that the derivation continues with merger of T:



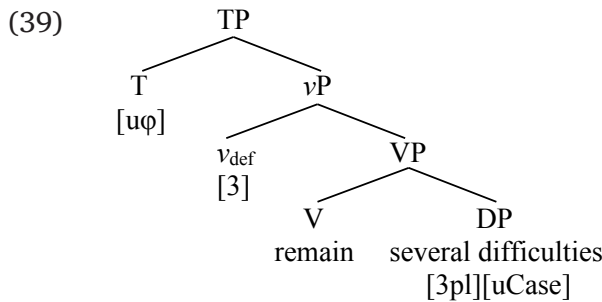
²⁹ A related problem is noted by Epstein & Seely (2002) with respect to Spell Out, the operation that removes LF-uninterpretable material. They argue that Spell Out cannot operate at the point shown in (36) (since the derivation still contains unvalued features) neither can it apply at the point shown in (37) because the ϕ -features of v are now indistinguishable from the ϕ -features of the DP (they are both valued). To solve this problem, they argue that Spell Out must be derivational, in the sense that it must be able to inspect "both the input to and output of Agree" (cf. Epstein & Seely 2002: 75).

T now could in principle Agree with *v*, which again, is not consistent with the asymmetric nature of Agree. The standard approach to Agree would prevent this by means of the activation condition, which requires that both probe and goal display unvalued features (of different kinds) for Agree to apply. It has been argued, however, that this condition holds for cyclic movement, but not necessarily for Agree (cf. Bošković 2007). In addition, Nevins (2004) has challenged the empirical adequacy of the activation condition, and Rodríguez-Modoñedo (2006) suggests that the activation condition should actually be replaced by a deactivation condition that would just ensure that DPs with valued Case are invisible for Agree.

The derivation in (38), however, violates the MFR. If the MFR is satisfied, with a specifier being merged in Spec-*v*P when a formal feature is detected, *v* is no longer able to serve as a goal because the ϕ -features of the DP are now closer to T, a locality condition that is standardly assumed for Agree. This way, the fact that it is specifiers (and not complements) that satisfy the MFR is derived.

Admittedly, even under standard assumptions, T would never be inserted in (38) before a DP is, since the lack of a DP in Spec-*v*P would trigger a θ -criterion violation at LF. This explanation, however, would involve look-ahead; the syntax would first need to provide a DP for the θ -criterion to be satisfied later at LF. The MFR-based explanation does not have this problem.

Moreover, invoking the θ -criterion does not seem to be the right solution, since a similar problem would also arise in the absence of a θ -criterion violation, as the derivation in (39) with a ϕ -defective *v* (which does not assign a θ -role) helps illustrate:



As can be seen, a similar problem arises in the derivation above after the person feature of the *v* head gets valued as third person and T enters the derivation with unvalued ϕ -features. Since *v* is now valued as third person, T could in principle get a person value after locating *v* as a goal, a situation that is prevented by the obligatory specifier required by the MFR, either expletive *there*, yielding *there remain several difficulties*, or movement of *several difficulties* to Spec-*v*P, ultimately yielding *several difficulties remain*.³⁰

Application of the MFR in the syntactic derivation, then, ensures that Agree provides a value for the ϕ -features of the probe based on ϕ -features that enter the derivation already valued and never from ϕ -features that were themselves valued in the course of the derivation (those of T or *v*).

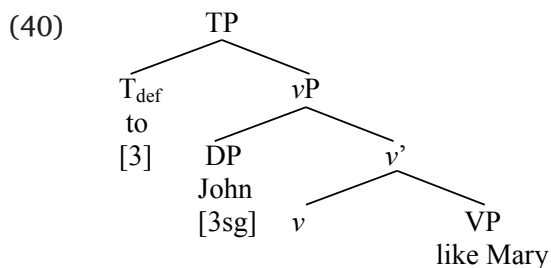
5.3 The MFR, Agree, and T

In order to strengthen this theoretical motivation for the MFR, a similar argument should be made in the case of T and C. For T, this would require finding a syntactic context in which a set of ϕ -features on T valued in the course of the derivation could in principle

³⁰ Notice that when *there* is inserted, it provides a person value for T, which can still probe for a number value and locate the plural feature of *several difficulties*. This means that number and person features probe separately, as claimed by Boeckx's (2008: 173).

serve as the goal for a higher probe with unvalued ϕ -features.³¹ The prediction is that the MFR would require a specifier in this kind of context that would block this Agree operation.

If my observations about VP ellipsis in raising contexts are correct (see Section 4.1), a similar argument could be provided for T. Suppose that the derivation for a sentence like *John seems to like Mary* has reached the stage shown in (40) below, where the person feature of T gets a value from the DP after Agree:



Now the person feature of this ϕ -defective T head could in principle serve as a goal for the higher functional head in the main clause, a situation that would be prevented by the MFR, which would require movement of the DP *John* to the embedded Spec-TP.

A less familiar case in which the present motivation for the MFR can be tested in the T domain is that of hyperraising in Brazilian Portuguese (cf. Rodrigues 2002; Ferreira 2004). Consider an example like (41) below:

- (41) João_i parece que t_i tinha telefonado.
 John seems that has called
 ‘John seems to have called.’

As can be seen in (41), the T head in the matrix clause is able to probe inside the embedded clause, since the subject DP agrees with the matrix T and moves to the matrix Spec-TP. Ferreira (2004) claims that due to the weakening of verbal agreement morphology in Brazilian Portuguese (also related to the loss of referential *pro*) a T head may fail to value nominative case, making the DP available for further A-movement, hence the hyperraising phenomenon. In principle, then, Brazilian Portuguese could provide an example of a matrix T head undergoing Agree with an embedded T head that acquired a value for its ϕ -features in the course of the derivation (after Agree with the embedded DP subject). If my hypothesis about the motivation for the MFR is correct, this instance of Agree will necessarily be blocked by movement of the DP to Spec-TP.

Consider first the fact that in Brazilian Portuguese T displays partial agreement with a postverbal subject, but not with a preverbal one, as shown in (42) (examples taken from Hornstein *et al.* 2005: 236):

- (42) a. Alguns problemas apareceram.
 some problems appeared.pl
 b. Apareceu alguns problemas.
 appeared.sg some problems
 ‘Some problems appeared.’

³¹ Notice that ECM does not provide a test bed for this theoretical motivation of the MFR. Since ECM appears to display no ϕ -features (see discussion on (23) and (29) above), no specifier is needed to block Agree of a higher T or *v* with *to*.

Crucially, only the fully agreeing form is possible in hyperraising, as shown in (43):

- (43) a. [Alguns problemas]_i parecem que t_i apareceram.
 some problems seem that appeared.pl
 b. *[Alguns problemas]_i parecem que apareceu t_i.
 some problems seem that appeared.sg
 ‘Some problems seem to have appeared.’

This provides evidence that the embedded subject *alguns problemas* has first moved to Spec-TP in the embedded clause, as predicted by the MFR and the theoretical motivation that I am arguing for in this section, namely to prevent Agree from locating the ϕ -features of a CFC (T in this case) as a goal.³²

5.4 The MFR, Agree, and C

As for the C domain, the MFR predicts that when C contains a wh-feature a wh-phrase must be merged in Spec-CP. Since wh-movement is by hypothesis the result of Agree as well, a way to motivate the MFR empirically would be to find evidence from syntactic configurations in which a wh-feature in matrix C could in principle find a wh-feature in an embedded C head as a goal, an Agree operation that would be blocked by a wh-phrase required by the MFR in the embedded Spec-CP position. This is essentially the wh-movement version of the above discussion on Agree with T and *v*.

Although it is not that easy to find such an example, sub-extraction from moved wh-phrases might provide the kind of evidence needed. Consider first the following example of wh-movement in Spanish:

- (44) Me pregunto [cuántos libros de ese autor]_i han sido censurados t_i.
 wonder.1sg how.many books of that author have.been censored
 ‘I wonder how many books by that author have been censored.’

In this sentence, the wh-feature of the C head in the embedded clause acts as a probe and locates the wh-phrase in complement position, which undergoes movement to Spec-CP. This is the movement that I argue is motivated by the MFR.

Once this instance of wh-movement applies, the wh-phrase will be unable to undergo further wh-movement even in the presence of a higher wh-feature in C, just as in the ungrammatical English sentences **which books do you wonder did John buy* or **which books do you wonder John bought* (cf. Rizzi’s 2006 criterial freezing). Suppose, however, that instead of *that author* we have *which author*. In this case, a higher wh-feature in C is actually able to attract this wh-phrase in Spanish and other Romance languages like Italian, Galician and European Portuguese, as shown in (45) (cf. Rizzi 2006):

- (45) *Spanish*
 [De qué autor]_j te preguntas [cuántos libros t_j]_i han sido censurados t_i?
 of which author wonder.2sg how.many books have.been censored
 ‘By which author do you wonder how many books have been censored?’

Technical details aside, the important fact for the purposes of our discussion is that when the wh-feature of the matrix C head acts as a probe, its goal is necessarily the wh-phrase in Spec-CP (or the wh-phrase inside it, depending on the analysis), but never the embed-

³² The sentence *parece que apareceu alguns problemas* is grammatical but it would involve agreement of the matrix T with the complement clause.

ded C head. Again, the MFR ensures that this is the case by requiring a wh-specifier when C contains a wh-feature that has already served as a probe.

As one of the reviewers points out, Gallego (2007) provides an analysis of examples like (45) that does not involve movement. According to Gallego's analysis, in a sentence like (45), the PP *de qué autor* 'of which author' has not moved from the embedded clause but is actually base-generated in the main clause, denoting aboutness. However, the analysis that Gallego entertains applies to verbs like *decir* 'to say' and *saber* 'to know' that are indeed compatible with this selectional frame that includes the aboutness PP. The verb used in the example above, *preguntarse* 'to wonder,' does not seem to be compatible with such selectional frame, though.³³ Consider now the reconstruction tests below:

(46) *Spanish*

- a. ??De qué hijo suyo_i te preguntas cuántos libros ha leído [todo Of which son his wonder.2sg how many books has.read every padre]_i? father
'Which son of his do you wonder how many books by every father has read?'
- b. De qué hijo suyo_i se pregunta [todo padre]_i cuántos libros Of which son his wonder.3sg every father how many books han sido censurados? have.been censored
'Which son of his does every father wonder how many books by have been censored?'

(46a) is equivalent to the example with *saber* 'to know' that Gallego (2007: 350) uses and takes to be ungrammatical, and it does sound odd with *preguntarse*. However, (46b) is grammatical, despite the fact that the fronted phrase cannot be base-generated as an argument of the main verb denoting aboutness, which is the confounding factor that Gallego alludes to (see above).

A final issue that should be discussed with respect to the motivation for the MFR is the status of complementizer agreement and why the φ -features on C do not require a specifier like they do in T and *v*. There is a crucial difference between C and the other CFCs with respect to the role of φ -features, which is that C (and CPs) patterns with DPs in that their φ -features generally serve as the goal for an Agree operation regardless of whether the language displays complementizer agreement, while T and *v* cannot. Notice, in this respect, that CPs can actually undergo A-movement:

(47) That he has failed seems to surprise everyone.

It should be noted, however, that the φ -features of C that can serve as a goal are presumably a set of default third person singular features that seems to be inherent to C (*that he has failed* = *it*), and actually can trigger plural agreement in some cases when the two CPs are coordinated (cf. McCloskey 1991). Application of the MFR in examples of complemen-

³³ Interestingly, Gallego (2007: 349fn.47) acknowledges that Torrego recommends that he should test verbs that select only embedded interrogatives, like *preguntarse* 'to wonder,' which is the one that I use here. As shown below, the structure that Gallego discusses (and argues to be the source of examples like (45)) is unacceptable with *preguntarse*:

- (i) *Me pregunto de ese autor cuántos libros han sido censurados.
wonder.1sg of that author how.many books have.been censored
Intended meaning: 'I wonder how many books by that author have been censored.'

tizer agreement would then block such possibility, since the ϕ -features of the DP would be closer to the probe. Moreover, the status and properties of complementizer agreement are still a matter of debate, and both syntactic analyses (some of them employing Agree) and post-syntactic analysis have been proposed. As van Koppen (2017) discusses, linear adjacency, which would in principle favor a post-syntactic account, seems to be a condition on complementizer agreement in most dialects but not in all dialects, so it may even be the case that there are two types of complementizer agreement: a syntactic one and a post-syntactic/PF one.

Given the evidence just discussed, it seems reasonable to submit the hypothesis that derivations resort to application of the MFR to ensure that a feature that has been valued in the course of the derivation by means of Agree does not itself serve as a goal for a later Agree operation. As one of the reviewers points out, this is reminiscent of Stowell's (1981) notion of Case resistance, according to which a Case-assigning head cannot be assigned Case.

A final remark that I would like to make concerns the uniformity regarding the syntactic configuration that serves as the input for the operation of Agree that I have assumed throughout this section. It should be stressed that this uniformity refers to the properties of the goal that is involved in Agree. As Preminger (2014) shows, in some cases the output of the operation of Agree may not be as uniform, leading to what he calls failed agreement cases, that is, examples where agreement does not obtain but where there is evidence that Agree has nonetheless applied.

6 Remarks on EPP effects in null subject languages

As mentioned several times in the previous sections, null subject languages seem to challenge the idea that T heads require a specifier. Consider the Spanish examples in (48):

- (48) a. Muchos niños estuvieron en esa fiesta.
 many kids were in that party
 ‘Many kids were at that party.’
- b. Estuvieron muchos niños en esa fiesta.
 were many kids in that party
 ‘There were many kids at that party.’
- c. *pro* estuvieron en esa fiesta.
 were in that party
 ‘They were at that party.’

(48) illustrates the familiar state of affairs in the null subject languages that were originally analyzed in detail in GB. (48a) displays A-movement of the subject DP, yielding an EPP effect that is not found in (48b), in which the DP remains in situ. (48c) illustrates the very well-known fact that a finite clause can have a referential null subject *pro* (at least this was the main analysis within GB; see below for an alternative). This would seem to indicate that the MFR applies optionally in a language like Spanish, an optionality that needs to be accounted for, especially given the theoretical motivation for the MFR discussed in the previous section.

6.1 Types of null subject languages

Before we continue, a clarification regarding types of null subject languages is in order. Recent research on the null subject parameter has resulted in the following typology of languages (cf. Holmberg 2005; Biberauer *et al.* 2010; D'Alessandro 2015):

- (49) *A typology of pro-drop/null subject languages (NSLs)*³⁴
- a. Consistent NSLs, which allow null subjects in all person and number combinations in virtually all syntactic contexts (e.g. Italian, Spanish, Greek, Serbo-Croatian).
 - b. Discourse NSLs, which allow discourse-oriented null arguments in the absence of person and number features (e.g. Chinese, Japanese).
 - c. Partial NSLs, which allow null subjects only with certain person and number combinations (e.g. Finnish).
 - d. Non-NSLs, which generally disallow null subjects (e.g. French, English).³⁵

A second clarification should be made regarding the nature of the challenge to the MFR. Availability of null subjects in finite clauses and lack of movement to Spec-TP should be seen as two different issues; null subjects are indeed possible in all the language types listed above (except Non-NSLs, obviously), whereas the possibility of lack of movement to Spec-TP seems to be a property of the consistent NSLs.

It is important to note, first of all, that a null element in subject position does not necessarily challenge the MFR. Actually, most current analyses of null subjects involve an actual nominal element with φ -features that is either already null in the lexicon or becomes null at PF. Interestingly, under Rizzi's (1982; 1986) classic analysis, *pro* itself does not display any φ -features but is licensed and identified by the agreement features on T, an analysis that would indeed seem to challenge the MFR.

In this respect, Holmberg (2005) argues that Rizzi's analysis, in which *pro* is not specified for φ -features, is not tenable once the theory of Agree is adopted, since it reverses the directionality of agreement. Holmberg restricts *pro* to discourse NSLs, on the basis that T in these languages does not have φ -features that need to be valued. Thus, a Chinese sentence like (50) below would involve *pro*:

- (50) *pro* mingtian yao shangban.
 tomorrow want work
 'I have to work tomorrow.'

If this analysis is on the right track, null subjects in discourse NSLs do not constitute a challenge to the MFR, since there are no φ -features involved. Moreover, it has been proposed that languages like Chinese and Japanese lack a T head in the syntax altogether (see Bošković 2012 and references therein), so the MFR would actually not even apply.

Holmberg's (2005) claim that φ -less null subjects cannot be maintained under Agree in languages in which T displays φ -features has influenced most analyses of null subjects in the Minimalist Program. For partial NSLs, Holmberg (2005) proposes that a null subject like the one in the Finnish sentence in (51) below, is actually a DP whose phonological features are deleted at PF:

- (51) (Minä) olen väsynyt.
 I am tired
 'I'm tired.'

³⁴ Languages like German and Dutch are sometimes included in this typology as expletive NSLs, since it has been argued that they can have expletive null subjects in certain configurations. There are arguments, however, against this view (see Brandner 1993 for detailed discussion).

³⁵ I am abstracting away from very specific cases where null subjects seem to be possible in languages like English, like imperatives or conjunction reduction examples (cf. Holmberg 2005).

This PF-deletion approach has been extended and further developed to account for null subjects in consistent NSLs as well (cf. Roberts 2010; Fernández-Salgueiro 2011), as illustrated in (52) (repeated from (48c) above):³⁶

- (52) *Spanish*
 (Ellos) estuvieron en esa fiesta.
 they were in that party
 ‘They were at that party.’

As can be seen, the main implication of these analyses is that null subjects do not differ from regular DPs in how they would satisfy the MFR. In the next section, I discuss the optionality of A-movement in consistent NSLs, which is the second possible challenge to the MFR that I referred to above.

6.2 Null subjects and optionality of A-movement in consistent NSLs

There have been two main ways to account for the fact that a subject DP does not need to undergo A-movement in consistent NSLs. The first explanation involves the use of *pro* as an expletive, in very much the same way that *there* is used in Belfast English (recall (19)). This would mean that the MFR is satisfied in these languages as well, either by merge of an expletive in Spec-TP or by A-movement of the subject.

Explaining the EPP effect by means of expletive *pro*, however, seems like an *ad hoc* explanation, since *pro*'s only function would be to satisfy the EPP, which is the very phenomenon that we are trying to understand. Moreover, the expletive *pro* analysis, which was the standard one in GB, has been challenged. Alexiadou and Anagnostopoulou (1998) (henceforth A&A) reject the existence of expletive *pro* and claim that the EPP in consistent NSLs can be satisfied with verb movement. This second explanation claims that the EPP is parameterized; Germanic languages, for example, would require a phrasal element to satisfy the EPP, while head movement would be sufficient in the consistent NSLs. For A&A, this also entails that there is no preverbal A-position in these languages. This approach has indeed been influential and has been adopted by a number of researchers, especially for Spanish, European Portuguese, and Catalan (cf. Ordóñez 1997; Fortuny 2008).

If A&A are correct, then, it could be argued that the MFR also applies in consistent NSLs languages, although we would need to claim that it can be satisfied through head adjunction as well. This would not be problematic especially if Matushansky (2006) is right in that head movement involves movement of a head to the specifier position followed by morphological merger. The main implication of this analysis for our purposes is that the T head would first attract the verb, thereby creating a specifier position in a manner consistent with the MFR.

However, the idea that preverbal DPs in these languages are always in an A'-position has been contested (cf. Holmberg 2005; Sheehan 2006; Villa-García 2015). These authors have argued that, although it is true that preverbal subjects in consistent NSLs can indeed appear in A'-positions, this does not necessarily mean that they always do so.³⁷

Specific evidence for a preverbal subject position in a language like Spanish comes from exhortative clauses. As can be seen in (53) below, only a subject DP can appear between the complementizer and the finite verb in these examples (adapted from Villa-García 2015):

³⁶ Homberg (2005) claims instead that null subjects in consistent NSLs are ϕ Ps (an analysis that would also be consistent with the MFR). See Roberts (2010) for discussion.

³⁷ This has led to the idea that Spec-TP may be a position with mixed A and A' properties in null subject languages (see below).

- (53) *Spanish*
- a. Que Ángela se vaya a Madrid con él.
that Angela goes to Madrid with him
'May Angela go to Madrid with him.'
 - b. *Que a Madrid se vaya Ángela con él.
 - c. *Que con él se vaya Ángela a Madrid.

It should be noted, however, that the availability of a preverbal A-position in languages like Spanish or Italian does not automatically invalidate A&A's insights on verb movement, especially since verb movement seems to be a necessary (yet not sufficient) condition for a language to qualify as a consistent NSL.

In this respect, notice that verb movement in French and even clauses with finite *be* in English (which also undergoes V-to-T movement) still need Spec-TP to be filled with an overt DP. The crucial difference between French and the consistent NSLs may be that the latter project a separate Agr head in the derivation, as argued by Bobaljik (1995), among others. Notice that this would actually account for the properties of these languages in a way consistent with the MFR that I have proposed in this paper; the MFR would not require merge of a specifier in Spec-TP because T does not contain ϕ -features and also it would not apply to the Agr head because Agr is not a CFC. The T head in French or English, however, would still require a specifier regardless of whether verb movement to T takes place or not.

As Bobaljik (1995) claims, evidence for an Agr projection above T in these languages comes from the fact that T and Agr are relatively independent morphemes.³⁸ For example, in peninsular Spanish the plural suffixes *-mos* (first person), *-is* (second person), and *-n* (third person) are present in the verb forms regardless of variations of tense, mood, and aspect, and also regardless of any irregularities in the verb conjugation. In Bobaljik's (1995: 263) terms, tense morphology does not block the appearance of agreement morphology. In fact, closely related languages like Galician and Portuguese can even have inflected infinitives, in which the agreement suffixes are attached to the infinitival form of the verb. Moreover, the existential verb *haber* 'to have' in Spanish can be inflected for Tense but not for person and number agreement, as we saw in (7) above, which provides additional evidence that Tense and Agr are independent in these languages.

Whether a language has an independent Agr head or not may also help explain why certain languages do not belong in the consistent NSL group despite having relatively rich morphology. As one of the reviewers indicates, Russian, for example, does not have the same kinds of null subjects found in the consistent NSLs (though it does display discourse-oriented null subjects similar to the ones found in Chinese), while other Slavic languages like Serbo-Croatian do. Both languages indeed display relatively rich morphology with different person/number combinations; however, Russian exhibits impoverishment in the past Tense (where person agreement is no longer marked), an instance of morphological impoverishment that is crucially not found in Serbo-Croatian (see Müller 2006, who reaches a similar conclusion for Russian on slightly different grounds). The reviewer also mentions recent work by Todorović (2016) in which it is argued that neither language displays Tense morphology. In this respect, it has been suggested that temporal interpretation in these languages comes from other syntactic elements, like aspect (see Bošković 2012 for discussion on Russian, Serbo-Croatian, Chinese, and Japanese). Regardless of which syntactic features are involved in temporal interpretation in these languages, what

³⁸ As can be seen, this view substantiates the original distinction made by Chomsky (1995) in early minimalism in morphosyntactic terms.

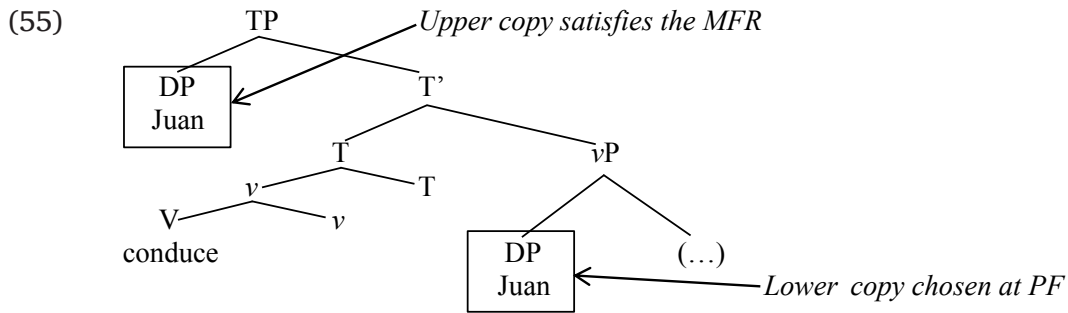
is important for our purposes is that those features seem to interfere with agreement morphology in Russian but not in Serbo-Croatian.

However, if it is true that the MFR does not require Merge of a DP in Spec-AgrP in consistent NSLs, questions arise regarding why subject movement to the A-position in Spec-AgrP (Spec-TP under most approaches) can still take place (see (48a) and (53a) above). In this respect, it is well known that preverbal DPs in these languages have mixed A and A' properties. Rizzi (2006), for example, argues that preverbal DPs tend to favor a topic interpretation (while postverbal DPs tend to be focused), as can be seen in the following Spanish examples:

- (54) a. Juan conduce.
John drives
'John can drive.'
- b. Conduce Juan.
drives John
'Let John drive.'

(54a) is simply a statement about the fact that John knows how to drive, while (54b) would be uttered in a situation in which John is chosen to be the driver.

One of the reviewers suggests that this state of affairs would be easily captured under Stjepanović's (2004) analysis of postverbal subjects in Slavic languages. The gist of Stjepanović's proposal is that under the copy theory of movement, pronunciation of the lower copy in these languages is preferred over pronunciation of the upper copy at PF if the lower copy is focused. Under this approach, the challenge to the MFR would only be apparent; in the syntactic derivation, the MFR would still be satisfied, as illustrated in (55) below (abstracting away now from the T/Agr distinction):



If Stjepanović (2004) is right, the DP would undergo A-movement to Spec-TP, satisfying the MFR. At PF, however, the lower copy of the DP could be pronounced, rather than the upper copy, if focus (or its PF correlate, stress) is assigned to that position.

A potential challenge to this approach comes from other well-known properties of languages like Spanish or Catalan, which suggest that subject movement does not take place. It has been observed that some preverbal subject QPs display scope-freezing effects, which is considered an A' property, as illustrated in (56) (cf. Uribe-Etxebarria 1992):

- (56) *Spanish*
- a. Con quién dijiste que trabajaba cada empleado?
with who said.3sg that worked.3sg each employee
'Who did you say each employee was working with?'

- b. *Con quién dijiste que cada empleado trabajaba?
with who said.3sg that each employee worked.3sg
- c. Con quién dijiste que todo empleado trabajaba?
with who said.3sg that every employee worked.3sg
'Who did you say every employee was working with?' (cf. who > every only)

As can be seen, when the distributive QP *cada empleado* stays in situ, it can take scope over *who*. However, this is not possible in (56b), presumably because movement to the preverbal position freezes the scope of the QP. Actually, a similar example with a universal quantifier like *todo* 'every' would be grammatical as long as it is interpreted with narrow scope, as in (56c). This would suggest that a postverbal subject does not undergo movement to the preverbal position in these languages. However, as the reviewer indicates, the topic interpretation favored by the preverbal subject usually correlates with narrow scope. This would account for the ungrammaticality of (56b), in which case the paradigm in (56) would not constitute evidence against Stjepanović's approach.

Another challenge for this approach, however, comes from the relation between the position of the subject and negation in Spanish. As is well known, a postverbal negative quantifier requires negation on the verb, while a preverbal one disallows it. This is illustrated in (57):

- (57) *Spanish*
- a. Nadie lo sabe.
Nobody it.knows
- b. *Lo sabe nadie.
- c. No lo sabe nadie.
Not.it.knows nobody
'Nobody knows it.'

Adopting Stjepanović's approach would then require that we assume that negation on the verb is sensitive to PF considerations and its overt realization depends on which copy is pronounced. For reasons of space I will not explore this possibility here and thus leave the question of whether her approach to Slavic languages can explain the properties of consistent NSLs more generally in this unresolved state.

The kind of evidence discussed above indicates that movement to Spec-AgrP in consistent NSLs may indeed be related to reasons that go beyond Case and agreement properties usually associated with A-positions and instead be related to A'-like notions associated with the left periphery (cf. Rizzi 1997). Conversely, in languages like English or French, A-movement targets Spec-TP, a position related to Case and agreement only that does not belong to the left periphery. If my analysis is on the right track, the source of these mixed A and A' properties in consistent NSLs is that A-movement targets Spec-Agr, which is still a position related to Case and agreement (since it is associated with ϕ -features) but also a position that belongs to the left periphery since it is higher than Spec-TP.

7 Conclusions

In this paper I have argued that EPP effects are not a property of Tense heads only, but of all three CFCs. To capture these effects I have proposed the MFR, which requires a specifier that matches the formal features of the relevant CFC and have also provided evidence that the MFR can be satisfied in similar ways in all the three CFC domains. I have also suggested that the MFR is motivated by the need for Agree operations to apply in a uniform

way, with an unvalued feature always functioning as a probe and a feature that enters the derivation already valued always serving as a goal. Finally, I have explored the consequences of this approach to our understanding of EPP effects in null subject languages.

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Competing Interests

The author has no competing interests to declare.

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