

Vehicle Change Phenomena as an Argument for Move F

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Three different formal devices have been proposed within minimalism to replace Chomsky's (1993) covert movement of phrasal categories to check Case and agreement: expletive-associate relations (Brody 1995), movement of formal features (Chomsky 1995), and the operation Agree (Chomsky 2000, 2001). We propose that vehicle change effects (in the sense articulated by Fiengo and May (1994)) establish empirical grounds for distinguishing among these alternatives and argue that only the Move F approach can account for the data without enriching the theoretical apparatus.

Keywords: vehicle change, Move F, Agree, expletive-associate pairs, covert checking

Three different technical alternatives have been advanced within minimalism to replace Chomsky's (1993) assumption that covert movement for Case and/or agreement purposes involves phrasal movement: expletive-associate pairs (Brody 1995), covert movement of formal features (Chomsky 1995:chap. 4), and overt agreeing relations (Chomsky 2000, 2001). In this article, we argue that vehicle change effects in the sense articulated by Fiengo and May (1994) provide evidence for choosing among these alternatives. More specifically, we propose that vehicle change effects arise as a by-product of feature movement.

The article is organized as follows. Section 1 discusses a canonical case of vehicle change and shows that only the Move F approach can independently account for it. Section 2 documents several problems for the notion of vehicle change *per se* and, by extension, for the approaches based on expletive-associate pairs or agreeing relations, and shows that the Move F approach is exempt from such problems. Section 3 concludes the article.

1 Vehicle Change Effects and "Covert" Case and Agreement Relations

Fiengo and May (henceforth, F&M) develop a theory of anaphora according to which nonpredicative nominal expressions bear two types of indices: an index represented by an integer, which annotates the interpretive value of the expression, and an index represented by α or β , which indicates whether this value is independent or dependent on the value of another nominal expression, respectively. Under this approach, the strict and sloppy readings of (1), for instance, arise from the different indexical structures in (2a) and (2b), respectively (throughout the article, reconstructed material is annotated in boldface).¹

(1) Max saw his mother and Oscar did, too.

(2) a. Max₁ saw his₁ ^{α} mother and Oscar₂ **saw his₁ ^{α} mother** too

b. Max₁ saw his₁ ^{β} mother and Oscar₂ **saw his₂ ^{β} mother** too

Roughly speaking, when reconstructed into an elided position, α -pronouns carry their

integer indices with them (see (2a)), but β -pronouns do not (see (2b)). The value of a reconstructed β -pronoun is determined by what F&M call *dependency theory*, which in essence requires that the formal dependency relations licensing the original and the reconstructed β -pronoun be parallel.

F&M supplement this theory with the notion of *vehicle change*, according to which "in a reconstruction, a nominal can take any syntactic form so long as its indexical structure (type and value) is unchanged (modulo identity for β -occurrences)" (F&M 1994:218). With vehicle change, F&M account for interesting contrasts such as the one illustrated in (3).

- (3) a. *Mary admires John₁, and he₁ does, too.
 b. Mary admires John₁, and he₁ thinks Sally does, too.

(3a) has no grammatical output: standard reconstruction, as shown in (4a), violates Principle C of binding theory; and reconstruction with vehicle change, as shown in (4b), violates Principle B. Under standard reconstruction, (3b) yields the structure in (5a), which also violates Principle C. By contrast, reconstruction with vehicle change yields the grammatical representation in (5b), where the reconstructed pronoun preserves the indexical information of *John* and no violation of Principle C or B arises; hence the acceptability of (3b).

- (4) a. *Mary admires John₁, and he₁ **admires John₁^α** too
 b. *Mary admires John₁, and he₁ **admires him₁^α** too

- (5) a. *Mary admires John₁^α, and he₁^α thinks Sally **admires John**₁^α too
 b. Mary admires John₁^α, and he₁^α thinks Sally **admires him**₁^α too

Bearing contrasts such as the one in (3) in mind, let us now consider the three approaches to "covert" Case and agreement relations mentioned earlier. Assuming that accusative objects in English do not undergo A-movement overtly,² these approaches would analyze the sentence in (6), for instance, roughly along the lines of (7).³

(6) Mary admires John.

(7) a. covert Move F

[... [_v FF(John)+admires₁+v⁰ [_{VP} t₁ John]]]

b. overt expletive-associate relation

[... [_{VP} Expl ... [_v admires₁+v⁰ [_{VP} t₁ John]]]]]

c. overt application of Agree

[... [_v admires₁+v⁰-φ_u [_{VP} t₁ John-φ_k]]] →

[... [_v admires₁+v⁰-φ_k [_{VP} t₁ John-φ_k]]]

In (7a), the set of formal features (FF) of *John* covertly adjoins to the complex formed by the main and the light verb, allowing accusative Case and object agreement to be checked (see Chomsky 1995). In (7b), Case and agreement are checked in virtue of the association between *John* and the expletive that occupies the Case/agreement-checking

position (see Brody 1995). Finally, in (7c), the uninterpretable (unvalued) ϕ -features of the light verb are valued by overtly agreeing with the ϕ -features of *John*, which then has its Case feature specified as accusative (see Chomsky 2001).

It is not easy to tease these three proposals apart empirically, for they are by and large subject to the same conditions (e.g., locality). There is, however, a crucial difference that distinguishes the Move F approach from the other two approaches. Under Move F, we find interpretable ϕ -features in two positions: in the object position and within the set of formal features adjoined to the light verb. By contrast, under the expletive-associate and Agree approaches, we find interpretable ϕ -features only in the object position, for the ϕ -features of the expletive in (7b) and the light verb in (7c) are uninterpretable. In fact, as Chomsky (2001:5) points out, after Agree applies in (7c), valuing the uninterpretable ϕ -features of the light verb, these features must be deleted from narrow syntax, for otherwise they would be indistinguishable from interpretable features at LF. In other words, under the expletive-associate and Agree approaches the number of interpretable ϕ -features is kept constant throughout the derivation, whereas in the Move F approach another set of interpretable ϕ -features is added to the syntactic structure and made available for interpretation. Let us then submit this difference to a closer examination by asking what exactly a set of formal features amounts to.

Arguably, $FF(John)$ in (7a) includes a categorial (nominal) feature, as well as gender (masculine), number (singular), person (third), and Case (accusative). Phonological features aside, this is basically the feature composition of the pronoun *him*. Put in different terms, the feature composition of *John* essentially involves the formal features of *him*, plus semantic and phonological features. Once covert

movement does not pied-pipe semantic or phonological features (see Chomsky 1995), *FF(John)* in (7a) and the pronoun *him* are, therefore, essentially equivalent for the computational system. Let us then assume that for the purposes of binding theory they should pattern alike; that is, *FF(John)* should be like *him* in being subject to Principle B. We now have all the ingredients to account for the contrast in (3). Consider the details.

Given (7a), there are in principle two syntactic objects that could be reconstructed to "complete" the second conjunct of each sentence of (3): either vP or the three-segment v^0 .⁴ Notice that by behaving like a pronoun, *FF(John)* is also able to saturate the internal θ -role of the predicate.⁵ Thus, (3a) can be associated with the reconstructed structures in (8), and (3b), with the ones in (9).

(8) a. *... and [he_1 [v_P **FF(John)₁+admires+v⁰**] [v_P **admires John₁**]] too]

b. *... and [he_1 [v^0 **FF(John)₁+admires+v⁰**] too]

(9) a. *... and he_1 thinks [Sally [v_P **FF(John)₁+admires+v⁰**] [v_P **admires John₁**]]
too]

b. ... and he_1 thinks [Sally [v^0 **FF(John)₁+admires+v⁰**] too]

In (8a) and (9a), regardless of the relation between *he* and *FF(John)*, the full copy of *John* is A-bound by *he*; therefore, Principle C prevents them from being coreferential. Now consider (8b) and (9b). Assuming that *FF(John)* should pattern like *him* for the purposes of binding theory, (8b) violates but (9b) complies with Principle B. The

grammatical alternative in (9b) is therefore what underlies the contrast between (3a) and (3b).

To sum up, by exploring the additional interpretable features available in the structure that are introduced by the copy operation, the Move F approach is able to account for the contrast in (3) without resorting to the notion of vehicle change.⁶ The competing alternatives based on expletive-associate or agreeing relations, on the other hand, must unavoidably invoke something like vehicle change in order to handle the data in (3). In other words, we do not have an empirical argument for Move F yet; all we are saying is that the Move F approach is more concise than the other alternatives in that it need not assume vehicle change. In the next section, we will however discuss other kinds of data that strongly favor the Move F approach on empirical grounds, as well.

2 Independent Evidence for the Move F Approach

2.1 (Lack of) Vehicle Change Effects in Nominal Domains

F&M (1994:221, fn. 24) claim that "vehicle change is operative in both sentential and nominal domains." The sentence in (10a) below, for instance, which allows coreference between *Bill* and *he* without yielding a Principle C effect, is analyzed as involving vehicle change of *Bill* inside the complement NP, as represented in (10b). (10b) should thus pattern with the sentence in (11) with respect to the possibility of coreference.

- (10) a. Mary saw that picture of Bill₁, and he₁ did, too.
 b. Mary saw that picture of Bill₁^α, and he₁^α saw [that picture of him₁^α]

too

(11) John₁ saw that picture of him₁.

This approach, however, leads to incorrect results when applied to other cases of reconstruction involving nominal domains. Consider, for instance, the sentences in (12), which allow for the intended coreference. Reconstruction with vehicle change of *John* should yield the structures in (13), which should parallel the sentences in (14) with overt pronouns.

(12) a. I wonder if Mary took those pictures of John₁ or if he₁ did.

b. Mary always tells stories/jokes about John₁, but he₁ never does.

(13) a. I wonder if Mary took those pictures of John₁ or if he₁^α **took those**

pictures of him₁^α

b. Mary always tells stories/jokes about John₁, but he₁^α never **tells**

stories/jokes about him₁^α

(14) a. ??/*John₁ took those pictures of him₁.

b. *John₁ never tells stories/jokes about him₁.

Given that the sentences in (14) are unacceptable with the relevant meaning, vehicle change in (13) should also yield unacceptable results. The fact that the

sentences in (12) are in fact fully acceptable therefore raises questions about the account of (10a) in terms of vehicle change. This state of affairs in turn weakens the initial appeal of resorting to vehicle change to account for the contrast in (3).⁷ To the extent that the approaches based on expletive-associate pairs or agreeing relations require vehicle change to account for (3) and (10a), they are also unable to account for the contrast between (10a)/(11), on the one hand, and (12)/(14), on the other.

Under the Move F approach, by contrast, the reconstruction in the second conjunct of each of the sentences in (10a) and (12) takes into account the structure resulting from the covert movement of the formal features of the object of the first conjunct. That amounts to saying that the simplified structures in (15) and (16) constitute the input for the relevant reconstructions.

(15) [_{TP} Mary [_{VP} FF([that picture of Bill_i])+saw+v⁰ [_{VP} saw [that picture of Bill_i]]]]

(16) a. ... [_{TP} Mary [_{VP} FF([those pictures of John_i])+took+v⁰ [_{VP} took [those pictures of John_i]]]]]

b. ... [_{TP} Mary [_{VP} FF([stories/jokes about John_i])+tells+v⁰ [_{VP} tells [stories/jokes about John_i]]]]]

If reconstruction targets the whole vP in (15) or (16), a Principle C effect should arise and the sentences in (10a) and (12) should all be unacceptable, contrary to fact. Consider now the possibility that reconstruction targets the three-segment v⁰ instead,

as illustrated in (17) and (18).

(17) ... and [he₁ [_{v0} FF([that picture of Bill₁])+saw+v⁰] too]

(18) a. ... or if [he₁ [_{v0} FF([those pictures of John₁])+took+v⁰]]

b. ... but [he₁ never [_{v0} FF([stories/jokes about John₁])+tells+v⁰]]

The crucial point here is that, for the purposes of binding theory computations, *FF*([that picture of Bill]) in (17) should be equivalent to the pronoun *it* and *FF*([those pictures of John]) or *FF*([stories/jokes about John]) in (18) should be equivalent to *them*. In other words, (17) and (18) should pattern like the sentences in (19) and (20), where neither Principle C nor Principle B is at stake. Hence, the sentences in (10a) and (12) are correctly predicted to be acceptable only under the Move F approach.

(19) He saw it.

(20) a. He took them.

b. He never tells them.

2.2 Apparent Vehicle Change Effects within Embedded Clauses

At first sight, the acceptability of the Portuguese sentence in (21a) is another illustration of vehicle change: Principle C can be circumvented if reconstruction involves vehicle change of *o João*, as shown in (21b).

(21) *Portuguese*

- a. A Maria quer que o João₁ compre um carro, mas ele₁ não.
 the M. wants that the João buy-SUBJ a car but he not
 ‘Maria wants João₁ to buy a car, but he₁ doesn’t (want to buy a car).’
- b. ... mas ele₁^α não **quer que ele₁^α compre um carro**
 but he not wants that he buy-SUBJA car

The problem with the account of the acceptability of (21a) in terms of (21b) is that a (null or overt) pronoun in the subject position of a subjunctive clause in Romance is generally obviative with respect to the subject of the embedding clause, as illustrated in (22).⁸ Hence, the lack of a Principle C effect in (21a) is arguably independent from vehicle change, which again weakens the initial appeal of resorting to vehicle change in the account of the contrast in (3).

(22) *Portuguese*

- *O João₁ não quer que ele₁/pro₁ compre um carro.
 the João not wants that he buys-SUBJ a car
 ‘João doesn’t want to buy a car.’

A similar problem is posed by the lack of isomorphism with respect to verbal agreement in (23a), represented in (23b), which leads F&M (1994:103, fn. 8) to extend their notion of vehicle change to verbal agreement, as well: "The VPs in [(23a)] also

appear to differ in a respect other than indexical value, in that the pronouns, and the attendant verbal agreement, are of different number. But such differences in terminal vocabulary are immaterial to reconstruction; these are again instances of vehicle change."

- (23) a. Max and Oscar said that they are going to Europe this summer, and Sally did, too.
- b. [Max and Oscar]₁₊₂ said that they_{1^β+2^β} are going to Europe this summer, and Sally₃ **said she_{3^β} is going to Europe this summer**, too

It is very plausible that reconstruction should in principle disregard the relevant verbal agreement features in (23a), given that they are taken to be uninterpretable (see, e.g., Oku 1998, Zocca 2003, and Nunes and Zocca 2005 for relevant discussion). However, it is not clear that all verbal readjustments under reconstruction should fall under vehicle change. Consider the sentence in (24a), for instance, which should be associated with the structure in (24b) after reconstruction and this extended version of vehicle change take place.

- (24) a. After getting a call from the vice president yesterday, they thought that they were going to get a raise; and if John gets a call from the president tomorrow, I'm sure he will, too.
- b. After getting a call from the vice president yesterday, they_{1^α} thought that they_{1^β} were going to get a raise; and if John₃ gets a call from the

president tomorrow, I'm sure he_3^{α} will **think that he_3^{β} is going to get a raise too**

Under the extended notion of vehicle change, the verb *were* in the first conjunct of (24b) is to be reconstructed as *is*. However, it has been observed that the verb *be* in English does not in general tolerate reconstruction involving different tenses (see Warner 1986, Lasnik 1999, and Lightfoot 1999 for discussion). Thus, although the past form *slept* allows sloppy reconstruction in (25a), the same does not happen with *were* in (25b).

- (25) a. John slept, and Mary will, too.
 b. *They were here, and Mary will, too.

The unacceptability of (25b) thus provides evidence against analyzing (24a) – and, by extension, (23a) – in terms of vehicle change of verbs. To the extent that the expletive-associate and the Agree approaches cannot independently account for (23a) without assuming something like vehicle change, data such as (24a) remain unexplained under these approaches.

The Move F approach, on the other hand, is in a much better position. It is arguably the case that the formal features of a complement CP may adjoin to a light verb for agreement and/or Case reasons in the same way the formal features of an object NP may. That is, the relevant inputs for the reconstruction in (21a), (23a), and (24a) are along the lines of (26) (English glosses are used for convenience in (26a)).

- (26) a. [_{TP} Maria [_{VP} FF(CP)+wants+v⁰ [_{VP} wants [_{CP} that João buy-SUBJ a car]
]]]
 b. [_{TP} Max and Oscar [_{VP} FF(CP)+said+v⁰ [_{VP} said [_{CP} that they are going to
 Europe this summer]]]]
 c. [_{TP} they [_{VP} FF(CP)+thought+v⁰ [_{VP} thought [_{CP} that they were going to
 get a raise]]]]

Reconstruction of the whole vPs in (26) into (21a), (23a), and (24a) would lead to problems analogous to the ones found in F&M's analysis. However, the system also has the option of copying just the three-segment v⁰, as shown in (27).⁹ Assuming that *FF(CP)* behaves like the propositional pronoun *it*, the relevant interpretation of (21a), (23a), and (24a) is attained if *FF(CP)* is interpreted as a sort of deep anaphor in the sense of Hankamer and Sag (1976). That is, the structures in (27) should read as 'but he doesn't want it', 'and Sally said it, too', and 'I'm sure he will think that, too', respectively, where 'it/that' is determined contextually.¹⁰

- (27) a. ... but [he not [_{v⁰} FF(CP)+want+v⁰]]
 b. ... and [Sally did [_{v⁰} FF(CP)+say+v⁰] too]
 c. ... I'm sure [he will [_{v⁰} FF(CP)+think+v⁰] too]

Suggestive evidence for this analysis comes from the correlation between coreference possibilities and word order in Basque. The canonical word order

involving a verb and a complement clause in Basque is CP-V. However, some dialects also allow the head-initial order V-CP. Interestingly, the two orders do not pattern alike with respect to reconstruction for the speakers who admit both orders. Consider the contrast between (28a) and (28b), for instance.

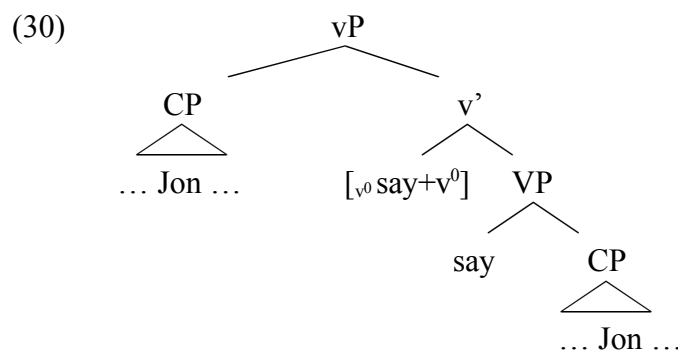
(28) *Basque*

- a. Mirenek esan zuen [_{CP} Jonek₁ kotxea erosi zuela], baina berak₁ ez
 Miren say Aux [_{CP} Jon₁ car buy Aux-Comp] but he₁ not
- b. *Mirenek [_{CP} Jonek₁ kotxea erosi zuela] esan zuen, baina berak₁ ez
 Miren [_{CP} Jon₁ car buy Aux-Comp] say Aux but he₁ not
 ‘Miren said that Jon₁ bought a car, but he₁ didn’t (say that he₁ bought a car).’

Given the analysis of V-CP structures in Portuguese and English in (27), the lack of a Principle C effect in the second conjunct in (28a) is no surprise. Movement of the formal features of the embedded clause to the matrix light verb for purposes of agreement and/or Case checking should yield a reconstruction along the lines of (29) (with English glosses); *FF(CP)* would then behave like a (propositional) pronoun for purposes of binding theory and be interpreted like a deep anaphor, and neither Principle B nor Principle C is at stake.

(29) ... but [he not [_{v,0} **FF(CP)**+say+v⁰]]

Let us now consider the CP-V order in (28b). Following Kayne (1994), we take the different word orders in (28a) and (28b) to result from different hierarchical structures. More specifically, we assume that the complement CP in (28b) has overtly moved to the same position object to which NPs move in Basque, namely, the (outer) specifier of vP, as sketched in (30) (with English glosses).



Given (30), reconstruction in principle has two potential targets to "complete" the second conjunct of (28b): either the whole vP or the two-segment v⁰, as abstractly shown in (31a) and (31b) (with English glosses), respectively.

- (31) a. *... but [he₁ not [v_P [CP ... **Jon**₁ ...] [v' **said+v⁰** [v_P **say** [CP ... **Jon**₁ ...]]]]
]
 b. *... but [he₁ not [v⁰ **said+v⁰**]]

(31a) gives rise to a Principle C violation, whereas (31b) violates the θ -Criterion, for the two-place predicate is associated with only one argument; hence the unacceptability of (28b).

The acceptability of (28a) for speakers who accept V-CP order and the unacceptability of (28b) for all speakers consulted therefore show that vehicle change effects involving embedded clauses are actually contingent on the appropriate structural configurations that allow applications of Move F.¹¹

2.3 Asymmetries between Names and Quantifiers

F&M extend the analysis outlined in section 1, allowing vehicle change to target variables as well. Consider their discussion of the sentence in (32a), under the scenario in which the quantifier adjoins to VP at LF, as illustrated in (32b).

- (32) a. Max saw someone and Oscar did, too.
 b. Max [_{VP} someone_i [_{VP} saw e_i^α]] and Oscar did, too

F&M (1994:228) propose that reconstruction may target either the two-segment VP of (32b), as illustrated in (33), or just the lower segment, as shown in (34a).¹² As is, (34a) is not a well-formed object because the syntactic variable is not bound. This problem can be avoided if the variable undergoes vehicle change, as shown in (34b). In other words, the prediction is that the reconstructed structure in (34b) should pattern like the structure in (35), with an overt pronoun.

- (33) Max [_{VP} someone_i [_{VP} saw e_i^α]] and Oscar [_{VP} **someone**_i [_{VP} **saw** e_i^α]] too

- (34) a. *Max [_{VP} someone_i [_{VP} saw e_i^α]] and Oscar [_{VP} **saw** e_i^α] too

- b. Max [_{VP} someone₁ [_{VP} saw e₁^α]] and Oscar [_{VP} **saw him₁^α**] too

(35) Max saw someone₁ and Oscar saw him₁, too.

Let us test this prediction by examining the pair of sentences in (36), where (36b) is analogous to (3b), the prototypical example of vehicle change. Given the acceptability of (36a), we should expect the sentence in (36b) to also be acceptable under the representation in (37), where the reconstructed variable has undergone vehicle change.

(36) a. Mary admires someone₁, and he₁ thinks that Susan admires him₁, too.

b. *Mary admires someone₁, and he₁ thinks that Susan does, too.

(37) Mary [_{VP} someone₁ [_{VP} admires e₁^α]] and he₁^α thinks Susan [_{VP} **admires him₁^α**] too

The fact that (36b) is not as acceptable as (36a) therefore raises some doubts about the proposed vehicle change of variables.

Similar questions are posed by the sentence in (38a) with the reading in (38b). Under the standard assumption that quantifier raising (QR) is clause bound (see, e.g., May 1985), the relevant LF structure of (38a) should be as in (39), with the quantifier adjoined to the embedded IP. Given that the relevant VP to be reconstructed is the matrix one, from (39) we should then obtain (40).

(38) a. Mary thinks that [some employee]₁ should get a raise, but he₁ doesn't.

b. 'Mary thinks that some employee₁ should get a raise, but he₁ doesn't think that he₁ should get a raise.'

(39) Mary [_{VP} thinks that [_{IP} some employee₁ [_{IP} e^α should get a raise]]] but he₁^α doesn't

(40) *Mary [_{VP} thinks that [_{IP} some employee₁ [_{IP} e₁^α should get a raise]]] but he₁^α doesn't [_{VP} **think that** [_{IP} **some employee₁** [_{IP} e₁^α **should get a raise**

III

(40) should however be ruled out regardless of whether or not the reconstructed variable undergoes vehicle change, because coindexation between *he* and *some employee* in the second conjunct should yield a Principle C effect (or a violation of the Proper Binding Requirement). The acceptability of (38a) therefore cannot be ascribed to the ability of variables to undergo vehicle change.

It is not obvious that the expletive-associate pair and the Agree approaches to “covert” Case relations have anything to say about the data above. By contrast, the Move F approach may derive this complex paradigm straightforwardly. If we examine the simplified structures given in (41), we find a very plausible explanation for the contrast between (3b) and (36b).

- (41) a. [_{TP} Mary [_{VP} FF(someone)+admires+v⁰ [_{VP} admires someone]]]
 b. [_{TP} Mary [_{VP} FF(John)+admires+v⁰ [_{VP} admires John]]]

It is arguably the case that *FF(someone)* contains the information that *someone* is a quantifier and in that, it is different from *FF(John)*.¹³ Let us assume, for concreteness, that this information is encoded by the categorial feature of *someone*. If so, *FF(someone)* should not behave like a pronoun for purposes of binding theory, as is the case of *FF(John)* (see section 1). Rather, *FF(someone)* should be subject to Principle C because of its quantifier feature, and coindexation between *he* and *FF(someone)* in (42) should be ruled out; hence the unacceptability of (36b).

- (42) *... and [_{he}₁ thinks [_{Susan} [_{v⁰} **FF(someone₁)**+admires+v⁰] too]]]

Independent evidence for this approach is provided by acceptable instances where the quantifier is embedded in an NP, as illustrated in (43). Under reconstruction, the structure of the second conjunct of (43) should be along the lines of (44).

- (43) Mary saw a picture of someone_i; and he_i thinks Susan did, too.

- (44) ... and [_{he}₁ thinks [_{Susan} [_{v⁰} **FF([a picture of someone₁])**+saw+v⁰] too]]]

Crucially, the quantifier has its Case feature checked within the PP and its features are not pied-piped when the formal features of the object NP adjoin to the light verb. Put

differently, for purposes of binding theory, *FF*([*a picture of someone*]) should behave like the pronoun *it*; hence, (44) is correctly predicted to be as acceptable as (45).

(45) He thinks Susan saw it.

As for (38a), its acceptability is due to the movement of the formal features of CP for agreement and/or Case reasons, as discussed in section 2.2. That is, given the structure in (46a), the reading of (38a) indicated in (38b) can be obtained if reconstruction targets the three-segment v^0 , as shown in (46b), yielding the reading ‘he doesn’t think that’.

- (46) a. [_{TP} Mary [_{VP} **FF**(CP)+**thinks**+ v^0 [_{VP} thinks [_{CP} that [_{CP} that [_{CP} that [_{CP} that [some employee]_i should get a raise]]]]]]]]
 b. ... but [he_i doesn’t **FF**(CP)+**think**+ v^0]

For the sake of completeness, let us finally examine the sentence in (32a), repeated here as (47a), under the reading in (35), repeated in (47b).

- (47) a. Max saw someone and Oscar did, too.
 b. Max saw someone_i and Oscar saw him_i, too.

Recall that we are not claiming that ellipsis resolution must always involve reconstruction of v^0 ; rather, we are assuming that both VP and v^0 are potential targets

for reconstruction under ellipsis resolution. Thus, the reading in (47b) can be obtained by reconstructing the whole VP in the second conjunct, as illustrated in (48). That is, although each quantifier in (48) ranges over its own variable after QR, nothing prevents the two variables from being “accidentally” covalued. When they are indeed covalued, the reading in (47b) is derived.¹⁴

(48) Max saw someone and Oscar did **see someone** too

To sum up, the Move F approach also proves empirically superior to its alternatives with respect to the proper handling of constructions involving quantifiers.¹⁵

3 Conclusion

In this article, we have discussed some interesting contrasts in ellipsis constructions that stem from Fiengo and May's (1994) influential proposal of a vehicle change operation. We have argued, however, that bleeding of Principle C in ellipsis constructions does not arise as the result of such operation; rather, it is a by-product of the independently proposed Move F operation. Furthermore, we have shown that the expletive-associate pair and the Agree approaches cannot handle the data discussed without enriching the theoretical apparatus.

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Following F&M, in this article we will use the term *reconstruction* for ellipsis resolution.

² But see Johnson 1991, Koizumi 1993, and Lasnik 1999, among others, for arguments suggesting that objects may move overtly in English. To the extent that the analysis to be developed below is on the right track, the landing site for such overt movement should not be a Case or agreement position (see, e.g., Boeckx 2001 and Bošković 2002 for relevant discussion). We leave a full exploration of this consequence for another occasion.

³ Whether the Case-checking position in (7b) is Spec,Agr_oP instead of Spec,vP is orthogonal to our discussion. Also, nothing would essentially change if FF-movement proceeds overtly via sideward movement, as suggested in Nunes 2001, 2004. For arguments that the formal features of the object must adjoin to the (trace of) the light verb, as in (7a), rather than T, as in Chomsky 1995:360, see Nunes 2000, 2004.

⁴ To be precise, reconstruction in (8a) and (9a) should copy v' rather than vP. Furthermore, the subject of the second conjunct must somehow function as the external argument of the reconstructed predicate. The issue of how to properly connect (the trace of) an external argument to a

reconstructed VP arises in any analysis of VP-ellipsis that assumes VP-internal subjects (including ours), but is orthogonal to the analysis to be developed below. For purposes of exposition, we will therefore ignore the trace of the subject of the first conjunct in both vP and v⁰ reconstruction.

⁵ Technically speaking, once *FF(John)* is adjoined to [_{v⁰} *admires* [_{v⁰} v⁰]], it is in a mutual c-command relation with the main verb *admires*, thus not being different from the mutual c-command relation between the trace of the verb and its complement.

⁶ A reviewer points out that the account of the unacceptability of (3a) in terms of FF-movement seems to incorrectly predict that a ditransitive structure such as (i) should be acceptable. The reason is that *John* in (i) arguably has its Case checked within PP; thus, reconstruction of just v⁰, as illustrated in (ii), does not contain *FF(John)*, which we argued was responsible for the Principle B effect in (3a).

(i) *Mary gave a hefty bonus to John_i and he_i did, too.

(ii) ... and [he_i did [_{v⁰} **FF([a hefty bonus]+give+v⁰)** too]

However, notice that the reconstruction suggested by the reviewer is independently excluded, as it violates the θ -Criterion, for the reconstructed predicate is not saturated (See also the discussion of the potential reconstructions in (31b) and in footnote 11, which also violate the θ -Criterion.) In other words, although ellipsis resolution via reconstruction of vP or v⁰ is always available in principle, each resolution will be subject to other grammatical constraints in addition to binding theory.

⁷ For additional problems with the notion of vehicle change as formulated by F&M, see Merchant 2001.

⁸ For discussion of the effects of this restriction in Portuguese, see Raposo 1985.

⁹ Recall that, unless there is some morphological restriction, tense and agreement features on

the verb may be disregarded under ellipsis; hence the uninflected verbal forms in (27) and the other reconstruction structures below in the text.

¹⁰ The deep anaphora interpretation provided by *FF(CP)* also accounts for the potentially problematic “bound” reading available in more complex constructions such as (i), pointed out to us by an *LI* reviewer. Notice that *FF(CP)* in (i) can be analyzed like the prepositional *that* in the second conjunct of (ii), which also admits a “bound” reading.

- (i) a. Mary₁, who is an octogenarian, thinks that she₁ loves John₂. And he₂
believes that [every teenage girl]₃ does, too.
b. ‘he₂ believes that [every teenage girl]₃ thinks that she₃ loves him₂, too’.
- (ii) a. Susan₁ said that John loves only her₁, but every other teenage girl said
that, too.
b. ‘[every other teenage girl]₂ said that John loves only her₂, too’)

¹¹ Two observations are in order here. First, the contrast between (28a) and (28b) also indicates that overt movement of CP does not involve FF-movement, followed by category movement as a repair strategy (see Ochi 1999). Questions still remain open in this regard with respect to overt movement of an object NP to its Case position (Basque does not allow constructions analogous to (3b), with-VP ellipsis in a embedded clause, which would be the relevant test case). We will leave this issue pending further research.

Second, consider (i).

- (i) *Mary wants to give John₁ a prize, and he₁ does, too.

A reviewer observes that the unacceptability of control structures such as (i) appears to

present problems for our account of vehicle change effects involving embedded clauses, for adjunction of *FF(CP)* to *want* in (i) should circumvent the potential violation of Principle C when the ellipsis in the second conjunct is resolved. Although the point is well taken, it is worth noting that (i) may count as a counterargument only if the embedded complement of subject control verbs is CP and if this CP needs to have its Case checked. However, neither assumption is uncontroversial. In a movement approach to control, for instance, the embedded clause is actually a TP (see Hornstein 2001). Furthermore, the embedded complement of subject control verbs cannot undergo passivization, as shown in (ii), which suggests that such clauses are not involved in Case/agreement relations.

(ii) *To give John a prize is wanted (by Mary).

That being so, if ellipsis resolution in (i) involves just reconstruction of v^0 , it will comply with the binding theory but will violate the θ -Criterion (see footnote 6); hence the unacceptability of (i).

¹² With respect to (33), F&M (1994:227) claim that the fact that both the antecedent and the elliptical material have the same indexical value does not imply that the variables are covalued in the sense that coindexed names are covalued: "variables need not employ novel indices in discourse, and for them, sameness of indexical value allows for a sort of 'quantificational sloppy' reading, which arises by virtue of quantification theory" (p. 228).

¹³ This does not mean that being quantificational is the only formal feature that distinguishes names from quantifiers. All we are saying is that this difference is sufficient to account for their different behavior with respect to vehicle change effects.

¹⁴ VP reconstruction is presumably what also underlies the sloppy reading of cases such as the one illustrated in (i), pointed out by an *LI* reviewer. It is worth mentioning that we have no specific proposal on how to handle sloppy readings, which are orthogonal to vehicle change phenomena. For

purposes of concreteness, we may assume F&M's notion of β -indexation discussed in section 1, according to which the sloppy reading of (i) is to be represented as in (ii).

- (i) Mary wants her mother to buy a car and John does, too.
- (ii) Mary₁ [_{VP} wants her₁ ^{β} mother to buy a car] and John₂ [_{VP} **wants his₂ ^{β} mother to buy a car**] too

¹⁵ F&M also resort to vehicle change of variables to account for sentences such as (ia), a strategy that would circumvent Principle C effects if the reconstructed variable underwent vehicle change, as shown in (ib) (see Safir 1999 for further examples and discussion).

- (i) a. Who₁ did Mary see, and does he₁ think Sally did, too?
b. who₁ did Mary [see e₁ ^{α}] and does he₁ ^{α} think Sally did [**see him₁ ^{α}**] too

Our suggestion is that the *wh*-feature of *who* is a mere reflex of its agreement with an interrogative complementizer (see, e.g., Cheng 1991 for relevant discussion). In other words, a *wh*-feature should behave like other agreement features in general and be disregarded under reconstruction. If so, *FF(who)* in the reconstructed structure in (ii) should actually pattern like a pronoun and the acceptability of (i) should follow.

- (ii)... and [does he₁ thinks Sally [**FF(who₁)+saw+v⁰**] too]