

NELS 29

Proceedings of the North East Linguistic Society

University of Delaware

Volume One Papers from the Main Sessions

Edited by

Pius Tamanji, Masako Hirotsu, and Nancy Hall

Agreement, Case, and i-subjects¹

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0. Introduction

In this paper I argue that i-subjects (=associates) in all Romance varieties check-off nominative Case and agree with the verb, in spite of appearances to the contrary in languages such as French. My analysis thus differs from that of Cardinaletti (1997) and Chomsky (1995) (henceforth CC), who claim that the formal features of the i-subject in French expletive constructions do not raise for checking at LF. My analysis appeals to certain facts exhibited by the Italian dialects as supporting evidence. My hypothesis allows us to account for why first and second person i-subjects in Romance never exhibit apparent lack of agreement with the verb (a fact not directly explained by the CC analysis), and why the Italian dialects (which, unlike French, do not exhibit a Definiteness Effect) can have i-subjects in transitive constructions (a fact not predicted by Lasnik's (1995) analysis of Case assignment).

In §1 I review the two different agreement patterns exhibited in expletive constructions cross-linguistically, and Cardinaletti's *Nominative Agreement Hypothesis*, which I adopt for my analysis of Case and agreement (§2). In sections 2.1 and 2.2 I present my analysis of the two different agreement patterns, and in §2.3 I discuss its advantages. In §3 I review CC's explanation of the two different agreement patterns, and discuss why my explanation is to be preferred. In §4 I provide a conclusion.

1. Explaining the two different agreement patterns

As CC note, there are two different agreement patterns found in expletive

¹I would like to thank Paola Benincà, Tonia Bleam, Luigi Burzio, Anna Cardinaletti, Diana Cresti, Sam Epstein, Bob Frank, Jon Gajewski, Richie Kayne, Cecilia Poletto, Jean-Yves Pollock, Teresa Satterfield, Dan Seely, Annemarie Toebosch, and Karen Zagana for helpful discussion. None of these people, though, are responsible for any of my own mental lapses.

constructions: the French-type agreement pattern (exhibited in (1)), where the *i*-subject does not seem to trigger verb agreement, and the English-type agreement pattern (seen in (2)), where the *i*-subject does seem to trigger verb agreement.

- (1) a. Il est entré trois hommes.
it is entered three men
'There have entered three men.'
- b. *Il sont entré trois hommes.
- (2) a. There have entered three men.
b. *There has entered three men.

CC claim that (1) indicates that (singular) agreement is triggered by the expletive (in this case, *il*), rather than by the *i*-subject. Since I will be adopting this claim, immediately below I briefly review their justification for it.

1.1 Cardinaletti's Nominative Agreement Hypothesis (NAH)

Cardinaletti's (1997) analysis of agreement in expletive constructions distinguishes between two different types of expletives, which I will call here 'F(rench)-type expletives' and 'E(nglish)-type expletives.' An F-type expletive is a morpheme which can occur only as a structural subject; an E-type expletive, on the other hand, is a morpheme which can occur in more than one structural position. So, while French *il* can never occur as a complement (3b), English *there* can (4b).

- (3) a. Il à vu Marie.
he has seen Marie.
- b. *Marie à vu il.
Marie has seen he
- (4) a. There have entered three men.
b. I saw three men there.

Since F-type expletives are only permitted as structural subjects, Cardinaletti concludes that they must be unambiguously marked with nominative Case; French *il* is thus not unlike English *he* (as opposed to *him*), which must also be taken to be specified for nominative Case. E-type expletives, on the other hand, are not marked with any specific Case, which is what allows such morphemes to occur freely in different structural positions that are associated with different Cases.

Cardinaletti demonstrates that F-type expletives always yield the agreement pattern

seen in (1), while E-type expletives always exhibit the agreement pattern seen in (2), and concludes that expletives which are specified for nominative Case trigger agreement, while Case-vague expletives do not. This is expressed in Cardinaletti's (1997:526) generalization (her example (9)):

- (5) Only those expletives that are unambiguously marked as nominative trigger agreement with the verb.²

Thus, according to Cardinaletti, the key property which explains the agreement pattern exhibited in (1-2) is the Case information on the expletive. She calls this the *Nominative Agreement Hypothesis (NAH)*, which I adopt in my analysis of agreement and Case assignment in §2.

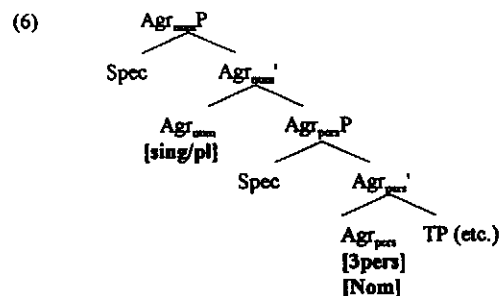
2. Apparent non-agreement is agreement: formal features of the associate raise at LF

In order to explain the two different agreement patterns exhibited in (1-2), I claim that Agr_P involves a *person* feature which is structurally divorced from the *number* feature (see, e.g., Kayne (1995); Taraldsen (1995)). Thus, Agr_P involves two distinct functional heads, Agr_{num}P and Agr_{pers}P; this can be seen in (6).³

² Note that in order for (5) to be correct, Cardinaletti's claim must assume that specification of nominative Case on a morpheme entails specification of phi-features. This entailment (which is unidirectional: Case → phi-features; ∴ -phi-features → -Case) is curious, since there is nothing obvious (at least, not to me) which would logically preclude the existence of a morpheme which is specified for nominative Case, but not for phi-features (such a morpheme, unlike French *il*, would not trigger agreement). If Cardinaletti is correct, then the non-existence of such a morpheme requires an explanation (an explanation which, unfortunately, I do not have).

The E-type agreement pattern obtains due to subsequent LF-raising of the phi-features of the *i*-subject. I discuss this below in §3.

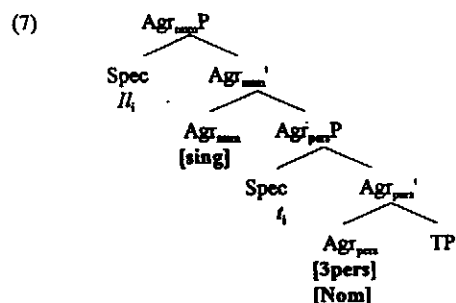
³ While I follow Taraldsen (1995) in proposing the existence of these two distinct functional heads, my analysis differs from his in that for me, the *number* head structurally dominates the *person* head. A discussion of the consequences of this reversal of Taraldsen's order for the explanation of his Icelandic facts is beyond the scope of this paper.



As can be seen, I assume that the number head contains either the feature [singular] or the feature [plural]. Furthermore, I assume that the nominative Case feature resides in the lower head, together with the person feature.

2.1 Explaining the F-type agreement pattern

To explain 'agreement with the expletive' (= apparent lack of agreement with the i-subject) in the French example in (1), I must make two additional assumptions: first, I will assume (following Moro (1993, 1997); see also Tortora (1997)) that the expletive overtly raises from a structurally lower position,⁴ passing first through (the lower) [Spec, Agr_{pers}P], and ultimately landing in [Spec, Agr_{num}P]. This is illustrated in (7).



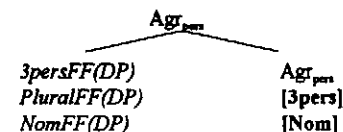
Assuming (following Cardinaletti (1997)) that *il* is specified for both nominative Case and phi-features (see footnote 1), it checks off [Nom] and [3pers] (via Spec-Head agreement)

⁴ It is not necessary for the present purposes to specify the exact origin of the expletive; see references cited in the text.

through the presence of its trace (*t*_i in (7)) in [Spec, Agr_{pers}P].⁵ It checks off [sing] (via Spec-Head agreement) in [Spec, Agr_{num}P].⁶

Note at this point that in order to pass the Case filter, the *i*-subject *trois hommes* must also have its Case feature checked off. Following Chomsky (1995:chapter 4), let us assume that the formal features of the *i*-subject raise at LF in order to be checked. Given Chomsky's assumption that the phi-features (i.e., the person and number features) on the argument are [+Interpretable], they do not have to be checked; thus, it is the [-Interpretable] nominative Case feature of *trois hommes* that is of concern at this point, even though I will be assuming (also following Chomsky) that the phi-features get pied-piped along. The example in (8) provides an illustration of LF (left-)adjunction of the formal features of the *i*-subject to the Agr_{pers} head.

(8) LF feature movement:



As can be seen in (8), the person (third), number (plural), and Case feature (nominative) of the *i*-subject adjoin at LF to the Agr_{pers} head. The *NomFF(DP)* gets checked against the [Nom] feature of the target, and the *3persFF(DP)* gets checked against the [3pers] feature of the target, too.⁷ The *PluralFF(DP)* does not get checked against anything, but since it is

⁵ I must assume here that the nominative Case feature is checked, but not deleted. See footnote 3 for a detailed explanation for this assumption. Furthermore, I will assume that unless all of the features of the head are deleted once checked, then none are deleted. As such, the (third) person feature on the target is not deleted under checking either.

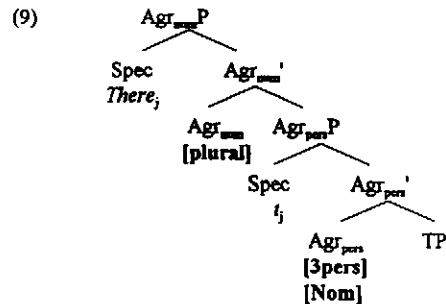
⁶ I am assuming that although the number feature is [+Interpretable] on arguments, it must be [-Interpretable] on expletives (if we are to take the notion of 'interpretability,' as a semantic notion, seriously). Given that the number feature on *il* is [-Interpretable], it must be checked against Agr_{num}. Note, then, that if the Numeration (and thus, Agr_{num}) contained a [plural] feature (rather than a [sing] feature), the derivation would crash, because the [plural] feature on Agr_{num} would clash with the (singular) number feature of the expletive *il*.

⁷ At this point I must explain my assumption (footnote 4) that *il* checks, but does not delete, the Nom Case feature on the target when it (overtly) moves through Spec, Agr_{pers}P in (7). I must assume no deletion under checking in this case in order to ensure survival of the Nom Case feature of the target for subsequent LF-checking against the nominative Case feature of the *i*-subject. I would hope that the inability of *il* to delete the Nom Case feature on the target would follow from more general principles. At present I unfortunately find no convincing principled reason why this should be so; I can only follow the intuition that it has something to do with the morphologically 'weak' nature (in the sense of Cardinaletti & Starke (to appear)) of expletives in general.

[+Interpretable], it does not need to be checked, it does not move up to be checked against the Agr_{num} head, and thus stays adjoined (and inert) in the Agr_{pers} head.⁸

2.2 Explaining the E-type agreement pattern

To explain 'agreement with the i-subject' (= lack of agreement with the expletive) in the English example in (2), I will assume that *there* also overtly raises from a structurally lower position, passing first through [Spec, Agr_{pers} P], ultimately landing in [Spec, Agr_{num} P]; this is illustrated in (9).

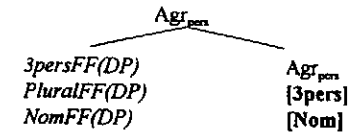


Assuming (again, following Cardinaletti (1997)) that *there* is neither specified for nominative Case, nor for person features, it does not check off the Case and person feature through the presence of its trace (t_i in (9)) in [Spec, Agr_{pers} P]. Furthermore, note that, since it is devoid of number features, it cannot check off the number feature (via Spec-Head agreement) in [Spec, Agr_{num} P].

As in the French case, the i-subject *three men* must also have its Case feature checked off at LF in order to pass the Case filter. Like in (8), then, the formal features of the i-subject raise at LF (the [+Interpretable] phi-features getting pied-piped along with the [-Interpretable] nominative Case feature). The example in (10) provides an illustration of LF (left-)adjunction of the formal features of the i-subject to the Agr_{pers} head.

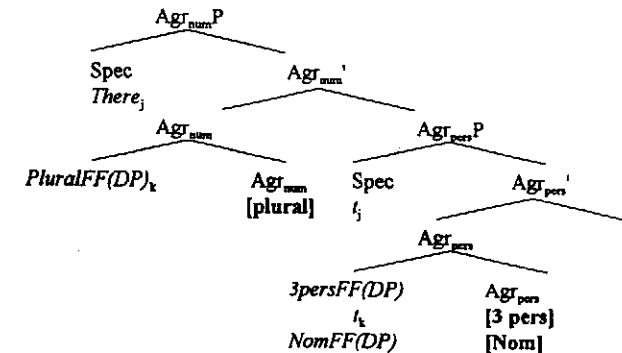
⁸ Note that nor does it need to move up to check the Agr_{num} head, since that [-Interpretable] feature on the target has already been checked by *it* via Spec-Head agreement.

(10) LF feature movement:



As can be seen in (10), the person (third), number (plural), and Case feature (nominative) of the i-subject adjoin at LF to the Agr_{pers} head. The $3persFF(DP)$ gets checked against the [3pers] feature of the target, and the $NomFF(DP)$ gets checked against the [Nom] feature of the target. The $PluralFF(DP)$ does not get checked against anything. Since it is [+Interpretable], it does not need to be checked. However, note in (9) that the [plural] feature residing in the Agr_{num} head (which, as a target, is [-Interpretable]), has not yet been checked, given that *there* (which occupies its Spec) has no number feature to check it with (see (5) and footnote 1). Thus, the [plural] feature in Agr_{num} attracts the $PluralFF(DP)$, which left-adjoints to it; this is illustrated in (11).

(11) LF feature movement:



Note that if the Numeration (and thus, Agr_{num}) contained a [sing] feature (rather than a [plural] feature), the derivation would crash, because the [-Interpretable] [sing] feature on Agr_{num} would clash with $PluralFF(DP)$.

2.3 Predictions made by this analysis

The above analysis of Case and agreement accounts for other properties exhibited by expletive constructions in the Romance languages in general. In particular, it predicts that

F-type expletive constructions do not allow first and second person *i*-subjects. This is because the present account takes sentences like (1) to involve agreement between the verb and the *i*-subject; the [3pers] feature checks both *it*'s third person feature and the *i*-subject's third person feature, i.e., *3persFF(DP)*, independent of what the number feature is (*Ag_{pers}*'s [3pers] feature thus matches both the person feature of the expletive and the person feature of the *i*-subject). The person feature of a first/second person *i*-subject, on the other hand, would not match *Ag_{pers}*'s [3pers] feature. Thus, a first/second person *i*-subject would be prohibited from occurring with a verb that has third person singular morphology.

For French, it is impossible to test whether this prediction is borne out, given the fact that the Definiteness Restriction does not allow for first and second person *i*-subjects in the first place. To test whether this prediction is borne out, then, we must turn to a language that has an F-type expletive (i.e., an expletive that, like *il*, is specified for nominative Case), but that does not have a Definiteness Restriction.

It turns out that many Italian dialects offer just such an example. Here I will give examples from only two Italian dialects. The first, Borgomanerese (Tortora (1996; 1997)), is a Piedmontese dialect, spoken in the town of Borgomanero in the Province of Novara. Its expletive,⁹ *ngh*, must be taken to be an F-type expletive, since (like French *il*) it can only occur as a structural subject. Furthermore, (like French *il*) it triggers third person singular agreement on the verb, even in the presence of a third person plural object. This can be seen in (12).

- (12) *Ngh è rivà-gghi do mati.*
 LOC is arrived-LOC two.fem girls
 'There arrived two girls.' or 'Two girls arrived.'

Unlike French, however (but like Italian), Borgomanerese does not have a Definiteness Effect. Thus, definite *i*-subjects are permitted in the expletive construction, as can be seen in (13).

- (13) *Ngh è rivà-gghi la Maria.*
 LOC is arrived-LOC the Maria
 'Maria arrived.'

Nevertheless, first and second person *i*-subjects are not permitted in this construction, as can be seen in (14).

- (14) a. **Ngh è rivà-gghi té / vjau.*
 LOC is arrived-LOC you.sg / you.pl
 b. **Ngh è rivà-gghi mé / njau.*
 LOC is arrived-LOC I / we

It is important to note that this restriction is not due to a general ban on first and second person *i*-subjects. Borgomanerese allows first and second person *i*-subjects, as long as they agree with the verb; this can be seen in (15) (SCL=subject clitic).

- (15) a. *I summa rivà njau.*
 SCL be.1pl arrived we
 'We arrived.'
 b. *I sòn rivà mé.*
 SCL be.1sg arrived I
 'I arrived.'

This pattern is not peculiar to Borgomanerese. It is also exhibited in Coneglianese (Sacco (1993:133)). As can be seen in (16a), Coneglianese's *el* (which is just like French *il*) occurs in the presence of a third person *i*-subject. The sentence in (16a), which has the feminine *i*-subject *ela* 'she', must be compared with (16b), which also has feminine *ela*; note that in (16b), however, the preverbal *ela* triggers the presence of *la*, rather than *el*, confirming that the Coneglianese expletive construction in (16a), just like the French one in (1), involves a case of "apparent lack of agreement."

- (16) a. *El e ndat ela.*
 SCL is gone she
 'She left.'
 b. *Ela la e ndat.*
 she SCL(fem) is gone.
 'She left.'

Just like in Borgomanerese, first/second person *i*-subjects are not permitted in this construction, as can be seen in (17).

- (17) **El e ndat ti.*
 SCL(-agr) is gone you

Similarly, first/second person *i*-subjects are licit in Coneglianese, as long as the SCL (and therefore the verb) agrees; this can be seen in (18).

⁹ See Tortora (1996, 1997) for arguments against the idea that this morpheme is an expletive. For the sake of simplicity, I will assume here that it is, although it should be noted that whether or not it is analyzed as an expletive is not relevant to the argument at hand.

- (18) Te sè ndat ti.
SCL(+agr) are gone you
'You left.'

In addition to the (correct) prediction that first/second person *i*-subjects do not occur with third singular verbs, the present analysis makes another prediction. In particular, given the claim that the *i*-subject checks nominative Case in Agr_{σ} , this leaves open the possibility of other (Case-assigning) functional heads to check the Case of other arguments. To be more specific, we predict the possibility of *i*-subjects with transitive verbs (i.e., transitive expletive constructions) in Romance. That is, since Agr_{σ} is not needed to check the Case of the *i*-subject, it is free to check the Case of any potential object argument.

This is a correct prediction. The dialect of Cicagna (P. Benincà and M. Cuneo, personal communication) is an example of an Italian dialect which has transitive expletive constructions. As can be seen in (19), the expletive (*pro*, in this case) is an F-type expletive; it triggers singular agreement with the verb, even in the presence of a third plural *i*-subject (*i karabinè* 'the carabinieri').

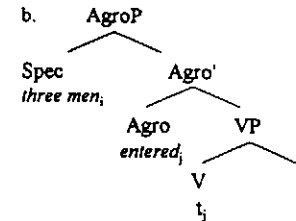
- (19) pro porta ia tütu i karabinè.
pro take.3SG away everything the.3PL carabinieri.3PL
'The carabinieri took away everything.'

Furthermore, we can see in (19) that a direct object (in this case, *tütu* 'everything') is permitted with an *i*-subject (yielding a VOS word order). Coneglianese (Saccon (1993)) also allows this type of construction, as can be seen in (20).

- (20) El a fat tut la serva.
it has done everything the maid(fem) (cf.: La Serva la a fat tut).
'The maid did everything.'

It is worthwhile noting that the present analysis, which makes the correct prediction, contrasts with Lasnik's (1995) analysis of Case-assignment in expletive constructions. Lasnik (following Belletti (1988)) claims that *i*-subjects in expletive constructions check Case (at LF) in $[Spec, Agr_{\sigma}]$ (following Belletti (1988)). An illustration of Lasnik's hypothesis can be seen in (21).

- (21) a. There entered three men.



An analysis which takes the *i*-subject to check Case in $[Spec, Agr_{\sigma}]$ makes an incorrect prediction with respect to the data in (19-20). In particular, it predicts that direct objects cannot occur with *i*-subjects, given that $[Spec, Agr_{\sigma}]$ would not be available for Case-checking of the direct object in the presence of an *i*-subject. I thus conclude that an analysis which claims that the Case of an *i*-subject is checked in Agr_{σ} is to be preferred.

3. CC's explanation of Case and agreement in expletive constructions

I would now like to turn to CC's explanation of Case and agreement in expletive constructions, and illustrate how the analysis presented in this paper is to be preferred.

To recap, given the NAH, CC conclude that F-type expletives check nominative Case and phi-features, while E-type expletives do not. In order to explain agreement with the *i*-subject in E-type expletive constructions, CC claim that the formal features of the *i*-subject raise at LF to be checked against these features in Agr_{σ} . In the F-type expletive construction, however, CC assume that since the Case and phi-features in Agr_{σ} are checked by the expletive, the Case and phi-features of the *i*-subject need not (and therefore do not) raise at LF to be checked.

Note that a negative consequence of this analysis is that, if nothing further is stated, the sentence in (1) is predicted to be ungrammatical, since the nominative Case feature of the *i*-subject is never checked (and as such does not pass the Case filter). N. Chomsky (personal communication) points out that the *i*-subject in (1) can satisfy the visibility requirement through $N \rightarrow D$ raising. Note, however, that this account cannot be used for the Italian dialects, which do not exhibit any Definiteness Restriction.¹⁰ As such, we are left with the question of how the visibility requirement is satisfied.

Another consequence of the CC analysis is that it provides no direct way of ruling out first/second person non-agreeing *i*-subjects (discussed in §2.3 above). In order to explain this

¹⁰ Cardinaletti (1997) addresses the Case filter question by suggesting that unchecked [-interpretable] features be allowed. With this suggestion, however, we lose the content of the Case filter

come up with a separate explanation. The hypothesis presented in this paper, however, directly predicts that first/second person non-agreeing i-subjects are not possible. Furthermore, the question of satisfying the visibility requirement does not arise, since the nominative Case feature of the i-subject is always checked, even in F-type expletive constructions.

4. Conclusion

The analysis presented in this paper takes non-agreeing i-subjects to be non-existent. Apparent cases of non-agreement, such as in French in (1) involve LF checking of the (third) person feature. Under this analysis, the nominative Case feature of the i-subject is also checked at LF, so that the question of passing the Case filter does not arise. As we have seen above, an analysis which involves nominative Case-checking of the i-subject, as opposed to Case-checking in Agr_o (Lasnik (1995)), is to be preferred. This analysis is also to be preferred to one which does not involve a splitting of Agr_o into two distinct functional heads, which cannot account for the ban on non-agreeing first/second person i-subjects.

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Move 1st: A Dynamic Economy Plan*

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0. Introduction

In Chomsky (1995), the operation Merge is considered "costless," whereas Move/Attract is not, so that Merge always has priority over Move/Attract, whenever there is a choice — global static economy. On the other hand, Collins (1997) proposes a framework of local economy, in which Merge and Move/Attract are not comparable, so that neither has priority over the other; in effect, they have equal "cost." Thus, Merge and Move/Attract are always options whenever there is a choice, leading to different outputs — non-deterministic local economy.

In this paper, I propose a deterministic economy principle that makes a dynamically local choice of operations, generally favoring Move/Attract over Merge, yet sometimes choosing Merge over Move/Attract. I call this the Principle of Minimum Feature Retention (MFR), which chooses the operation that leaves the fewest features in the structure produced by that operation. This principle is empirically motivated by an over-generation problem that arises in the account of super-raising offered in Chomsky (1995) — a classic case of a Tensed-S Condition violation (Chomsky 1973), which has not yet received any satisfactory account in the minimalist literature. Conceptually, the MFR is motivated from the viewpoint of computational complexity theory, in which it is known that the space requirement is more crucial than time measurement (Johnson 1990, Papadimitriou 1994, among others). For the computational system of human language, the memory load required to keep track of unchecked features is more important than the number of steps to yield a convergent derivation. The MFR offers a local solution to minimize the number of steps, by reducing the memory load, thus having a propensity of synergistic effect for the reduction of the overall computational complexity.

This paper is organized as follows: in section 1, we first see the over-generation problem of the super-raising account in Chomsky's (1995) global static economy as well as in Collins' (1997) non-deterministic local economy, reviewing their accounts of the *there*-expletive constructions, which is the principal empirical motivation for holding the view that Merge is equally or more economical than Move/Attract. In section 2, we see

* The material of this article is excerpted from Chapter I and Chapter III of Toyoshima (forthcoming). The usual disclaimer applies, and any misunderstandings or misinterpretations are of my sole responsibility.