



## V-FEATURES

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### 1 Introduction

Word order in Chomsky (1992: 1994), i.e. in Minimalism, is determined by whether or not features cause NPs and Verbs to move. Verbs move overtly to check the strong V-features (or tense and agreement) of the functional head. In this paper, I examine several aspects of these V-features and show that regarding Case and agreement in terms of checking provides new insights and better accounts.

First (section 3), I examine how person, number and gender (for simplicity, I assume these features) are represented. I argue that V-features are not a bundle but that they must be divided in person, number and gender and that languages differ as to whether all three are present or whether just some of these are. The division of features is not new, but if each of these features can be weak or strong (depending on the language), certain cases of 'breakdown' of agreement are accounted for. Languages that most clearly show this are Arabic and Belfast English.

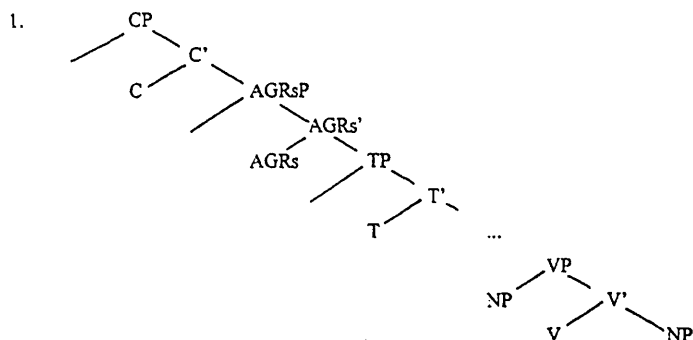
Second (section 4), features are not automatically tied to a particular functional node, e.g. N-features can be in C or AGRsP. This is compatible with earlier work (van Gelderen 1993) where I argue that there is a difference between structural position and features. Dialects of English and early Middle English show that the V-features may be in C. Past participle agreement shows that N-features need not be present.

Third (in section 5), I argue that the checking of V-features can only take place if a nominal element occupies the Specifier of the functional category to which the Verb moves. If an NP is not present - for instance, because the N-features are weak - an expletive will be inserted to give content to the V-features. The evidence for this can be found in Arabic and Italian dialects.

As a fourth point (in section 6), I investigate the relationship between the checking of the V-features and the checking of the morphological shape of a lexical item. It is usually assumed that checking of the V-features present in the functional head is sufficient to render the sentence grammatical. This cannot be correct for N-features since otherwise sentences in which expletives check the strong N-features could have NPs with 'wild' cases. In 'traditional' terms, this involves the difference between the grammatical and logical subject. Dutch shows that the strict Minimalist account cannot be correct for V-features either. Therefore, I propose a mechanism whereby NPs and Vs that need not move - not even covertly - still check their morphological shape. In the next section, I start with a short discussion of Minimalism.

## 2 Minimalism

Under Minimalist assumptions, word order differences between languages derive from differences between the strength of features present in Functional Heads. If a feature is strong, it will have to be checked before LF; if it is weak, it will be checked at LF. The tree structure assumed is one where the I(nflection) position is split up in a Tense and an Agreement position as in (1)<sup>1</sup>:



Since both Verbs and NPs move, Functional Heads are said to contain both V and N-features. If the V-features are strong, the Verb moves in overt syntax (i.e. the movement is visible); if they are weak, the Verb moves at LF (i.e. the movement is not visible). NP movement proceeds in a similar fashion.

Since this paper is about V-features, I elaborate on these a little more. Lexical Verbs do not move overtly as is well-known from the ungrammaticality of sentences such as (2) and (3):

2. \*Why talked you so much?
3. \*I talked not to her.

Auxiliary Verbs do move but this is not because of the strength of the V-features but because they are not visible at LF. At LF, a main Verb moves to T and checks its finiteness and past and then moves to AGRs to check its agreement. Since the N-features are strong in English, there is always an NP (or overt expletive) in Spec AGRsP.

In what follows, I address some questions that arise in connection to V-features. The first one is whether the V-features in AGRs are one set or separate. Once, one argues for splitting tense and agreement features and assigning them a structural position as in (1), one

<sup>1</sup> In van Gelderen (1993), I argue against such a split for English and those arguments still hold. For the purposes of this paper, I will use a split I, but nothing hinges on this.

could also argue for splitting up the V-features and allot each feature (number, gender and person) a structural position.

### 3 The split in V-features

The phenomena in (4) and (5) are well-known. Several accounts have been formulated (e.g. Mohammad 1989; Koopman & Sportiche 1991; Benamoun 1992; Aoun et al 1994). These accounts focus on the VS/SV difference:

4. Darab-at/\*-na l-banaat-u Zayd-an,  
'hit-past-3-fem-sg/\*3-fem-pl the girls-nom Zayd-acc,  
i.e. the girls hit Zayd'.
5. l-banaat-u Darab-na/\*-at Zayd-an,  
'the girls-nom hit-past-3-fem-pl/\*3-fem-sg Zayd-acc'.

SV, as in (5), would involve Spec-Head (and full agreement) whereas VS, as in (4), would involve government (without agreement). The explanations do not account for the fact that only number is 'deficient'. Mohammad (1989) argues in favor of an expletive but he too does not deal with the difference between number and person/gender.

I will argue that an expletive is inserted to help check the number features (cf. section 5) but not the gender and person ones. The Verb moves obligatorily in Arabic, whereas the NP moves optionally. In (4), an expletive is inserted to check the strong N-features, but since only the number features are strong in Arabic, the expletive checks these. The gender and person features are checked covertly after NP-movement to the expletive (cf. Chomsky 1986). Thus, only the number features are strong (cf. also Falk 1993 and Platzack 1994 for a separation of person and number in older Swedish).

Aoun et al (1994: 202ff.) argue that expletives are not involved in structures such as (4). Their evidence is based on constructions with complementizers that have agreement markers. For instance, in (6), the complementizer never agrees with the full NP, regardless of the order:

6. \*fakkar ?innun/?inna l-baneet raaho,  
'thought-3-m that-3-f-pl/3-f-sg the girls left-3-pl'.  
(?inno 'that-3-m-sg' is correct)

This is interpreted by Aoun et al. as there not being an expletive in VS structures. If there were one, the expletive should agree with the complementizer. The ungrammaticality can, however, also be caused by the fact that complementizers check features under government in Arabic. Checking under government usually does not involve expletives and hence, an expletive is not present. There is independent evidence that complementizers 'assign' an accusative Case, independently of a Verb. Thus, sentences such as (6) need not be parallels to (4). Aoun et al's alternative is not straightforward either. They argue that in sentences such as (4), the Verb raises to a position higher than I and this "head-raising does not always preserve agreement" (p. 204). Ultimately, there is no answer in their account as to why and as to why sometimes.

Belfast English (as reported in Henry forthcoming) shows that if Verbs move to higher functional heads as in (7) and (8), agreement is necessary whereas it is not when Verbs remain inside VP as in (9):

7. Are/\*is the girls playing.
8. The girls are/\*is often playing.
9. The girls often are/is playing.

In this variety, SV may have less agreement than VS! Rather than saying V-features are sometimes weak and sometimes strong (as Chomsky 1992 does for N-features in Arabic), I claim that the number features need not be present even though the person ones are. The number features when present are always strong, but those of person are weak. Suppose the number features are present, the Verb moves because they are strong and checks its features.

Thus, I have analyzed a number of constructions as indicating that V-features must be divided into (at least) number, person and gender features, but that not all languages select all features.

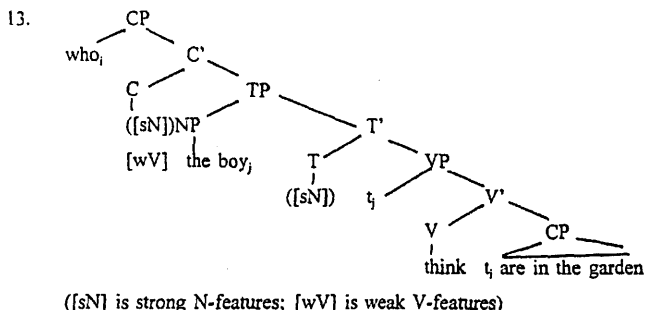
#### 4 'Floating' features

There are some dialects of English that may be argued to have agreement features in C indicating the agreement features are not always situated in the same position. Kimball and Aissen (1971) describe a variety of English that allows relative clauses as in (10) and (11) but not in (12). In (10) and (11), the nominative plural *wh*-element agrees with the verb of a higher clause if that *wh*-element has cyclically moved through the Specifier of the higher CP as in (10). Sentence (12) shows that this type of agreement only takes place if the *wh*-element indeed moves through the relevant Spec CP:

10. The people<sub>CP</sub>[who<sub>i</sub> the boy think<sub>CP</sub>[t<sub>i</sub> are in the garden]].
11. The people who the boy think t the girl know t are in the garden.
12. \*The people who t think that John know the answer.

This unusual agreement between the *wh*-element and the Verb is only possible if the *wh*-element originates or moves through the Spec CP of the clause in which the Verb is situated as in (10) and (11). Kayne (1991) argues instead for the existence of a NumP to which the *wh*-element adjoins and then agrees with the Head through a special kind of Spec-Head agreement (the *wh*-element is not in Spec NumP!). In cases where agreement does not occur, the *wh*-element does not adjoin and moves to Spec CP directly.

To explain this phenomenon without a NumP, one could argue that agreement features, i.e. V-features, are optionally placed in the C of the relative clause as in (4). The NP-subject will have to check Case, i.e. the N-features, either under government if the N-features are also situated in C or through Spec-Head agreement if the N-features are in T. In the former, Case would be checked under government. I will argue that when the features are placed in C and the *wh*-element moves through Spec CP, the Verb (after V-raising at LF) will agree with the *wh*-element:



In this dialect, a pronoun does not appear as subject (\*The people who she think are in the garden). For reasons I do not go into here, a pronoun needs to be in a Spec-Head relationship, i.e. a government relationship is not enough.

Interrogatives in Middle and early Modern English also indicate that it is possible to split up the N from the V-features as in (14) (cf. Jespersen 1913: 417-8). In (14), the Verb checks its V-features in a Spec-Head relationship, but the subject does so under government. The same is true in 13th century Layamon, even though checking all occurrences with *what*, *wat* and *wham* (occurs 47 times), only (15) to (17) are relevant:

14. *Tempest*, I, 1, 17  
**What** cares these roarers for the name of King.
15. Layamon, *Brut*, Caligula 1743  
**wat** beon hire wille.
16. *Idem*, 7144  
**what** weoren þat speche.
17. *Idem*. 7885  
**what** beon þi wille.

In (15) and (17), *beon* is used with singular subjects, *hire wille* and *þi wille*, whereas normally it is used with plural subjects. In (16), *weoren* is used with a singular even though it is usually accompanied by a plural subject. To account for these sentences, one could argue that *w(h)at* is responsible for agreement whereas the subject checks its Case. In (18), we can see a 'collapse' of the checking of both NP (*you*, rather than *yee*) features as well as one of the V-features (*be* rather than *are*):

18. Caxton, *Aymon*, 91, 25 (Kellner 1905: 134)  
**What be you**, fayre knyghte.

These data are compatible with Rizzi (1990: 51-60) who argues that agreement is in C for certain languages. Others, for instance, Belletti (1992) have argued the same. Belletti argues

that AGR moves to C to ensure nominative Case in participial constructions. Thus, the 'breakdown' of agreement in the dialect described by Kimball and Aissen and the data in (14) to (17) can be accounted for by means of splitting up Case and agreement (van Gelderen 1993 argues the same for construction in Dutch where the subject NP remains inside VP).

Splitting up V and N-features may even go so far that there are certain constructions in which the one is present but not the other. Past Participles present such a phenomenon. Take, for instance, French sentences such as (19) to (24). There is a difference between (19) and (20), (21), (22): in (19), agreement is obligatory whereas in (20), (21), (22) it is optional (cf. Kayne 1989: 94; Sportiche 1992: 17). Examples (22), (23) and (24) show the lack of agreement between the object and the past participle in constructions where the object has not moved to preverbal position (cf. Blinkenberg 1968: 51; 50 for (23) and (24)):

19. Les chaises sont repeintes,  
'the chairs are repainted-pl'.
20. Il les a repeintes.  
'He them has repainted-pl'.
21. Je ne sais pas combien de tables Paul a repeintes,  
'I don't know how many tables Paul has repainted-pl'.
22. Il a repeint les chaises,  
'He has repainted-sg the chairs'.
23. Fini, les livres,  
'finished-sg, the books', i.e. the books are finished.
24. Vu/regardé cette difficulté,  
'Seen/regarded-sg this difficulty'.

The intuitive account for these sentences is to link overt movement to overt agreement. In (19), (20) and (21), the NP has moved through Spec AGRoP and the past participle agrees. In (22), (23) and (24), the NP does not overtly move and the Verb does not show agreement. There are several possibilities to formalize this idea depending on whether the N-features of AGRo are seen as weak or strong. Answering this question, however, one encounters a paradox. The features cannot be strong in (22) because the NP does not overtly move. Yet, they seem strong in (19) to (21) because the NP moves there overtly. It could be argued that they are weak but that the NP in (19) to (21) moves through Spec AGRoP on its way elsewhere. Even then, a strange situation occurs in that overt movement results in different agreement than does covert movement. To solve this, I will argue that expletives are present in (22) to (24). The reason for the presence of the expletives is that the N-features are strong. Regular NPs do not move overtly because in French expletives are less costly. This latter move is stipulative.

The reason (19) is the only one with obligatory agreement, i.e. movement through Spec AGRoP, is that it is a passive and AGRo does not contain N-features. So, one might argue that empty expletives in Spec AGRoP are inserted when N-features are involved. In (20) and (21) it is possible to insert an expletive since there are N-features (as well as V-features). The difference between these sentences is interesting in that again N and V-features are shown to be independent and that passives have AGRos with V-features but without N-features

## 5 Role of expletives

I will argue that the content of the V-features depends on a nominal element and that V-movement without NP-movement or expletive insertion is impossible. (The opposite is possible). Sentences (4) and (5) above show that V-checking is dependent on a nominative element, e.g. an expletive specified for number. If such an element were not needed, the number features would be able to wait till LF to be checked. Verb-movement should have been sufficient and an empty expletive would not have had to be inserted. The same can be argued for Italian and some of its variants. In standard Italian, (25) is grammatical in which the Verb agrees with the postverbal subject; in Trentino and Fiorentino, agreement does not occur as the glosses to (26) and (27) show (data from Brandi & Cordin 1989: 121):

25. Sono venute delle ragazze,  
'are come-f-pl some girls'.  
26. E' vegnù qualche putela (T),  
'is come some girls'.  
27. Gli è venuto delle ragazze (F),  
'there is come some girls'.

Trentino is like standard Italian in that no expletive appears (p. 122) but in Fiorentino, *gli* serves as expletive. Thus, in standard Italian, N-features as well as V-features are weak and the Verb waits till LF to check its features in a Spec-Head relationship and hence agreement is full agreement. In Trentino and Fiorentino, the V-features are strong and an expletive is needed to check them.

Thus, languages show that even if the N-features are weak, an expletive must be inserted to 'help' check the V-features.

## 6 Double checking?

Standard English *there*-sentences exemplify that although *there* checks the N-features (in Spec AGRs), the NP must also be checked at some point. In the case of expletives, it can be argued that NPs must be compatible with the expletive with which they unite at LF. Hence, (28) is ungrammatical:

28. \*There were five unicorn('s) in the garden.

In the case of Verbs, as in (29), this is not so obvious. In Dutch, Verbs move to C as in (30) when an overt C such as *dat* 'that' is missing, but in (29), there is no overt movement of *ga/gaat* 'go/goes' to *dat*. Therefore, I propose that the Verb *ga* moves at LF to check itself just as other Verbs do overtly when the complementizer is not present:

29. Ik weet dat zij vaak daarheen gaat/\*ga,  
'I know that she often there goes/go'.  
30. Zij is daar heen gegaan,  
'She has there gone'.

To formalize this idea, one might assume that the expletive in (28) and the complementizer in (29) only change the features from strong to weak but that the ultimate checking is done by the NP and V respectively at LF.

## 7 Conclusion

In conclusion, I consider certain facets of V-features that shed light on agreement and on Verb-movement. In particular, I question the representation of the V-features, the role of expletives and the necessity for NPs and Vs to check themselves independently of the N and V-features. I argue that V-features make it possible to account for partial agreement, especially in cases of 'irregular' movement.

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