

On a Case Feature of Unaccusative Verbs

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1. Introduction

It is a well-known fact that there are two classes of intransitive verbs, unaccusative and unergative verbs. In Government and Binding approach, the subject of an accusative verb is originated in the complement of the verb, while the one of an unergative verb is originated in the subject position. This paper mainly discusses the relationship between the overt complementizer *that* and an unaccusative verb. As illustrated in (1), a grammatical contrast is observed, depending on whether there is *that* or not:

- (1) a. *How many men do you think that there arrived at that station? (Ura (1994:227))
b. *How many arguments do you think that there developed from my idea? (Ura (1994:227))
c. How many men do you think there arrived at that station?
d. How many arguments do you think there developed from my idea?

Some of my informants indicated that the examples in (1c, d) are a little bit awkward, but they are much better than (1a, b). Notice that the *wh*-phrases in (1a-d) move from the complement positions of the verbs. The grammatical contrast in (1) is, then, peculiar. The aim of this paper is to advocate that the grammatical contrast in (1) is due to feature visibility of a Case feature, and to explicate it in terms of relativized phases first advocated in Wurmbrand (2003).

The organization of this paper is as follows. Section 2 examines relativized phases. Section 3 discusses visibility of a Case feature of unaccusative verbs. The following section explores a phase-based approach to the above grammatical contrast in terms of the argument in the previous sections. Section 5 is a conclusion.

2. Relativized Phases

This section will introduce the notion *Relativized Phase*. Chomsky (2000: 106-107) defines a phase, as follows:

A phase is CP or vP, but not TP or a verbal phrase headed by H lacking

ϕ -features and therefore not entering into Case/ agreement checking:

neither finite TP nor unaccusative/ passive verbal is a phase.

On the basis of this definition, Bobaljik and Wurmbrand (2003) and Wurmbrand (2003) are considered in this section. They examine certain constructions where (i) a matrix verb exhibits agreement with an embedded object, and (ii) a dislocated object cannot be interpreted at the original position. Before introducing the notion *relativized phase*, let us consider *Agree* first. *Agree* is an operation “which establishes a relation (agreement, Case checking) between an LI α and a feature F in some restricted search space” (Chomsky (2000:101)) or is “an abstract feature matching relation between the probe

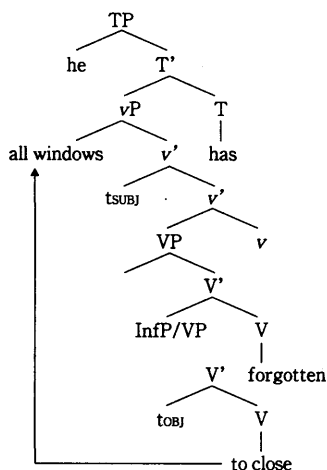
and the goal in situ.” (Wurmbrand (2003:464)) Thus, feature checking does not necessarily require a SPEC-head relationship between the probe and the goal.

Wurmbrand (2003) provides an interesting support for the relativized phases, considering the scope interpretation of an embedded object contingent on the presence and the absence of a matrix Case/agreement dependency. See the following examples:¹

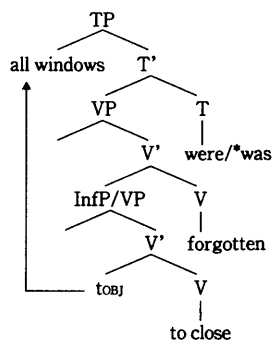
- (2) a. Weil er alle Fenster vergessen hat [tOBJ zu schlieBen]
 since he all windows(-ACC) forgotten has to close
 'since he forgot to close all the windows' ∇ > forgot ; *forgot > ∇
- b. weil alle Fenster zu schlieBen vergessen wurden
 since all windows(-NOM) to close forgotten were-PL
 'since they forgot to close all the windows' ∇ > forgot ; *forgot > ∇

The examples in (2a, b) involve restructuring infinitives (henceforth, RIs). According to Wurmbrand (2003), RIs are regarded as bare VPs, but not CP, TP or vP. Consider the following configurations, which are from Wurmbrand (2003:466):

- (3) a. (= (2a))

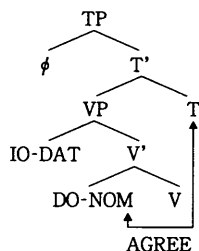


- b. (= (2b))



In addition to (3a, b), Wurmbrand (2003:466) provides the following configuration:

- (4)



It has been claimed in the literature that Agree does not hold over more than one phase, and is limited to a single phase. The examples where Agree in situ is permissible establish agreement within a single clause: hence, T agrees with the object. Assuming that German lacks the EPP property, Wurmbrand

(2003) argues that although both (3b) and (4) involve nominative Case licensing by way of Agree, they differ from each other in that in (4), nominative Case is licensed in situ, whereas in (3b), nominative Case is licensed at the dislocated position.

The different nominative Case licensing in (3b) and (4) raises an interesting question. Why can't the nominative Case in (3b) be licensed in situ? To put it differently, why does the nominative object have to move to SPEC-T? In order to answer this question, Wurmbrand (2003) as well as Bobaljik and Wurmbrand (2003) suggests that "(i) Agree cannot span more than one phase; (ii) in addition to vP and CP (inherent phases), a complement to a lexical verb (as in restructuring contexts) is an (induced) phase for Agree." (Wurmbrand (2003:467)) Bearing this in mind, consider (3a, b). The lowest VP in (3a, b) is a complement to a lexical verb, *forgotten*. Hence, the nominative Case of the objects cannot be licensed in situ because of the induced phases. Following the insights of Bobaljik and Wurmbrand (2003) and Wurmbrand (2003), I suggest that there is an intervening (induced) phase if Agree cannot hold between the probe and the goal.

3. Visibility of a Case Feature

This section will discuss lifespan of a deleted Case feature. In order to do that, let us consider the relationship between Spell-Out (S-O) and a phase (PH) as explained by Chomsky (2004). See the following structure:

(5) PH = [α [H β]]

In (5), α is the edge of PH. Chomsky (2004:108) states that "[a] natural condition, which permits spell-out of root phrases and allows for meaningful cyclic computation, is that β must be spelled out at PH, but not the edge." Given this, consider the following structures of *wh*-interrogatives, in which traces are represented as copies:

- (6) a. [CP WH_{SUBJ} [C' C [TP WH_{SUBJ} [T' T [vP WH_{SUBJ} [v' v [VP V OBJ]]]]]]]]]
 PH S-O PH S-O
- b. [CP WH_{OBJ} [C' C [TP SUBJ [T' T [vP WH_{OBJ} [v' SUBJ [v' v [VP V WH_{OBJ}]]]]]]]]]
 PH S-O PH S-O

In (6a, b), VPs are spelled out at vPs, while TPs are spelled out at CPs. Extending the insight of Chomsky (2004), let us assume here that as soon as S-O occurs, the valued uninterpretable features residing in all copies are deleted at once and turn out to be invisible.² Thus, in (6a), the Case feature of the WH_{SUBJ}, which is valued at SPEC-v, remains visible until CP. This is because the edge is not spelled out until CP. In (6b), on the other hand, the Case feature of WH_{OBJ}, which is valued in VP, does not remain visible until CP, since it is spelled out at vP. With this much as background, the definition that I will assume is as follows:

(7) Spell-Out renders valued uninterpretable features in all copies invisible.

I suggest that this feature visibility is crucial to account for the grammatical contrast in (1), and that overt complementizers cannot co-occur with elements with a Case feature.

4. An Analysis of Visibility of a Case Feature in Unaccusative Constructions

This section will offer a phase-based account for the grammatical contrast in (1), which is replaced

here as (8):

- (8) a. *How many men do you think that there arrived at that station? (Ura (1994:227))
 b. *How many arguments do you think that there developed from my idea? (Ura (1994:227))
 c. How many men do you think there arrived at that station?
 d. How many arguments do you think there developed from my idea?

What is interesting is that the following examples contrast with (8):

- (9) a. How many men_i do you think that there were t_i in that garden? (Ura (1994:227))
 b. How many men_i do you think there were t_i in that garden?
 c. *How many men_i do you think that t_i were t_i in that garden?
 d. *How many men do you think that t_i arrived t_i at that station?

(9c, d) can be treated in terms of the *that*-trace effect, which will not be examined in this paper for limitation of space. I claim that the grammatical contrast found in (8) and (9a, b) can be treated in a uniform way.

With the argument in the previous section, let us consider the sentences in (5), which are assigned structures at some point of the derivations, as illustrated below:³

- (10)a. *[CP Wh_i[C] [C that][TP there T [v_P arrived t_i at that station]]]
 b. *[CP Wh_i[C] [C that][TP there T [v_P developed t_i from my idea]]]
 c. [CP Wh_i[C] ϕ [TP there T [v_P arrived t_i at that station]]]
 d. [CP Wh_i[C] ϕ [TP there T [v_P developed t_i from my idea]]]

The important point to note is that unaccusative verbs like *arrive* do not form phases. This means that the Case feature of the *wh*-phrases in (10) remains visible at CP. The generalization that I draw on the basis of this observation is as follows:

- (11) A non-agreeing overt complementizer cannot internal-Merge with an element with a Case-feature.⁴

In (10a, b), the non-agreeing overt complementizer *that* internal-Merges with the *wh*-phrase with a Case-feature: hence, the ungrammaticality of (10a, b). Let us now proceed to examples (9a, b), which are assigned structures at some point of the derivations, as shown below:

- (12)a. [CP Wh_i[C] [C that] [TP there [T were] [v_P t_v t_i in that garden]]]
 b. [CP Wh_i[C] ϕ [TP there [T were] [v_P t_v t_i in that garden]]]

If (12a, b) are treated in the same manner as (10a-d), and the Case feature of the *wh*-phrases in (12a, b) remains at CP, the grammaticality of (12a) cannot be accounted for, because the non-agreeing overt complementizer internal-Merges with an element with a Case feature.

The relativized phase-based approach can provide a principled account for the grammaticality of (12a). Wurmbrand (2003) advocates that a complement to a lexical verb is an induced phase. Bearing this in mind, let us consider the following contrast:

- (13)a. There is usually a man. (Ura (1994:228))
 b. *There arrives usually a bus (at this time). (Ura (1994:228))

The grammatical facts in (13a, b) show that unaccusative verbs like *arrive* are in vP, whereas the existential *be* is in T. Given this, consider the following structures:

- (14)a. [CP Wh_i [C that] [TP there T -were_j [v_P t_j [v_P t_j t_i ...]]]
 PH
 b. *[CP Wh_i [C] [C that] [TP there T [v_P v-arrived_j [v_P t_j t_i ...]]]]]

The important point to note is that in (14a), *vP* is a complement of a lexical verb, *were*, rendering *vP* an induced phase. Thus, *VP* in (14a) is spelled out at the embedded *vP* and the Case feature of the *wh*-phrase turns out to be invisible. The grammaticality of (14a), therefore, obtains. As for (14b), the Case feature of the *wh*-phrase remains visible at the embedded *C*, because *v* is an unaccusative verb and does not constitute a phase. As a result, (14b) is in violation of (11): hence, the deviancy of (14b).

Our analysis predicts that if *vP* in (14b) constitutes a phase, the sentence turns out to be grammatical, because the Case feature of the *wh*-phrase becomes invisible at the embedded *CP*. This prediction is indeed borne out by the following example:⁵

(15) How many men_i do you think [_{CP} t_i that [_{TP} there [_T had] [_{vP} arrived [_{vP} t_v t_i at that station]]]]

Notice that *T* is lexically filled with *had*, which renders unaccusative *vP* as an induced phase. It follows that the embedded *VP* is spelled out at the embedded *vP*. The Case feature of the *wh*-phrase is, therefore, deleted and valued at the complement position of *arrived*, and turns out to be invisible at *SPEC-C*; hence, the grammaticality of (15). In addition, the suggested analysis can account for the following English and French examples, which are assigned structure as in (16c) and (16d), respectively:

- (16)a. Combien de gens crois-tu qu'il est arrivé?
 how many people believe-you that-it is arrived
 ‘How many people do you believe there have arrived?’ (Rizzi (1982: 148))
- b. Who_i do you think that it was?
- c. [_{CP} Wh_i [_C qu’] [_{TP} il T-est_j [_{vP} t_j arrivék [_{VP} t_k t_i]]]]
- d. [_{CP} Wh_i [_C that] [_{TP} it T-was_j [_{vP} t_j [_{VP} t_j t_i]]]]

In (16a), *qu’* is *que* ‘that.’ It can be concluded that *vP* in (16c, d) is a complement of a lexical verb, *est* ‘is’ and *was*, rendering *vP* an induced phase. Hence, the Case feature of the *wh*-phrase is invisible at *CP*. (16a, b) are, therefore, grammatical.

5. Conclusion

In this paper, it was shown that there are some grammatical contrast between an unaccusative verb and a copula verb involving the presence and the absence of the overt complementizer *that*. Following Bobaljik and Wurmbrand (2003) and Wurmbrand (2003), who advocate that (i) Agree cannot span more than one phase, and (ii) in addition to *vP* and *CP*, a complement to a lexical verb is an induced phase, I advanced that a non-agreeing complementizer cannot internal-Merge with an element with a Case feature. The presence and the absence of *that*, then, can be reduced to the lifespan of an uninterpretable Case feature. If the suggested analysis is on the right track, the relevant range of data can be accounted for.

References

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Footnotes

1. Examples (2a, b) are from Wurmbrand (2003:465).
2. This assumption might contrast with Chomsky (2004). Although visibility of a deleted uninterpretable feature is not explicitly argued, it is conceivable that in Chomsky (2004), the valued Case feature of the object *wh*-phrases at the outer SPEC-*v* on the way to SPEC-C may be still visible. This might be because the edge of *v*P is not spelled out until CP.
3. In what follows, [C] represents a Case feature.
4. In Chomsky (2005), internal-Merge is the same as the operation Move, and creates copies.
5. One of my informants pointed out that (15) is ungrammatical. However, s/he indicates that the examples in (8c, d) and (9a, b) are also deviant. It seems to her/ him that sentences in which *there* appears are all ungrammatical.

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