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# Word order in the Dutch middle field

*Thirty years after Verhagen's thesis*

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## Abstract

Verhagen's thesis on the relative order of nominal arguments and sentence adverbials in the middle field of the clause argued that the order variation found in Dutch can be described in a more insightful way within a functional approach than within a formal, generative grammar. This was true in the 1980s, when generative grammar was concerned with competence only. In current generative grammar, however, the output of the computational system is interpreted and filtered by the performance systems, which opens the possibility of formally accounting for certain aspects of meaning and intonation. I will argue that this refutes Verhagen's claim.

**Keywords:** generative grammar, functional approach, word order, form-meaning relationship, intonation

## 1 Introduction

The main body of Verhagen's (1986) thesis is concerned with the relative order of nominal arguments and comment modifiers (sentence adverbials) in the middle field of the clause as well as various intricacies involved in this issue like intonation and interpretation. For a long time it has been the most exhaustive description of word order in the middle field of the clause, and it has therefore also been a major source for my description of this issue in the *Syntax of Dutch* (cf. Broekhuis & Den Dikken 2012: section 8.1) and Broekhuis & Corver (2016: ch. 13). Verhagen also aims at showing that the word order variation under discussion can be described in a more insightful way within a functional approach (FA) than within a formal,

generative grammar (GG), and it is this claim that I would like to discuss and refute here.

Kooij (1987) observed that Verhagen's critique on GG was quite modest and mild compared to other attacks in the same period. Verhagen argues that FA and GG both have to deal with the problem that there is gap between the observed facts (language use) and the actual mechanisms underlying the language system; it is consequently impossible to argue in favor of FA on the basis of this. His arguments are therefore 'negative' in nature in the sense that they involve a number of presumed conceptual problems for GG (§2.4). In addition, Verhagen points out several descriptive problems related to the distribution and relative order of sentence adverbials and nominal arguments for the version of GG in the 1980s (§3).

Verhagen contends that a linguist's commitment to FA or GG is ultimately a matter of 'belief' (p. 23) and it therefore does not come as a surprise that his plea for FA has failed to persuade the followers of GG: 'I do not understand why he tries to prove that a formal analysis of sentences with adverbials would not be clarifying or even be desired, and he has not succeeded in that either' (Kooij 1987: 300). Personally, I feel uncomfortable with the idea that the choice for a specific theoretical orientation would be based on belief and, in fact, I find it difficult to see that in the case at hand this is indeed true for Verhagen's choice for FA; my impression is that this choice is rather forced upon him by his focus of interest, the principles underlying actual performance.

## 2 Conceptual arguments against the generative approach

Verhagen's point of departure is that while FA takes the form-meaning relationship to be simple (one-to-one), GG takes it to be complex. He claims that this entails that GG should also consider linguistic competence as complex, which in turn implies that human beings come equipped with a fairly intricate innately given language faculty (§2.3). A problem with this position is that Verhagen's use of the notion of simplicity may not coincide with that of the generativists in the 1980s.

One complexity discussed at some length is the postulation of D-structure, S-Structure, Logical Form, and Phonetic Form, the so-called levels of representation (LoRs). These LoRs are claimed to be an essential ingredient of GG while they are not needed in FA: FA is therefore to be preferred as the simpler option. It is questionable, however, that generativists con-

strue the postulation of LoRs as a complication of the form-meaning relationship in view of the fact that the LoRs were initially introduced in order to simplify the structural description of sentences and their constituents. It was only later that considerations of meaning entered the picture, as is clear from the fact that it was generally assumed in the mid 1960s that transformations cannot affect meaning (the Katz-Postal hypothesis). The alternative hypothesis that the different LoRs determine specific meaning aspects (Chomsky 1972: ch. 2) essentially got a free ride and does therefore not involve adding complexity to the theory as a whole, but rather exploits possibilities made available by the theory for independent reasons.

By ignoring the original motivation for the postulation of LoRs and by restricting the attention to the form-meaning relationship, Verhagen biases the comparison in favor of FA. Before we can conclude that FA is indeed to be preferred for reasons of simplicity, it should be shown that it also provides a simpler theory of the structural properties of sentences and their constituents.

In retrospect, we can add that Verhagen's claim that the postulation of LoRs is an essential ingredient of generative grammar cannot be upheld: the distinction between D- and S-Structure was abandoned with the introduction of the minimalist program (Chomsky 1993: ch. 3) and the postulation of separate levels of Logical Form and Phonetic Form could be abandoned after the introduction of the notion Agree in Chomsky (2000); the derivation of the sentence now simply results in an output which is fed to the performance (cognitive and phonological) systems of the grammar (perhaps incrementally if phase theory is correct). This elimination of the LoRs is just one of the many substantial simplifications of the 'fairly intricate innately given language faculty' postulated by generative grammar which were proposed over the last 25 years.

Another conceptual problem discussed by Verhagen is related to the tension between explanatory and descriptive adequacy: the more severely restricted a theory is, the more difficult it becomes to account for the observed data. Verhagen suggests that as a result of this tension the descriptive range of GG is becoming continuously smaller and that this makes 'maintaining the pretence of embodying *the* view on *the* core of language' increasingly difficult. The generativists from the 1980s may have had problems with this view because the empirical range of generative grammar was vastly extending since Chomsky (1981): many new phenomena received a natural account within the theory, which was furthermore successfully applied to an increasing number of languages. In retrospect, we can add that Verhagen's list of 'phenomena that have been excluded



I will not review Verhagen's reasons to conclude that 'it is clear that attempts to incorporate into the generative framework an account of the distribution of adverbials and of the effects of this distribution on the interpretation of the sentence systematically run into problems' and that it 'might seem a natural move to exclude the phenomena at hand from the domain of formal grammar' but that 'such a move must still be evaluated as an indication of something fundamentally wrong' (p. 79). I fully agree with the last quote, but I do not see why this would 'indicate the failure of the generative *research program*': instead of giving up hope at such an early stage in the investigation, one should simply continue investigating the possibilities of avoiding the systematically occurring problems. The following subsections sketch a version of GG that seems to cover the core properties discussed in Verhagen's study and thus show that Verhagen's dismissal of the generative research program was highly premature. The presentation is necessarily much simplified but I refer to Broekhuis (2008) for a more detailed and technical discussion.

### 3.1 The base position of the nominal arguments and adverbials

When Verhagen published his study, the base structure of a Dutch transitive clause was essentially as given in (2), where C stands for the complementizer/verb-second position and I stands for the inflectional features of the finite verb (cf. Chomsky 1986). Predicate adverbials were assumed to be part of the VP while sentence adverbials (ADV<sub>S</sub>) were assumed to be part of the IP; this is indicated in (2) for ADV<sub>S</sub> only. This base structure suggests that the word order variation in (1b) is derived by NP-preposing of the direct object across the adverbial *waarschijnlijk* 'probably'. This proposal leads to problems with two major principles of GG: (i) the base structure in (2) suggests that the word order variation in (1a) follows from rightward movement of the subject, which is forbidden by trace theory because it involves movement of the subject into a structurally lower position; (ii) the leftward movement of the object violates Emonds' (1976) structure-preserving constraint, according to which movement must target a designated *pre-existing* landing site such as the specifier of CP, which is indicated by dots in (2).

- (2) [CP ... [C' C [IP NP<sub>subject</sub> I ADV<sub>S</sub> [VP NP<sub>object</sub> V]]]]

The first problem dissolved when Koopman & Sportiche (1991) argued that the subject is not inserted directly in the specifier of IP, but originates in a lower position, which was later identified as the specifier of VP. The result-

ing VP-internal subject hypothesis ultimately led to the idea that a sentence consists of two parts: a lexical domain, which provides the propositional content of the clause in the sense of traditional predicate calculus, and a functional domain, which provides additional information. The inflectional head I, for instance, provides temporal information, while the C-head provides information about illocutionary force. One version of this proposal is given in (3), where V can be seen as a root element and  $\nu$  as an element that provides verbal features (which is taken to enable it to assign accusative case in later minimalist work), and the lexical domain expressing the propositional content consists of  $\nu$ P. The location of predicate and sentence adverbs now also find a more natural place: predicate adverbials modify predicates, which can be expressed in a natural way by assuming that they are adjoined to VP; sentence adverbials, on the other hand, are modifiers of the full proposition, which can be expressed in a natural way by assuming that they are adjoined to  $\nu$ P. One argument in favor of the resulting structure in (3) is that this enables us to construct the meaning of the proposition in an incremental and compositional fashion along the lines found in type logic.

- (3) [CP ... [C' C [IP ... I [ $\nu$ P ADV<sub>S</sub> [ $\nu$ P NP<sub>subject</sub>  $\nu$  [VP NP<sub>object</sub> V]]]]]]]]

The word order variation found in (1a) can now be accounted for by assuming that the subject optionally moves into the specifier position of IP (the position where it is assumed to be assigned nominative case); this is in full accordance with trace theory since it involves movement into a structurally higher position. It also partly solves the second problem concerning structure preservation under the assumption (embodied by X-bar theory) that all functional heads are intrinsically endowed with a specifier position that can act as a landing site for an element that is dependent on this functional head (e.g., for agreement, case, etc.).

The structure in (3) still leaves us with the problem that leftward movement of the direct object does not satisfy the structure-preserving constraint, but this was solved by Chomsky's (1991/1993) proposal that nominative and accusative case are both assigned by an Agreement head; the subject NP moves into the specifier of AGR<sub>S</sub>P and the object NP moves into the specifier position of AGR<sub>O</sub>P in (4); T is the head containing tense features.

- (4) [CP ... [C' C [AGR<sub>S</sub>P ... AGR<sub>S</sub> [TP ... T [AGR<sub>O</sub>P ... AGR<sub>O</sub> [ $\nu$ P ADV<sub>s</sub> [ $\nu$ P NP<sub>subject</sub>  $\nu$  [VP NP V]]]]]]]]]]

On the additional assumption that movement of the subject/object into its case position is essentially optional in Dutch, we now have a natural account for the word order variation found in (1a&b). The structure in (4) raised many new and intricate questions, which ultimately led to considerable simplification of this structure in later work, but the main finding that subjects and objects cross the sentence adverbial on their way to their designated case positions has remained intact so far. Note that the changes in the structural description of the clause reviewed above were introduced for independent reasons and that our account of the word order variation found in (1) therefore follows from the contemporary version of GG without much ado.

### 3.2 Intonation and interpretation

Verhagen shows at great length that the relative order of the direct object and the sentence adverbial affects both the (non-contrastive) intonation pattern and the interpretation of the clause; something similar holds for subjects but I will ignore this here for reasons of space. The effect on the intonation patterns is illustrated in (5) for example (1b), where sentence accent is indicated by underlining.

- (5) a. dat mijn broer waarschijnlijk het boek gekocht heeft.  
           that my brother probably       the book bought has  
       b. dat mijn broer het boek waarschijnlijk  $t_i$  gekocht heeft.  
           that my brother the book probably       bought has

That leftward movement has the effect of deaccenting the direct object follows immediately from Cinque's (1993) hypothesis that non-contrastive sentence accent is assigned to the most deeply embedded phrase in the clause: if the object occupies its base position within the lexical domain of the clause, as in (5a), it counts as the most deeply embedded phrase and will thus be assigned sentence accent; if the direct object is moved into its case position in the functional domain, it no longer counts as the most deeply embedded phrase and the sentence accent will therefore shift to some other phrase that counts as most deeply embedded phrase in the derived structure, which in our example in (5b) is the main verb *gekocht* 'bought'.

The interpretative effect follows under the natural assumption that the comment (new information) should be included in the lexical domain of the clause ( $\nu P$ ), which after all expresses the propositional contents of the clause. Movement of the direct object into its case position thus removes

the direct object from the comment, as a result of which it must be construed as presuppositional; see Chomsky (2001) and Broekhuis (2008) for two different implementations of this idea.

### 3.3 Delimiting the empirical range of the formal approach

Section 3.2 derived the fact that leftward movement of the direct object in (5b) results in its removal from the comment of the clause. It should, however, be observed that the preferred reading of (5a) is that the object is included in the comment, which does not follow from the proposal so far. I believe that this is a typical example of the problem (common to both FA and GG) that there is gap between the observed facts (language use) and the actual mechanisms underlying the language system.

One way of bridging the gap would be to simply assume that the lexical domain cannot contain non-presuppositional material. This claim is clearly wrong, however, as is clear from the fact that the nominal part of PP-objects can be presuppositional; this is shown by the fact that the PP in (6a) may contain a pronoun. In fact we can go one step further by saying that PP-objects can only be removed from the lexical domain if they are contrastive foci; this is illustrated in (6b) by showing that leftward movement of a PP with a pronoun requires the PP to be contrastively stressed; see Broekhuis & Corver (2016: ch. 13) for detailed discussion.

- (6) a. Jan heeft waarschijnlijk [op hem/'m] gewacht.  
 Jan has probably for him/him waited  
 b. Jan heeft [op HEM/'\*m]<sub>i</sub> waarschijnlijk *t<sub>i</sub>* gewacht.  
 Jan has for him/him probably waited  
 'Jan has probably waited for him.'

So the conclusion should be that while the object in (5b) must be interpreted as familiar information, the object in (5a) can *in principle* be interpreted as either familiar or new information. Verhagen would probably consider the fact that GG has nothing to say about why the object in (5a) is normally interpreted as new information as a typical deficiency of GG, but it is not because we are arguably dealing here with a pragmatic phenomenon resulting from Grice's (1975) Maxim of Manner, which states that a speaker should avoid ambiguity. If the speaker wants to express that the referent of the direct object is part of the presupposition of the clause, this maxim requires the structure in (5b) to be used, and from this it follows that use of (5a) normally implies that the object is part of the comment. In

short, there is simply no need for GG to provide an account for the more restricted interpretation of (5a) in actual use.

## 4 Conclusion

Verhagen (1986) embraced FA because he was of the opinion that the generative research program is unnecessarily complex. Section 2 argued that he could only underpin this opinion because he one-sidedly focused on form-meaning relationships and completely ignored the structural description of clauses and their constituents. This suggests that Verhagen's rejection of GG is not so much related to his beliefs but rather to his focus of interest: his study is not concerned with clause structure but with the actual use of these structures. Section 3 showed that on hindsight Verhagen was wrong in assuming 'that a formal analysis of sentences with adverbials would not be clarifying or even be desired' (Kooij 1987: 300); at least one generative line of research is able to account for the core data discussed in his work. A clear virtue of this line of research is that it should be applicable to all languages, and the literature so far suggests that this might indeed be true for at least a wider range of Germanic languages; cf. Chomsky (2001) and Broekhuis (2008). This clearly favors GG, as Verhagen candidly admits that his theory can only be applied to languages with a well-defined middle field (p. 199). I further adopted the view that GG is a theory of competence and that certain observed facts should therefore be left to theories about performance; this is not a flaw of the generative research program but one of the prerequisites for making GG a true minimalist theory of form-meaning correspondences.

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