

TRANSFER FROM L1 TO L2 : A STUDY OF PARAMETER VALUES IN THE AFRIKAANS OF A CHILD L2 LEARNER

Cecile le Roux and Carien Wilsenach

1. Introduction*

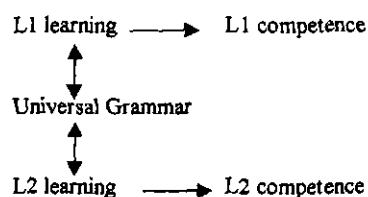
"Linguistics is concerned with explaining what natural languages are, what it is about human beings that makes them know a language, and how they are able to acquire and use their specific linguistic abilities" (Weibelhuth 1995:3). In answering these questions, Chomsky developed the concept 'Universal Grammar' (UG). UG is the "system of principles, conditions, and rules that are elements or properties of all human languages...the essence of human language" (Chomsky 1976:29). The central claim of Chomsky's theory is that children are born equipped with knowledge of the principles that apply to all languages. These universal principles are associated with sets of variable options known as 'parameters'. The settings, or values, of the parameters can vary from one language to another (Cook & Newson 1996:2). When acquiring a language, a child needs to learn only which parameter value to select for each principle of UG. In short, language knowledge can be described as knowing the principles of UG and knowing which parameter settings are appropriate for the language in question.

One of the main questions that linguists who apply UG theory to second language (L2) acquisition try to answer, is whether or not L2 learners too have access to UG (Cook & Newson 1996:291). Linguists who claim that L2 learners do have access to UG use the *poverty of the stimulus* argument to argue their claim. That is, they argue that L2 learners have knowledge of their second language that they cannot have learned from the input available to them. Knowledge that cannot be learned from the environment, it is argued, must be attributed to inherent properties of the mind (Cook & Newson 1996:86). In first language (L1) acquisition this built-in knowledge is attributed to UG. The question is whether this is true for L2 acquisition as well. Cook and Newson

provide two possible answers to this question. The first possibility is that, like L1 learners, L2 learners have direct access to UG and are not influenced by their L1 at all. The second possibility is that they have access to UG indirectly via their L1 grammar.

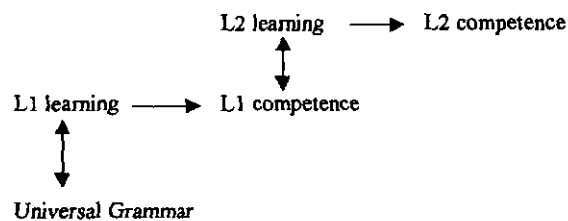
If L2 learners have direct access to UG, it is claimed, they employ the principles of UG and set the parameters for their second language without any reference to the parameter values of the L1. Cook & Newson (1996:292) represent the direct access hypothesis with the diagram in (1):

(1) **Direct access to UG**

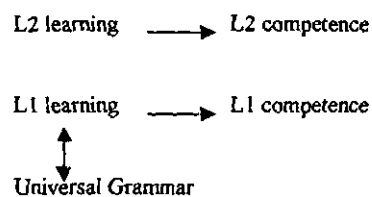


As shown in diagram (1), the direct access hypothesis holds that the L1 and the L2 grammars are two different instantiations of UG: the L2 speaker has parallel competences in the L1 and the L2. The interaction between L1 input and UG leads to an L1 grammar, while the interaction between L2 input and UG leads to an L2 grammar. The prediction is that L2 learners should ultimately possess the same kind of linguistic competence in the L2 as adult L1 speakers have in their L1.

Those who subscribe to the hypothesis that L2 learners have indirect access to UG, claim that L2 learners use their L1 instantiation of UG as a starting point in the acquisition of the L2. That is, in the initial stage of L2 acquisition only UG principles instantiated in the L1, together with the L1 parameter values, are predicted to be reflected in the L2. This implies that L2 competence can reflect only those UG principles and parameter values that are manifested in the L1. Diagram (2), from Cook & Newson (1996:293) represents the indirect access hypothesis:

(2) **Indirect access to UG**

In contrast to those who hold that L2 learners do have access to UG (whether directly or indirectly via the L1) there are those who hypothesize that L2 learners have no access to UG and learn the L2 without its help. The no access hypothesis implies that L2 competence is fundamentally distinct from L1 competence and is acquired in a different way. Consider the schematic representation of the no access hypothesis for L2 learning in (3), taken from Cook & Newson (1996:294):

(3) **No access to UG**

On this hypothesis L1 acquisition and L2 acquisition are two distinct and qualitatively different phenomena. In L2 acquisition, unlike in L1 acquisition, there is no contribution from UG.

In this paper we examine word order phenomena in a sample of Afrikaans utterances produced by Rebecca, a four-year-old English speaking girl who is learning Afrikaans as an L2 in a natural environment. The primary aim of this paper is (i) to propose a (partial) L2 grammar that can account for the word order patterns found in Rebecca's utterances, particularly with regard to the position of the verb, and (ii) to see whether the proposed L2 grammar can cast light on the relative merits of the different hypotheses regarding L2 learners' access to UG outlined above.

The theoretical framework adopted for the analysis of the L2 data is the Minimalist Program first outlined by Chomsky in his 1992 paper *A Minimalist Program for Linguistic Theory* (published as Chomsky 1993). It represents the most recent version of Chomskyan syntactic theory and, as such, is still very much a research programme (Maartens 1996:5). A secondary aim of this paper, then, is to see whether an analysis within the framework of the Minimalist Program can provide insight into L2 phenomena.

In section 2 of this paper, some of the core concepts of the Minimalist Program (MP) are introduced briefly. Section 3 presents key assumptions about the structure of Afrikaans. In section 4 the relevant properties of Rebecca's Afrikaans utterances are described and a grammar is proposed that can account for these properties. The findings of the study are discussed in the final section.

2. The Minimalist Program

2.1. The computational system

A fundamental assumption in Chomskyan linguistics is that the human brain contains a language faculty as one of its components.¹ The language faculty is an autonomous system which is independent from but interacts with other mental systems. It consists of a lexicon and a computational system (C_{HL}). C_{HL} selects items from the lexicon and

uses these items to generate structural descriptions. Structural descriptions are representations of the linguistic expressions of a language.

A structural description generated by C_{HL} can be seen as a "complex of instructions" providing information relevant to two performance systems: the articulatory-perceptual system (A-P) and the conceptual-intentional system (C-I). A-P and C-I are connected to the computational system via interface levels. The interface between A-P and C_{HL} is the linguistic level of phonetic form (PF). Between C-I and C_{HL} lies the linguistic level of logical form (LF). Representations at PF and LF have to consist of legitimate entities interpretable at the relevant levels. If a computation (henceforth "derivation") forms an interpretable representation at both interface levels, it converges. If not, the derivation crashes.

At an arbitrary point in a derivation, the information relevant to PF gets separated from the information relevant to LF. This splitting of the derivation on the separate ways to PF and LF is known as Spell-Out. All operations that take place prior to Spell-Out form part of the overt syntax and are reflected in the visible PF-representation. Operations that take place after Spell-Out form part of the covert syntax: their effects are not visible on the phonological level.

2.2. The role of morphological features

The crux of the MP is the role played by morphological features. Lexical items, for example verbs (V) and nouns (N), are fully inflected for tense, case and agreement in the lexicon. The lexical item inserted into a derivation, therefore, consists of a stem with all its appropriate inflectional affixes, and the associated morphological features, already added. Fully inflected verb forms are marked with V-features, i.e. the abstract morphological features associated with tense and agreement (person, number, gender) affixes. Fully inflected noun forms are marked with N-features, i.e. the abstract morphological features associated with case and agreement affixes. Person, number and gender features are known as ϕ -features.

Unlike the lexical heads V and N, the functional heads AgrS (= Subject Agreement), T (= Tense) and AgrO (= Object Agreement) do not contain "visible" inflectional affixes. Rather, they contain only the abstract morphological features associated with inflectional morphology, i.e. V-features and N-features. The V-features in AgrS, T and AgrO match the agreement and tense features of verbs. The N-features in AgrS, T and AgrO match the case and agreement features of nouns or determiners.

In order for NPs (=noun phrases) and Vs to be licensed, their morphological features must match the features contained in the functional categories AgrS, AgrO and T. Morphological features of NPs and Vs, therefore, have to be checked against the abstract features in the functional heads. In order to have their features checked, NPs and Vs have to move from their initial positions in the lexical domain to the relevant checking positions in the functional domain. A subject NP is licensed by movement to [Spec, AgrS], where its N-features can be checked against the case and agreement features of AgrS. An object NP is licensed by movement to [Spec, AgrO]. Vs are licensed by adjunction to AgrO, then to T and finally to AgrS. The tense and agreement features of verbs are checked against the V-features in these functional heads.

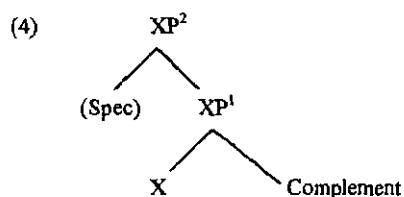
A fundamental assumption of the MP is that languages differ with respect to the strength of their verbal agreement features. Verbal agreement features can be strong, in which case they are visible at PF. A derivation fails to converge if strong verbal features are visible at PF. Therefore, strong features must be eliminated before Spell-Out through movement and consequent feature checking. Verbal agreement features can also be weak, in which case they are not visible at PF. Weak features are harmless and their checking can be delayed until after Spell-Out.

The requirement that a derivation must converge at the interface levels (*i.e. that strong features must be eliminated before Spell-Out*) is linked to the principle of Economy of Representation. Economy of Representation (henceforth "the Economy principle") excludes the presence of irrelevant material at any level of the derivation. The

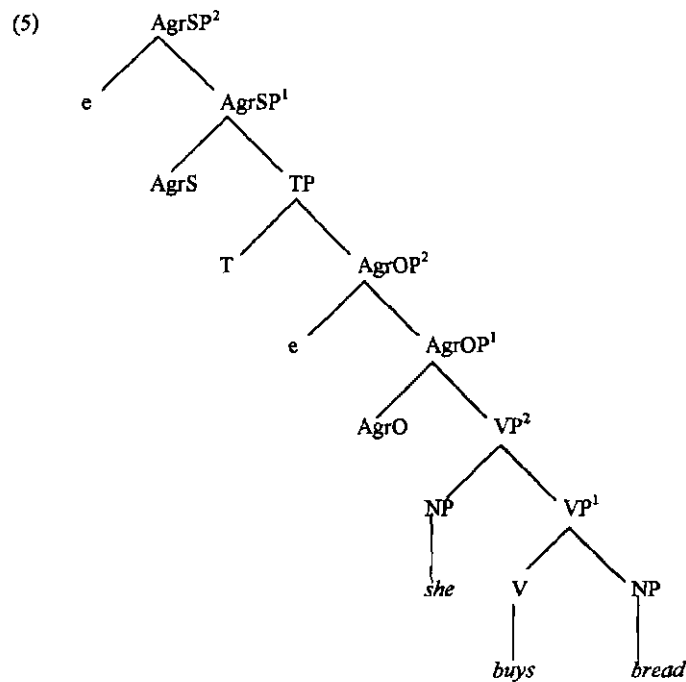
principle of Full Interpretation, one instantiation of the *Economy* principle, excludes the presence of non-interpretable material at the interface levels. The principle of Full Interpretation requires that every element of an output representation should provide a meaningful input to the relevant other parts of the cognitive system in order for the element to be a legitimate object at the interface levels. *Unchecked strong features* are visible at the interface level with PF. They do not provide meaningful input to the A-P system, however, and are therefore illegitimate.

2.3. The MP and word order

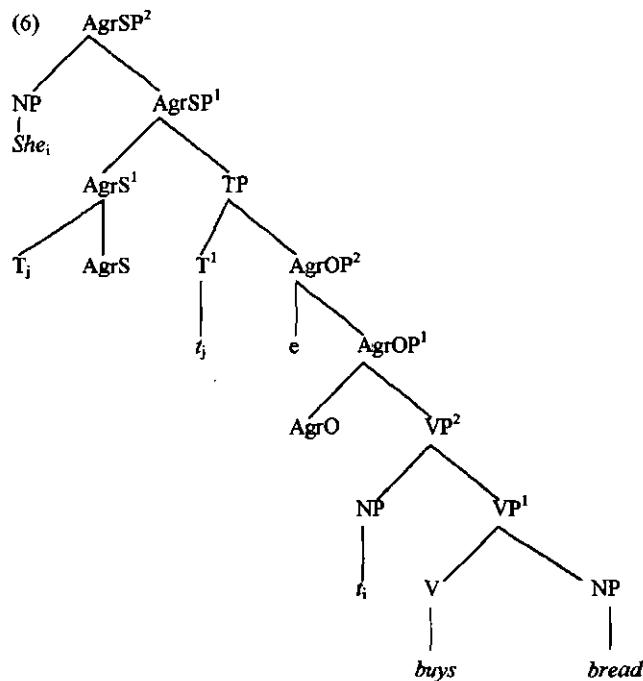
A fundamental assumption of the MP is that there is only one underlying word order for all human languages, viz. SVO.² This universal order is represented by the structure in (4):



The fact that different languages have different word orders at the phonological level is explained as the result of parametric variation between languages with regard to the strength of the morphological features in T and Agr. That is, the distinction between strong and weak features is used to account for word order variation. Recall that strong features are visible at PF and have to be checked before Spell-Out, while weak features are not visible at PF and can be checked in the covert syntax, after Spell-Out. Consider the structural representation of the sentence *She buys bread* in (5):



The functional category T is assumed to have a strong nominative (NOM) case feature (an N-feature) in English. This feature has to be checked before Spell-Out to prevent the derivation from crashing. The strong N-feature NOM of T must be checked against the matching N-feature of a lexical category. This brings about two overt operations, i.e. operations whose effects are visible at PF. T moves to AgrS to check its NOM feature against the corresponding feature of an NP in [Spec, AgrS]. Since [Spec, AgrS] is empty, the subject NP *she* moves to [Spec, AgrS]. (In structure (6), an italicized *i* is used to indicate the positions that elements have moved from.) Structure (6) is the result of the two overt operations described above:



These are the only movements that need to take place before Spell-Out, since all the other features of T and Agr are assumed to be weak. Movement of the V *buy* and the NP *bread* (to check the weak features) is delayed until after Spell-Out. As a result the sentence *She buys bread* has an SVO surface word order. The various surface word orders found in languages therefore result directly from the strength of the features contained in their functional categories. This point will be further illustrated in section 3 where we discuss the word order of Afrikaans.

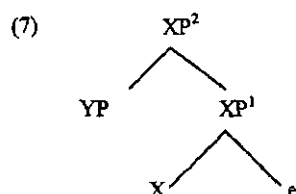
3. The structure of Afrikaans

Zwart (1993 & 1996) describes Dutch syntax within the framework of the MP. Many of the assumptions made by Zwart are applicable to Afrikaans as well, since Dutch and Afrikaans are closely related in terms of their grammatical structures.

As mentioned above, the MP assumes one underlying word order (SVO) for all languages. Central to Zwart's (1993:23-29) analysis of Dutch word order are three general proposals about the features of functional categories. These proposals concern the structural configurations in which the features of a functional head *X* can be checked as well as the accessibility of *X*'s features for projections of *X*.

First, Zwart (1993:28) *proposes* that feature checking can take place only in a sisterhood configuration.³ This proposal is problematic in some instances, specifically where feature checking occurs between two constituents that are not sisters. Recall that in (6) above *T*'s strong *N*-features are checked against the *N*-features of the subject *she*, even though *T* and *she* are not in a sisterhood configuration.

Zwart solves the problem by making a second proposal. He proposes that the morphological features of a functional head *X* are also present at the first *XP*-projection of *X*. Consider the following structure:



On Zwart's proposal, the head *X* in (7) above and its first *XP*-projection (*XP*¹) have the same morphological features, or in Zwart's terms, *X*'s features are *accessible* for *XP*¹ (Oosthuizen & Waher 1996:51). Feature-checking between *YP* and *XP*¹ is possible because they are in a sisterhood relation. So, given that *X* and *XP*¹ share the same morphological features, feature-checking in fact occurs, indirectly, between *YP* and *X*.

Zwart's third proposal concerns accessibility. According to him the accessibility of (the morphological features of) a functional head is subject to parametric variation:

functional heads are [$\pm$ accessible]. The morphological features of a functional head X can only spread to its first projection XP^1 if X is [$+$ accessible]. A head that is [$-$ accessible] becomes [$+$ accessible] through head to head movement, i.e. through movement and adjunction of (i) X to another head, or (ii) another head to X.⁴

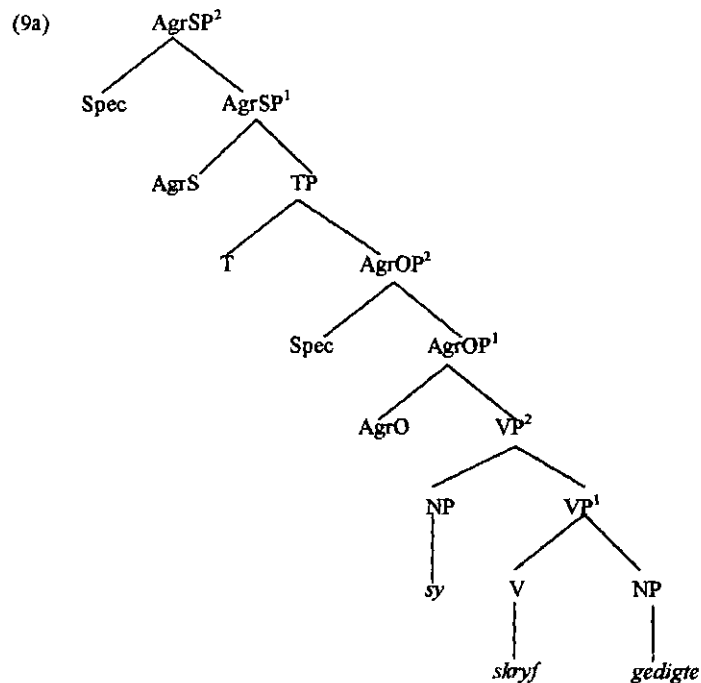
Given this proposal, the parameter of feature strength is no longer the only cause of structural variation between languages. Structural variation can also be the result of the parameter of feature accessibility. Zwart (1993) makes the following assumptions about the strength and the accessibility of morphological features in Dutch:

(8) **Dutch settings for parameters of feature strength and accessibility**

- (a) The N-features (case, number, person and gender features) of Agr (i.e. AgrS and AgrO) are strong; all the other features of Agr and T are weak.⁵
- (b) AgrS is [$-$ accessible].

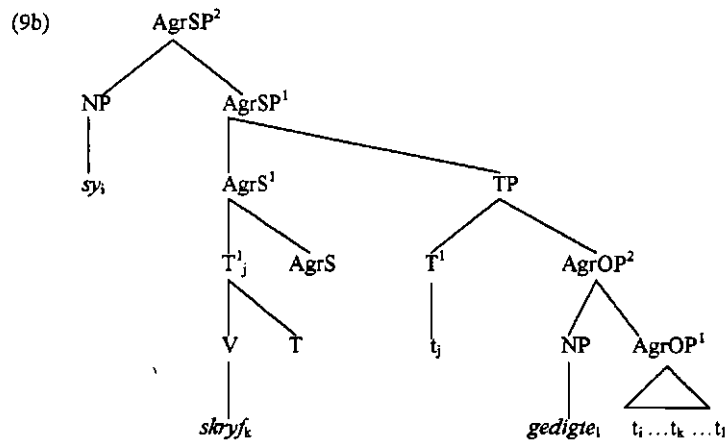
Oosthuizen & Waher (1996:52) adopt these assumptions in their analysis of Afrikaans. They propose that the structure of an Afrikaans subject-initial main clause such as *Sy skryf gedigte* ("She writes poems") should be represented as in (9a) below.

In (9a) there are three lexical categories that need to be licensed for interpretation at LF and PF. In order to be licensed the NP's *sy* and *gedigte* and the V *skryf* have to move to positions where their morphological features can be checked against the matching features of a functional category. By the assumption (8a) above, the N-features of Agr (i.e. AgrS and AgrO) are strong in Afrikaans and therefore visible at PF. These features must be eliminated before Spell-Out through movement and consequent feature checking. It follows that the NP's *sy* and *gedigte* have to move to [Spec, AgrS] and [Spec, AgrO] respectively in the overt syntax, i.e. before Spell-Out. Given that, by assumption (8a), all the other features of Agr and T are weak, movement of V is delayed until after Spell-Out.



However, this analysis is problematic for two reasons. Firstly, if the V *skryf* moves after Spell-Out, the resulting word order is SOV instead of the required SVO. Secondly, recall that AgrS is assumed to be [-accessible] – see (8b) above. This means that its morphological features do not spread automatically to AgrSP¹, and feature checking between AgrS and the subject NP *sy* through AgrSP¹ is not possible. As a result, movement of the NP *sy* to [Spec, AgrS] does not have the desired result, viz. checking of the strong N-features of AgrS.

Both these problems are solved if the V *skryf* moves in the overt syntax. Two additional head-to-head movement operations are needed to achieve this. The result of the two movement operations is shown in (9b).



In (9b) *skryf* first adjoins to the head *T*, forming the category T^1 , with *T* and *V* as daughters. The tense feature of *skryf* is checked against the weak *V*-feature of *T* in this configuration. In the second operation, T^1 moves and adjoins to *AgrS* forming the category *AgrS*¹ with *AgrS* and T^1 as daughters. This operation has two important consequences. Firstly, the *V skryf* moves to the second position in the sentence before Spell-Out, which results in SVO surface order. Secondly, the [-accessible] feature of *AgrS* becomes [+accessible], allowing the elimination of the strong *N*-features of *AgrS* through indirect feature checking between the subject *sy* and *AgrS* via *AgrSP*¹.

4. An L2 learner's Afrikaans word order

An investigation was conducted into the word order patterns in the spontaneous utterances of an L2 learner of Afrikaans. The subject, Rebecca, is a native speaker of English. At the start of data collection, the subject was four years and nine months old and enrolled in a dual medium (Afrikaans and English) nursery school where she received naturalistic exposure to Afrikaans in the classroom and on the playground. She had been in the nursery school for three months when the first recording was made. Recordings of Rebecca's Afrikaans utterances were made and transcribed over a period of seven months.⁶ Although the data contain many aspects worthy of

discussion, this paper focuses only on word order. The reason for the focus is that word order reflects parametrical differences between English and Afrikaans. As we saw in 2.3 above, T is assumed to have the strong N-feature NOM (= nominative case) in English, while all other T and Agr features in English are assumed to be weak. The result is that the object always follows the main verb in English, i.e. English has consistent S(Aux)VO word order.

In Afrikaans, by contrast, it is assumed that Agr has strong N-features, while all the other features of T and Agr are weak – see (8a) above. In addition, AgrS is assumed to be [-accessible] in Afrikaans – see (8b) above. The result of these parameter settings is that in Afrikaans the object follows the main verb in clauses containing only a finite main verb (= SVO word order), but precedes the main verb in clauses containing a finite auxiliary and a non-finite main verb (= SAuxOV word order). An investigation of Rebecca's Afrikaans word order should reveal whether her L2 grammar contains the English or the Afrikaans value of the relevant parameters, i.e. whether or not the parameters have been reset from their L1 value to the target L2 value.

4.1. Well-formed utterances

Rebecca's well-formed sentences can be divided roughly into three types: declarative sentences containing a single main verb, interrogatives with a single main verb and negative sentences. In this section possible derivations are proposed for the well-formed declarative and interrogative sentences. The sentences in (10) are examples of subject-initial declarative sentences with a single verb produced by Rebecca:

(10a) *Sy huil 'n klein bietjie.*
 She cries a little bit. ('She cries a little bit.')

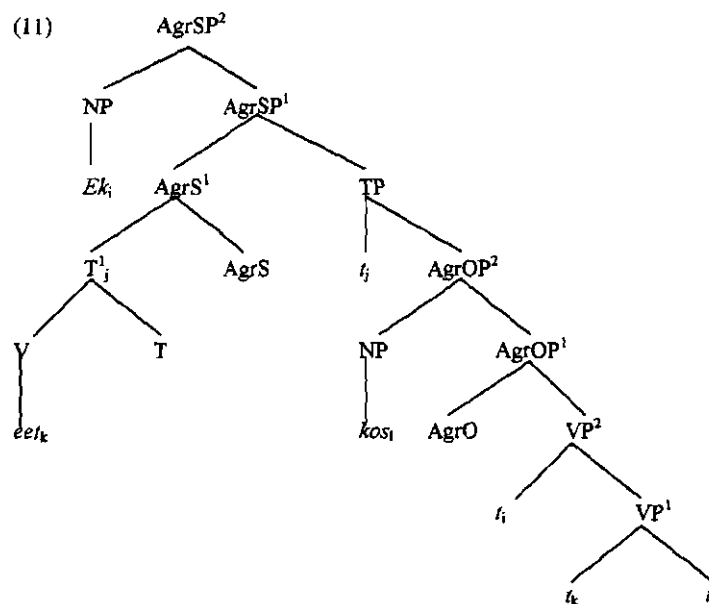
(10b) *Ek eet kos.*
 I eat food. ('I eat food.')

(10c) *Ek hou van "toast."*
 I like of toast. ('I like toast.')

(10d) *Sy sit op die huis.*
 She sits on the house. ('She sits on the house.')

(10e) *Ons speel met balle.*
 We play with balls. ('We play with balls.')

A possible derivation for (10b) is given in (11):



According to the representation in (11), sentence (10b) is derived as follows. The substantive categories *ek*, *eet* and *kos* have to be licensed for interpretation at PF and LF. In addition, the strong N-features of Agr must be eliminated before Spell-Out.

The NPs *ek* and *kos* therefore move to the appropriate positions, [Spec, AgrS] and [Spec, AgrO] respectively, to have their features checked. Recall, however, that AgrS is [-accessible] in Afrikaans. As a result, AgrSP¹ does not contain features against which those of the moved subject NP *ek* in [Spec, AgrS] can be checked. The problem is resolved by moving the V *et* to AgrS. The V first adjoins to the head T to form the category T¹ where the tense feature of V is checked against the weak V-feature of T. In a second operation, T¹ adjoins to AgrS, forming AgrS¹. In this configuration, any other V-features can be checked against AgrS. As a result of the head-to-head movement of T¹ (containing V) to AgrS, AgrS becomes [+accessible], allowing indirect feature checking between the subject NP *ek* and AgrS. These operations produce the structure (11) at Spell-Out. It appears as if Rebecca applies the correct parameter settings for Afrikaans in forming declarative main clauses in Afrikaans.

The sentences in (12) are examples of interrogative sentences produced by Rebecca. Again, the sentences contain only a single finite verb.

(12a) *Waar is die melk?*

Where is the milk? ('Where is the milk?')

(12b) *Wat is hierdie ding?*

What is this thing? ('What is this thing?')

(12c) *Wat doen hy met hierdie ding?*

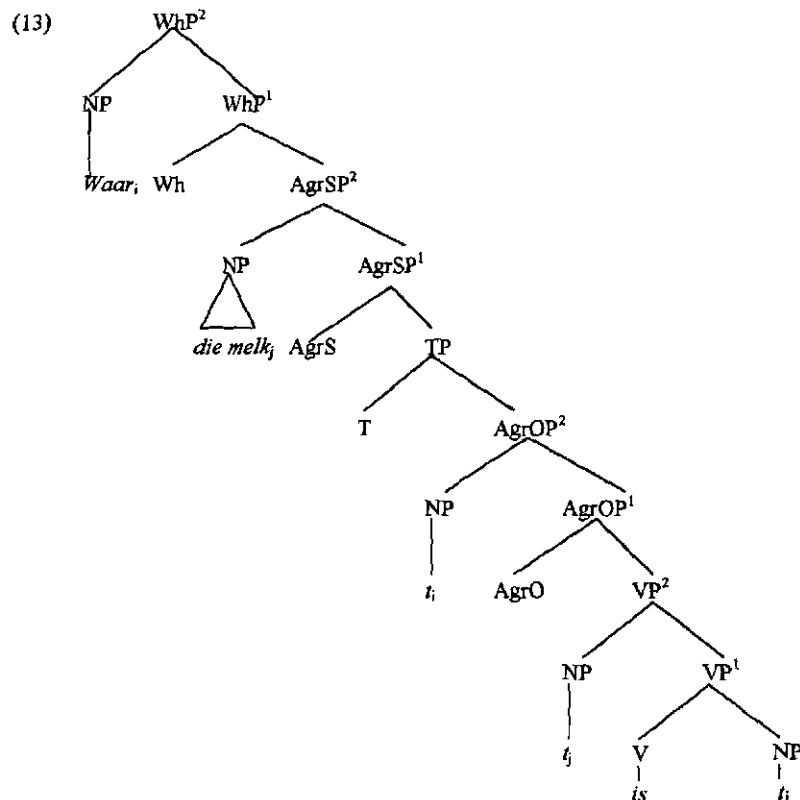
What does he with this thing? ('What is he doing with this thing?')

(12d) *Het jy 'n "rubber"?*

Have you a rubber? ('Do you have a rubber?')

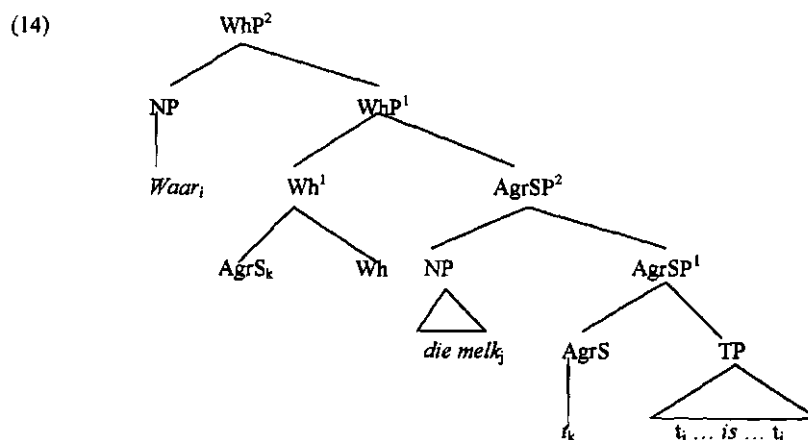
Zwart (1993) and Hoekstra & Zwart (1994) assume a split CP in their analysis of interrogatives in Dutch. On their analysis CP is divided into two functional categories, WhP and TopP. AgrSP is the complement (i.e. the sister) of the head Top, while TopP

is the complement of Wh (the head of WhP). [Spec, WhP] is the landing site for Wh-phrases and [Spec, TopP] is the landing site for topics. According to Zwart (1993:281-284), the functional heads Wh and Top have the strong N-features WH and TOPIC respectively, but they have no inherent V-features, since they are not lexically related to V. As they contain no V-features, Wh and Top are [+accessible] – see note 4. A possible derivation of (12a) *Waar is die melk?*, is shown in (13):



The functional heads in (13) (AgrS, AgrO and Wh) all contain strong N-features that have to be checked before Spell-Out. The NPs *die melk* and *waar* therefore move to the Spec positions in AgrSP and WhP respectively. The Wh-object *waar* makes an intermediate ‘landing’ in [Spec, AgrO], where the strong features of AgrO are checked

against the corresponding features of the Wh-object. AgrS is [-accessible], and needs to become [+accessible] before feature checking between AgrS and the NP *die melk* can occur. According to Oosthuizen (1996:87) this is achieved by the head-to-head movement and adjunction of AgrS to Wh before Spell-Out. A new category Wh¹ is created with AgrS and Wh as daughters, as illustrated in (14):



The weak V-features of AgrS are removed from AgrSP¹ by AgrS-to-Wh movement. The strong N-features of AgrS thus become [+accessible] for AgrSP¹, presumably via the trace of AgrS⁸. However, as Wh¹ now contains the V-features of AgrS, it becomes [-accessible]. The result is that feature checking between Wh and the NP *waar* is blocked. The strong features associated with Wh must be checked before Spell-Out though, or the derivation will crash. The only way in which convergence can be effected, is to adjoin the V *is* to Wh¹ in the overt syntax as a last resort. The V-feature of Wh¹ can now be checked against the V-feature of *is*. After the V-feature of Wh¹ has been checked and eliminated, the strong N-feature becomes [+accessible] for checking against the NP *waar*. It appears, once again, that the well-formedness of the utterances in (12) can be explained on the assumption that Rebecca has reset the relevant parameters to their L2, i.e. Afrikaans, values.

4.2. Ill-formed utterances

A common feature of Rebecca's ungrammatical sentences is that they are more complex than her well-formed ones: besides a non-finite main verb, they also contain a finite auxiliary verb. With a few exceptions, Rebecca's sentences containing auxiliary verbs, are ill-formed. Consider the following ill-formed sentences:

- (15a) **Ons kan eerste speel hierso.*
 We can first play here. ('We can first play here.')
- (15b) **Ons het geëet die vark.*
 We have eaten the pig. ('We have eaten the pig.')
- (15c) **Jy moet help my.*
 You must help me. ('You must help me.')
- (15d) **Ek wil werk met hierdie hoed weer.*
 I want-to work with this hat again. ('I want to work with this hat again.')
- (15e) **Ek sal sit hierdie "skirt" aan.*
 I shall put this skirt on. ('I shall put this skirt on.')

The auxiliaries *kan* ('can'), *het* ('have'), *moet* ('must'), *wil* ('will'/'want to'), and *sal* ('shall'/'will') follow directly after the subject in the sentences above. This is the correct position for auxiliaries in Afrikaans. The sentences in (15) are ill-formed because of the relative order of the object NP and the non-finite main verb. In a well-formed sentence, the non-finite main verb should be in the final sentence position, as shown in (16):

(16a) *Ons kan eerste hierso speel.*

We can first here play. ('We can first play here.')

(16b) *Ons het die vark geëet.*

We have the pig eaten. ('We have eaten the pig.')

(16c) *Jy moet my help.*

You must me help. ('You must help me.')

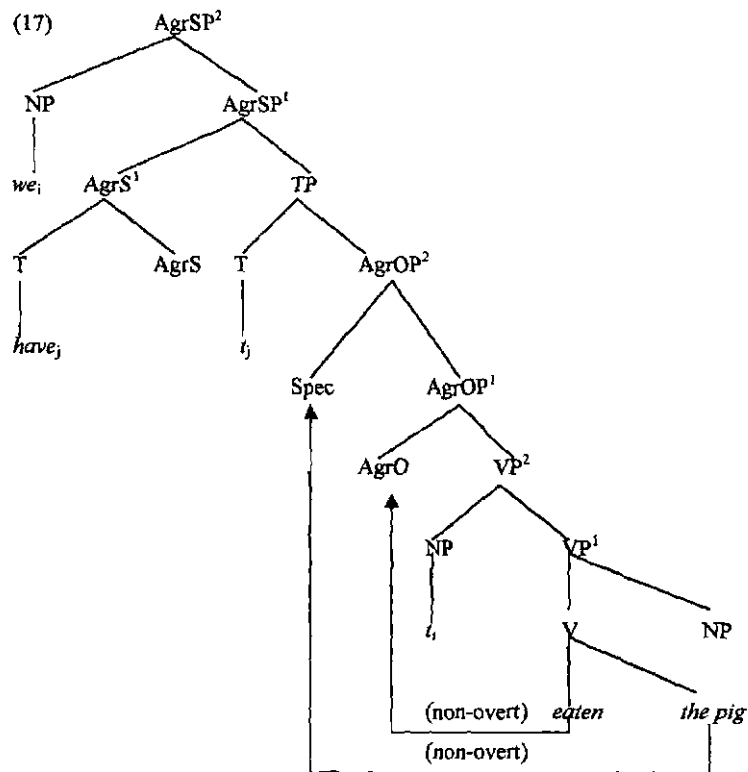
(16d) *Ek wil weer met hierdie hoed werk.*

I want-to again with this hat work. ('I want to work with this hat again.')

(16e) *Ek sal hierdie "skirt" aansit.*

I shall this skirt on put. ('I shall put on this skirt.')

The ill-formed sentences in (15) can be derived in one of two possible ways. The first possibility is to move the main verb to the final sentence position. This seems a highly unlikely derivation, however, since heads can only move leftward and upward in a tree.⁹ The second possibility is for the object NP to remain in its D-structure position, i.e. not to move to [Spec, AgrO] before Spell-Out. In this case a sentence such as, e.g., (15b) **Ons het geëet die vark* would have exactly the same derivation as its English counterpart *We have eaten the pig*. To see this, consider the structure in (17), which represents the derivation of the English sentence *We have eaten the pig*.¹⁰



Recall that the morphological features of AgrS and AgrO are weak in English – see paragraph 2.3 above. T, however, has strong as well as weak features: its strong N-features (e.g. case) have to be checked against the matching features of the subject NP, while its weak V-features (e.g. tense) are checked against those of the finite auxiliary *have* (Oosthuizen & Waher 1996:45; Radford 1997: 244).

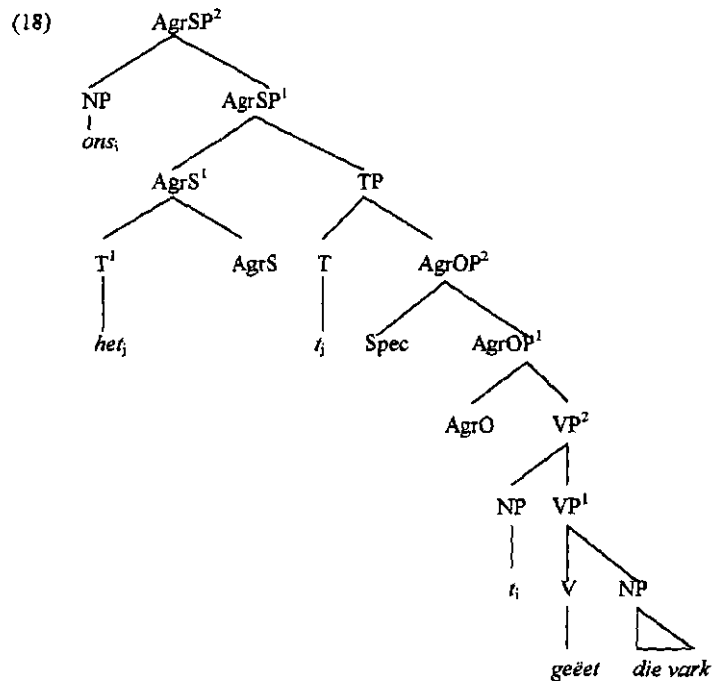
The strong N-feature of T, viz. NOM_i, has to be checked before Spell-Out. T therefore has to move overtly to a position where NOM can be checked against the matching feature of a substantive category. AgrS seems to be the only possibility, as [Spec, AgrS] is a potential landing site for the subject NP *we*. T moves before Spell-

Out and adjoins to AgrS, forming AgrS¹ as shown in (17). The NOM feature of T is still not checked though, since [Spec, AgrS] (the sister of AgrSP¹) is empty. The subject NP *we* has to move overtly to [Spec, AgrS], to fill the empty position. As shown in (17), the NP *we* and the functional category AgrSP¹ are now in a sisterhood configuration in which their N-features (including the strong N-features associated with T) can be checked. These overt movements result in the surface word order *We have eaten the pig*.

After Spell-Out a number of covert movements take place (indicated with arrows in (17)). The object NP *the pig* and the V *eaten* also have to move to positions where their morphological features can be checked. *The pig* contains ϕ -features (person and number) and the case feature ACC (accusative). *The pig* must move to [Spec, AgrO], where these N-features can be checked against the features of AgrO. As mentioned above, Agr-features are weak in English. Movement of the NP *the pig* is thus delayed until after Spell-Out and is therefore not visible at PF.

The V *eaten* contains an ACC case feature that matches the weak case feature of AgrO. The weak ACC feature is checked through movement and adjunction of *eaten* to AgrO after Spell-Out.

Given the equivalent Afrikaans lexical items, the derivation shown in (17) would yield Rebecca's ill-formed utterance **Ons het geëet die vark*, as shown in (18):

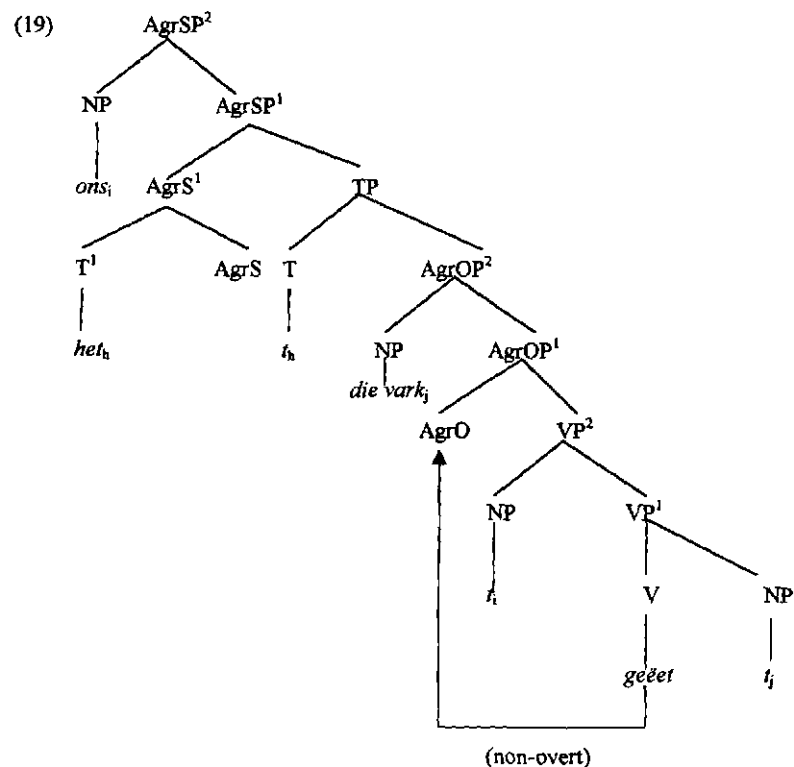


The structure (18) shows the representation of the sentence **Ons het geëet die vark* at Spell-Out. This representation is compatible with the hypothesis that Rebecca is constructing the Afrikaans sentence on the basis of the English values for the parameters of feature strength. The assumption that T has the strong N-feature NOM would force adjunction of T to AgrS. Consequently, the subject NP *ons* would have to move overtly to [Spec, AgrS] to ensure that the strong N-feature is eliminated before Spell-Out. All other features in English are weak. If these weak values are assumed to form part of the subject's L2 grammar, it would explain why the V *geëet* and the object *die vark* are not moved in the overt syntax, resulting in the surface word order **Ons het geëet die vark*. Consider once again the parameter settings assumed for Afrikaans, given in (8) above and repeated here for ease of reference:

(8) Dutch settings for parameters of feature strength and accessibility

- (a) The N-features (case, number, person and gender features) of Agr (i.e. AgrS and AgrO) are strong; all the other features of Agr and T are weak.
- (b) AgrS is [-accessible].

If these parameter settings were assumed to form part of the subject's L2 Afrikaans grammar, there would be no explanation for the occurrence of sentences such as (15b) **Ons het geëet die vark* in the data. Given the strong N-features of AgrS and AgrO in Afrikaans, both the subject NP *ons* and the object NP *die vark* would be forced to move overtly, i.e. before Spell-Out, as shown in (19).

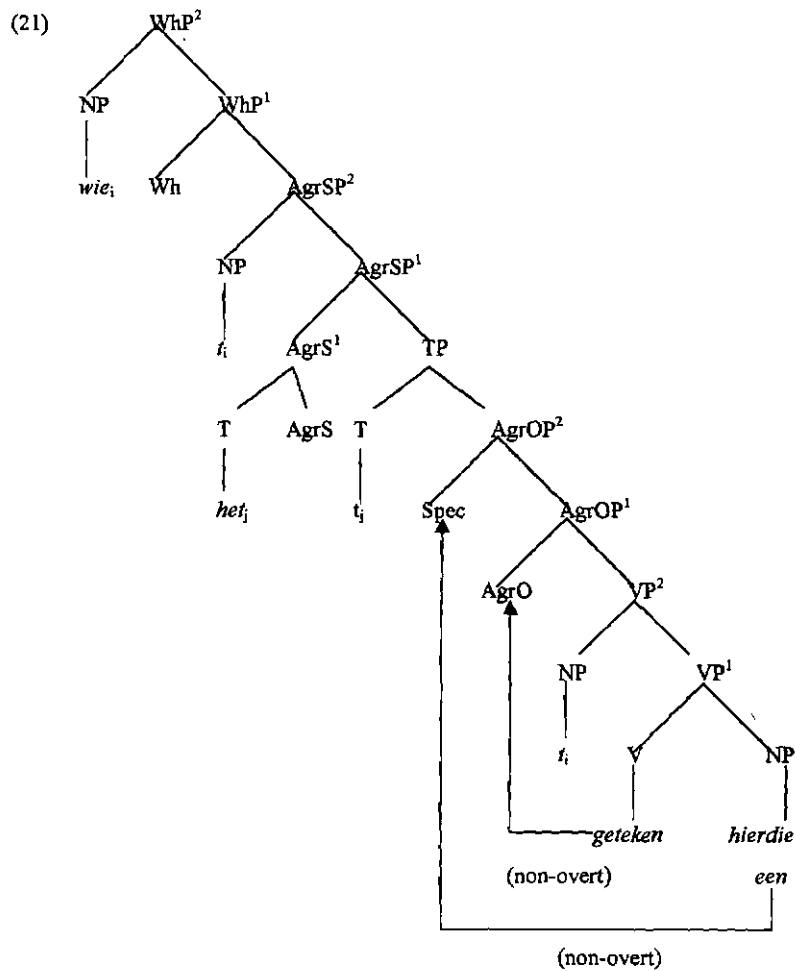


The representation in (19) is derived as follows. The subject NP *ons* moves overtly to [Spec, AgrS] to ensure checking of the strong N-features of AgrS. The category T undergoes head-to-head movement and adjoins to AgrS, causing the [-accessible] feature of AgrS to become [+accessible]. This movement allows indirect feature checking between the NP *ons* and AgrS, via AgrSP¹. The object NP *die vark* moves overtly to [Spec, AgrO], allowing for the strong N-features of AgrO to be checked against those of the object NP. Therefore, the requirement that all strong features be eliminated before Spell-Out results in the surface word order shown in (19). This order corresponds to (16b) *Ons het die vark geëet*, and not to the order produced by the subject, viz. (15b) **Ons het geëet die vark*.

The non-target word order pattern exemplified in (15) occurs quite consistently in the data. Consider, for example, the following ill-formed interrogatives produced by Rebecca:

- (20a) **Wat het gebeur met hierdie?*
 What has happened with this? ('What happened to this?')
- (20b) **Wie gaan sit hierso?*
 Who go sit here? ('Who is going to sit here?')
- (20c) **Wanneer gaan ons praat met dit?*
 When go we talk with this? ('When are we going to talk to it?')
- (20d) **Wie het geteken hierdie een?*
 Who has drawn this one? ('Who drew this one?')
- (20e) **Hoekom het jy gebring dit?*
 Why have you brought this? ('Why have you brought this?')

The ill-formed interrogatives in (20) can be derived in essentially the same way as the ill-formed declaratives in (15), as shown in (21). The diagram in (21) represents the structure of (20d) **Wie het geteken hierdie een?* at Spell-Out.



Sentence (20d) is derived in exactly the same way as (15b) – see (18) above – except that the NP *wie* moves from $[Spec, AgrS]$ to $[Spec, Wh]$ where the strong N-features

of Wh are checked against the corresponding features of the Wh-element *wie*. This movement occurs overtly, since the strong features associated with Wh must be checked prior to Spell-Out. As in the case of (15b), the only possible explanation for the non-target word order is that the NP in the object position does not move to [Spec, AgrO] before Spell-Out. The covert (as opposed to overt) movement of the object NP to [Spec, AgrO] follows if the English rather than the Afrikaans values of the relevant parameters are assumed to form part of the subject's L2 grammar. That is, in Rebecca's L2 Afrikaans grammar, Agr features are weak, as in English, not strong as in Afrikaans.

5. Conclusion

Rebecca's single-verb Afrikaans utterances are well-formed. The sentences underlying them have a possible derivation which is compatible with the hypothesis that Rebecca operates with the Afrikaans values of the relevant parameters as shown in paragraph 4.1 above. By contrast, utterances with a main as well as an auxiliary verb are all ill-formed. As was shown in paragraph 4.2 above, the sentences underlying them can be derived by applying the parameter settings assumed to hold for English. This was found to be the case in both declaratives and interrogatives containing a main and an auxiliary verb.

Is one to conclude that Rebecca's L2 grammar contains both the English and the Afrikaans settings for the relevant parameters? This is highly unlikely. Rather, a different explanation suggests itself. We would like to propose that the sentences underlying the well-formed utterances in (10) and (12) are grammatical purely by accident. Note that these sentences could just as well have been derived on the basis of English parameter values. As a result of the difference in parameter values between Afrikaans and English, the derivation of single-verb main clauses in English differs from their derivation in Afrikaans. The resulting surface word order is exactly the same in the two languages, however, as a comparison of the Afrikaans utterances in (10b) and (12b) with their English translations clearly shows.

(10b) *Ek eet kos.*
 I eat food. ('I eat food.')

(12b) *Wat is hierdie ding?*
 What is this thing? ('What is this thing?')

The well-formedness of the Afrikaans utterances in (10) and (12), therefore, is compatible with the assumption that Rebecca's Afrikaans grammar still contains the English values for the relevant parameters. This supports the conclusion that Rebecca's L2 grammar generates what, in essence, are English structures into which Afrikaans lexical items have been inserted.

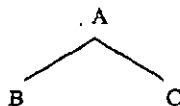
It seems clear that Rebecca, in learning her L2, Afrikaans, starts out with the parameter values of her L1, English. The question that remains to be answered is whether one of the hypotheses on access to UG in L2 acquisition described in paragraph 1 above can account for the way in which Rebecca acquires her L2. She obviously does not have access to UG directly, bypassing the L1 grammar. The direct access position is therefore not supported by the findings of this study. Choosing between the remaining positions, i.e. the indirect access position and the no access position, remains a difficult task. Both positions are compatible with the conclusion of this study, viz. that Rebecca uses her L1 grammar to construct sentences in her L2. More research is needed to establish whether or not UG plays any role in her acquisition of Afrikaans.

Finally, the secondary aim of the paper was to see whether L2 phenomena can be insightfully analyzed within the framework of the Minimalist Program. We believe that the findings of this study have shown that interesting insights into the way in which L2 learners go about the task of L2 acquisition can be obtained by using the descriptive machinery of the MP.

NOTES

- * This article is a substantially revised version of a paper submitted to the Department of General Linguistics at the University of Stellenbosch in 1998 in partial fulfilment of the requirements of the MA degree in General Linguistics. The research for the original paper was carried out by Carien Wilsenach under supervision of Cecile le Roux.

- 1 The discussion of the MP in section 2 is necessarily cursory and incomplete. The interested reader is referred to (Chomsky 1993, 1995) and (Marantz 1995), or to the very readable introductions to the MP provided in (Maartens 1996) and (Oosthuizen & Waher 1996).
- 2 The idea that all languages are underlyingly SVO was proposed by Kayne. Cf Kayne, R.S. 1994. *The antisymmetry of syntax*. Cambridge, MA: MIT Press.
- 3 Items that are immediately dominated by the same element are known as 'sisters'. An item is immediately dominated by the element that occurs immediately above it in a tree structure. In the tree structure below, A immediately dominates both B and C. B and C are therefore sisters, i.e. B and C occur in a sisterhood configuration.



- 4 According to Zwart (1993: 283ff) the inaccessibility of the N-features of a functional head is linked to the presence of unchecked V-features of that head. For the N-features to become accessible, therefore, the V-features must be removed either through movement of the head containing the V-features, or through checking of its V-features against the matching features of an adjoined head.
- 5 In his 1996 work Zwart assumes that the V-features of Agr are also strong. For the purpose of this paper, we adopt the assumption made in his 1993 work, viz. that the V-features of Agr are weak.
- 6 The recordings and transcriptions were made by a postgraduate student in the department of General Linguistics at the University of Stellenbosch as part of a departmental project to make data on the acquisition of Afrikaans as a first and second language available on the CHILDES database.
- 7 The Afrikaans verb *sit* can also be translated as "put" and the preposition *op* as "up" in English. However, it is clear from the context of the utterance that Rebecca wanted to say "She sits on the house" and not "She puts up the house".

- 8 This was suggested to us by Johan Oosthuizen. Since only the weak V-features of AgrS are checked in the moved position, as will be shown directly, the N-features presumably become accessible via the trace of AgrS in AgrSP¹.
- 9 Given Kayne's proposal that phrases are universally left-headed - see note 2 - the possible landing positions for moved verbs are all to the left of VP.
- 10 The proposed derivation is based on the discussion in Oosthuizen & Waher (1996: 45-48). In addition, it is assumed that auxiliary *have* originates in T - see e.g. Radford (1997: 240ff).

REFERENCES

- Chomsky, N. 1976. *Reflections on Language*. London: Temple Smith.
- Chomsky, N. 1991. Linguistics and adjacent fields: a personal view. In A. Kasher (ed.) *The Chomskyan turn*. Oxford: Blackwell, 5-23.
- Chomsky, N. 1993. A minimalist theory for linguistic theory. In K. Hale and S.J. Keyser (eds). *The view from building 20*. Cambridge, Mass.: MIT Press, 1-52.
- Chomsky, N. 1995. Bare phrase structure. In G. Webelhuth (ed.) *Government and Binding theory and the Minimalist program*. Oxford: Blackwell, 383-440.
- Chomsky, N & H. Lasnik. 1993. Principles and parameters theory. In J. Jacobs, A. Stechow, W. Sternefeld and T. Venneman (eds). *Syntax: An International Handbook of Contemporary Research*. Berlin: De Gruyter.
- Cook, V. J. & Mark Newson. 1996. *Chomsky's Universal Grammar*. Second edition. Oxford: Blackwell.
- Haegeman, L. 1994. *Introduction to Government & Binding Theory*. Second edition. Oxford: Blackwell.
- Hoekstra, E. & Zwart, J-W. 1994. De structuur van de CP. Functionele projecties voor topics en vraagwoorden in het Nederlands. *Spektator* 23(3): 191-212.
- Maartens, J. 1996. The Minimalist Program - an orientation. *Suid-Afrikaanse Tydskrif vir Taalkunde Supplement* 29: 5-34.
- Marantz, A. 1995. The Minimalist Program. In G. Webelhuth (ed), *Government and Binding theory and the Minimalist Programme*. Oxford: Blackwell, 351-384.

- Oosthuizen, J. 1996. Minimalisme en woordordevariasie in Afrikaanse vraagsinne. *SPIL PLUS* 29. Departement Algemene Taalwetenskap, Universiteit van Stellenbosch, 71-98.
- Oosthuizen, J. & H. Waher. 1996. Minimalisme: Organisasie, Afleiding en Woordorde. *Suid-Afrikaanse Tydskrif vir Taalkunde* Supplement 29: 35-67.
- Radford, A. 1997. *Syntactic theory and the structure of English. A minimalist approach*. Cambridge: Cambridge University Press.
- Webelhuth, G. 1995. *Government and Binding Theory and the Minimalist Program*. New York: Blackwell.
- Zwart, J-W. 1993. Dutch Syntax. A Minimalist approach. *Gronigen Dissertations in Linguistics 10*. Groningen: Universiteitsdrukkerij.
- Zwart, J-W. 1997. *Morphosyntax of verb movement. A minimalist approach to the syntax of Dutch*. Dordrecht: Kluwer Academic Publishers.