

ON CONTROL : AN ANALYSIS OF CONTROL PHENOMENA IN  
AFRIKAANS AND AN ARGUMENT FOR DISPENSING WITH THE  
MINIMAL DISTANCE PRINCIPLE

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1. Introduction

The notion of "control" is used in transformational grammar to account for the way in which certain sentential structures are interpreted. The structures concerned are illustrated in (1):

- (1) a. John [<sub>VP</sub>persuaded Bill [<sub>S</sub> [<sub>NP</sub> e]] to leave]]
- b. John [<sub>VP</sub>promised Bill [<sub>S</sub> [<sub>NP</sub> e]] to leave]]
- c. I gave him [<sub>NP</sub>a book [<sub>S</sub> [<sub>COMP</sub>for] [<sub>S</sub> [<sub>NP</sub> e]] to read which]]]
- d. I got [<sub>NP</sub>a book [<sub>S</sub> [<sub>COMP</sub>for] [<sub>S</sub> [<sub>NP</sub> e]] to read which]]]
- e. John was [<sub>AP</sub>lucky [<sub>S</sub> [<sub>NP</sub> e]] to win]]
- f. John was [<sub>AP</sub>eager [<sub>S</sub> [<sub>COMP</sub>for] [<sub>S</sub> [<sub>NP</sub> e]] to win]]]
- g. It was [<sub>AP</sub>unclear [<sub>S</sub> [<sub>COMP</sub>+ <sub>WH</sub>] [<sub>S</sub> [<sub>NP</sub> e]] to do what]]]
- h. I [<sub>VP</sub>asked him [<sub>S</sub> [<sub>COMP</sub>+ <sub>WH</sub>] [<sub>S</sub> [<sub>NP</sub> e]] to do what]]]

The only possible interpretation of (1)a (according to speakers of English) is that John persuaded Bill that he, Bill, had to leave. In (1)b by contrast, the empty subject, [<sub>NP</sub> e], of the complement is construed as John, i.e. "John promised Bill that he, John, would leave". In (1)c [<sub>NP</sub> e] is understood to refer to him, i.e. "I gave him a book for him to read". The empty complement subject of (1)d is interpreted as coreferential with I, the subject of the main clause, i.e. "I got a

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book for me to read". In both (1)e and (1)f the complement subject is understood to be John, i.e. "John was lucky that he, John, won" in (1)e, and "John was eager for him, John, to win" in (1)f. In (1)g,  $[\text{NP } e]$  is taken to be arbitrary in reference, i.e. "it was unclear what some unspecified person(s) was/were to do". The only possible interpretation of (1)h is that I asked him what I was to do.

To account for the fact that in each of the cases in (1) above  $[\text{NP } e]$ , the empty complement subject, is interpreted as either coreferential with an NP in the matrix clause or arbitrary in reference, a rule of control must assign a proper index to the element  $[\text{NP } e]$ . This index will be either the index of an NP in the matrix clause, the controller of  $[\text{NP } e]$ , or the index arb indicating arbitrary reference.

§2 contains a brief summary of what I take to be the current view of the properties of control and their treatment within the (Revised) Extended Standard Theory (henceforth: REST). This includes an outline of (i) the general theory of control as proposed in Chomsky and Lasnik's (1977) article, "Filters and Control", and in Chomsky's (unpublished) paper, "On Binding", and (ii) Chomsky's proposals (Chomsky, unpublished) for the description of control in English. In §3 an analysis of data from Afrikaans will be presented to show that (i) the general theory of control outlined in §2 holds for control in Afrikaans and (ii) the specific rule of control proposed for English by Chomsky extends to Afrikaans with only one slight modification. §4 deals more specifically with a certain redundancy in the general linguistic principles invoked to restrict the operation of the control rule. In conclusion, §5 will be devoted to a summary of the findings of this study and an outline of what I consider to be topics for further research.

## 2. The treatment of control within the REST

### 2.1 Positions subject to control

The rule of control, being a rule of construal whose task it is to associate antecedents and anaphors, can apply only to certain anaphoric elements, viz. base-generated  $[\text{NP } e]$  = PRO.<sup>1)</sup> Chomsky (unpublished: App-5) holds that "there are exactly two positions in which an anaphor can be controlled with proper binding, namely, COMP and subject [of an

infinitive complement --- C. le R.]". Thus, no occurrence of PRO in a matrix clause can undergo control. The matrix subject position is excluded from control by a general linguistic condition on anaphora, viz. the C-command Condition that requires an antecedent to c-command its anaphor.<sup>2)</sup> As the subject NP of a matrix clause can never be c-commanded by another NP in the sentence, it cannot be an anaphor, as in (2) below:

- (2) [S [NP e] [VP was [AP en [VP [V<sup>hit</sup>] [NP Bill]]]]]]]

In the absence of a c-commanding antecedent, [NP e] in (2) is left un-indexed and the sentence is starred because a structure which contains a free variable cannot be logically well-formed.<sup>3)</sup>

No NP within a VP, be it the VP of the matrix or of the embedded clause, can be subject to control. Both these positions are excluded as positions of control by the Opacity Condition<sup>4)</sup> which states that an element in the domain of the subject of  $\beta$  cannot be related anaphorically to an antecedent outside  $\beta$ , where  $\beta$  can be  $\bar{S}$  or NP, as in (3):

- (3) it is unclear [S who t to visit PRO]

In (3) PRO is in the domain of the subject of  $\bar{S}$ , viz.  $t$ , the trace of who. By the Opacity Condition PRO is left unindexed. The structure is therefore starred as a logically ill-formed structure. The sentence it is unclear who to visit cannot mean "it is unclear who is to visit some unspecified person".

It remains to be explained why only elements in infinitival complements are subject to control. This property of control follows from the Nominative Island Constraint<sup>5)</sup> which blocks any anaphoric relation between an anaphor in a tensed, i.e. finite, clause and an antecedent outside it, as in (4):

- (4) John asked Bill [S who PRO visited t]

In (4), with t the trace of who, PRO is the subject of a tensed clause, that is, PRO is assigned nominative case by the principles of case assignment.<sup>6)</sup> As PRO has no antecedent within  $\bar{S}$ , it is a free variable and the structure is starred as logically ill-formed. The sentence John asked Bill who visited cannot mean "John asked Bill who he (John or Bill) visited".

Thus, the general linguistic restrictions on antecedent-anaphor relationships expressed by the C-command Condition, the Opacity Condition and the Nominative Island Constraint, interact to leave us with only two possible positions of control, COMP and the subject of infinitival complements.

## 2.2 Obligatory control

According to Chomsky and Lasnik (1977:439), "there are two factors that enter into obligatory control. In the first place, certain structures are 'structures of obligatory control', for example, [30] [i.e. our (5) --- C. le R.], where + WH is the mark for a (direct or indirect) interrogative:

$$(5) \quad = [30] \cdot [\bar{S} \; [_{\text{COMP}}^{\text{what + WH}} \; [\underline{S} \; \text{to VP}]]]^7)$$

In the second place certain verbs require that an embedded subject be controlled either by the matrix subject or the matrix object, as determined by properties of the matrix verb".

The first case of obligatory control, viz. "interrogative" structures such as (5), ensures that no infinitival interrogative complement with lexical NP or trace is assigned a well-formed representation in LF. Therefore, the structure (6) can only receive an interpretation if  $NP_1$  is PRO, as is clear from the sentences in (7).

$$(6) \quad \dots [\alpha \; \text{who} \; [\beta \; NP_1 \; \text{to visit } NP_2]]]$$

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- (7) a. It is unclear [S who [S<sub>0</sub> PRO to visit t]]]  
b. \*It is unclear [S who [S<sub>0</sub> Bill to visit t]]]

In the second case of obligatory control, certain verbs are marked [+ Control] in the lexicon.<sup>8)</sup> According to Chomsky (unpublished: 40), "in the unmarked case, verbs that take bare (i.e. null COMP) infinitive complements are verbs of control".

This stipulation follows from the principles of case assignment: i.e. an NP is assigned nominative case when governed by Tense (as in that-complements) and oblique case when governed by P (as in for-complements).<sup>9)</sup> A lexical NP that has not been assigned case is ruled out by the filter \*N, where N has no case. It follows that the NP of a COMP-less, Tense-less clause, that is a "bare infinitive complement", cannot be assigned case and must therefore be a PRO coindexed with an NP that has been assigned case.<sup>10)</sup> Verbs of obligatory control can, therefore, never take a lexical subject in their complement. This accounts for the facts of (8).

- (8) a. John promised (persuaded) Bill [S<sub>0</sub> PRO to visit Jack]  
b. \*John promised (persuaded) Bill [S<sub>0</sub> Nick to visit Jack]  
c. John tried [S<sub>0</sub> PRO to visit Jack]  
d. \*John tried [S<sub>0</sub> Nick to visit Jack]  
e. \*John promised (persuaded) Bill [S<sub>0</sub> for [S<sub>0</sub> Nick to visit Jack]]]  
f. ?John tried [S<sub>0</sub> for [S<sub>0</sub> Nick to visit Jack]]<sup>11)</sup>

The sentences (8)b, d, e, and f are ill-formed because (i) promise, persuade and try cannot take for complementizer and hence (ii) the NP Nick cannot be assigned case. It follows that the verbs in question must be verbs of obligatory control.<sup>12)</sup>

Apart from verbs of obligatory control, certain adjectives invoke obligatory control as well. In fact, adjectives behave exactly like verbs in that adjectives of control may be defined as those adjectives that are

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not Raising adjectives and that do not take for or that complementizers, as illustrated in (9).

- (9) a. John was lucky [S PRO to win]  
b. \*John was lucky [S Tom to win]  
c. John is certain [S t to win]  
d. \*[NP e] is certain [S PRO to win]  
e. John was eager [S for [S Tom to win]]  
f. John was eager [S for [S PRO to win]]  
g. John was sorry [S that [S Tom won]]  
h. \*John was sorry [S that [S PRO won]]

It seems, then, that control is obligatory in the case of the adjective lucky, impossible in the case of certain and sorry, and optional (i.e. obligatory where applicable) with eager.

### 2.3 Other cases of control

Whereas PRO must appear in the subject position of the complements of verbs that take a bare infinitival complement (with the exceptions noted in fn. 12), PRO can optionally appear in structures such as (10).

- (10) [S [COMP for] [S NP to VP]]<sup>13)</sup>

Of these structures Chomsky (unpublished: 40) says: "Only [+ F]<sup>14)</sup> verbs take such complements as [85] [i.e. (10) above — C. le R.], though of course [85] appears quite freely in other contexts". The "other contexts" referred to are the complements of nouns and adjectives. Examples of such structures were presented as (1)d and f above and are repeated as (11)a and b below.

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- (11) a. I got [NP<sub>a</sub> book [S [COMP<sub>for</sub>] [S [NP<sub>e</sub>] to read which]]]
- b. John was [AP<sub>eager</sub> [S [COMP<sub>for</sub>] [S [NP<sub>e</sub>] to win]]]

The verb get and the adjective eager do not obligatorily assign control. The sentences (12)a and b, for instance, are equally acceptable, which they could not have been, had control been obligatory.

- (12) a. I got [NP<sub>a</sub> book [S [COMP<sub>for</sub>] [S [NP<sub>her</sub>] to read which]]]
- b. John was [AP<sub>eager</sub> [S [COMP<sub>for</sub>] [S [NP<sub>Tom</sub>] to win]]] <sup>15)</sup>

In (12)a and b case is assigned by virtue of the presence of the complementizer for and the resulting sentences are perfectly well-formed.

The operative principle, therefore, seems to be the following: certain structures, verbs and adjectives require that the complement subject position be controlled, while in all other cases control is obligatory just in case it is applicable, i.e. if the complement subject position is not lexically expanded.

#### 2.4 Restrictions on the controller

A controller is an indexed NP properly related to the verb of the matrix clause, that is, according to Chomsky (unpublished: 43), "NPs that are 'thematically related' to the verb in an appropriate sense". It follows that the possible controllers are lexical NP, trace (i.e. [NP<sub>e</sub>] coindexed with a moved category), and PRO (i.e. [NP<sub>e</sub>] just in case it has already been assigned an index by a rule of control). In the case of a matrix verb with the property [+SC], that is, a verb assigning subject control, the controller is the subject NP of the matrix clause. In the case of a matrix verb not specified in this way, the controller is determined in accordance with certain general principles which will be discussed in §2.5 below. One general restriction which may be mentioned here and which concerns the ability of an NP to act as a controller, is the one formulated as follows by Chomsky (unpublished: App-5): "once a

controller has assigned control it is no longer available as a controller".

## 2.5 The rule of control

Taking into account the relevant properties of and restrictions on control noted in the preceding paragraphs, the following environments for control emerge: (i) structures of obligatory control such as (5), (ii) structures containing verbs or adjectives of obligatory control, and (iii) structures such as (10) in which control is obligatory just in case NP is lexically unexpanded. Collapsing these possibilities, Chomsky (unpublished: 43) defines the context in which the rule of control applies as follows:

(13) ... V ... [ $\overline{S}$  COMP [ $_{NP} e$ ] ... ]

where  $V = [-F]$

and  $V$  and  $\overline{S}$  c-command one another

The feature  $[-F]$  in (13) denotes verbs that cannot assign case across clause boundaries. Chomsky (unpublished: 44) then formulates the rule of control for the context (13) as follows:

(14) = Chomsky's [95] "In [93] [i.e. (13) above --- C. le R.],  
(i) if COMP  $\neq$  null and V has no controller, then  
[ $_{NP} e$ ] is assigned arb  
(ii) [ $_{NP} e$ ] is assigned the index of the nearest  
controller."

To ensure that the appropriate controller is selected by the rule (14), the following three devices are incorporated in the general theory of control:

(15) The feature [+ SC]

Verbs that are assigned the feature [+ SC] in the lexicon obligatorily assign subject control.

(16) The Minimal Distance Principle (MDP)

A verb with a complement assigns complement control  
and a verb lacking a complement assigns subject control.<sup>16)</sup>

(17) The C-Command Principle (henceforth: CCP)<sup>17)</sup>

A controller c-commanded by  $\bar{S}$  is 'nearer' to  $[_{NP} e]$  than one not c-commanded by  $\bar{S}$ , and a controller immediately c-commanded by  $\bar{S}$  is nearer to  $[_{NP} e]$  than one not immediately c-commanded by  $\bar{S}$ .

Apart from the general linguistic devices (15), (16), and (17), which express conditions on the selection of the controller, three other general constraints are formulated to specify the way in which rules of control operate. These constraints may be formulated as (18)a-c below.

- (18) a. Control applies in the course of a systematic "top-to-bottom" indexing procedure for NPs, i.e. an index is assigned to an NP only if all NPs c-commanding or dominating it have been indexed.<sup>18)</sup>
- b. Control rules are index-assigning, not index-changing rules; therefore they cannot apply if the NP already has an index, as in the case of trace which is assigned an index by a movement rule.<sup>19)</sup>
- c. Control rules are obligatory.

2.6 Appraisal

The theory of control sketched in the preceding paragraphs seems to express the facts of control quite adequately as far as English is concerned. A point in favour of this theory is that it employs a rule of control which covers a variety of structures while obeying constraints that are independently motivated.<sup>20)</sup> The only devices that seem to be needed exclusively for stating facts about control are (15)-(17) above, i.e. the feature [+ SC], the MDP, and the CCP. These general principles are needed to ensure that the appropriate controller is selected as "nearest controller". I shall merely note, at this point, that there seems to me to be a surprisingly rich variety of formal devices engaged in the task of selecting the proper controller. The MDP, in particular, seems to be a suspicious device. On the one hand, it has to be used in conjunction with the lexical feature [+ SC] which accounts for the exceptions to the MDP. On the other hand, it has to be supplemented by the CCP which has the task of taking care of cases not accounted for by the MDP. In §4, I shall attempt to show that once the CCP is incorporated in the general theory of control, the MDP can be dispensed with altogether. The CCP, in conjunction with the feature [+ SC], can be relied upon to select the appropriate controller in all cases of control.

Before turning to the problem of the MDP, however, I shall present an analysis of data from Afrikaans in support of the theory of control outlined above.

3. Control in Afrikaans

3.1 Assumptions about Afrikaans

I shall be assuming that the base rules for Afrikaans are in the relevant respects the same as those for English, particularly those expanding VP, NP and AP.<sup>21)</sup> In assuming the same rule for expanding VP as in English, I shall be assuming that Afrikaans, like English, is a SVO language. This is a highly controversial assumption, as there is good reason to believe that Afrikaans is in fact an SOV language. However, I am keeping to the SVO order merely for the sake of convenience. The

position of the verb does not influence control in any way. If the verb had been generated in the final position in VP, it would in any case have been moved to the second position in the matrix clause by the time the rule of control applied, the only difference being that it would be dominated by S rather than by VP. The only effect this would have had on the context of control as stated in (13), would have been an amendment of the proviso "where V and  $\bar{S}$  c-command one another".

Furthermore, I am assuming that in Afrikaans, as in English, an (indirect) object NP or PP may appear either to the right or to the left of the direct object NP. When it appears to the right of the direct object NP it is always a PP. When it appears to the left of the direct object NP, it may be an NP or a PP. A well-motivated analysis of VPs containing more than one object NP or PP would have to provide a satisfactory answer to two crucial questions, viz. (i) whether an (indirect) object NP or PP appearing to the left of the direct object NP is base-generated in this position or moved from a position to the right of the direct object NP by some kind of Dative Movement rule, and (ii) whether an (indirect) object NP or PP appearing to the left of the direct object NP is dominated by V or by VP. The latter question in particular has important implications for a theory of control within which the controller is selected on the basis of distance from  $\bar{S}$ , where the distance is calculated in terms of c-command. In the absence of a well-motivated analysis of the verb phrase in Afrikaans, I am assuming that Chomsky's analysis of VP for English holds for Afrikaans as well.<sup>22)</sup> I am fully aware of the fact, however, that a satisfactory analysis of VPs containing more than one object NP or PP is crucial to the argument presented in §4 of this paper.

### 3.2 Verbs of obligatory control

A first category of verbs obligatorily assigning control are those verbs that take an NP or PP complement along with a "bare" infinitival complement, that is, verbs that can never take lexical NP in the complement subject position.<sup>23)</sup> This category includes verbs such as beveel 'order', versoek 'request', (aan)sê 'tell (someone to do some-

thing)', 'waarsku 'warn', 'oorreed 'persuade', 'aanraai 'recommend/advise', 'n beroep doen op 'appeal to', 'sover kry 'get (someone to do something)', 'herinner 'remind'.

Compare the sentences in (21) and (22).

(21) a. Piet oorreed die nar [S PRO om te lag]

Peter persuades the clown [S PRO to laugh]

b. Sy sê vir my [S PRO om gou te maak]

she says for me [S PRO quickly to make (= to hurry)]

c. Hy raai (vir) my aan [S PRO om regshulp te kry]

he advises (for) me [S PRO legal aid to obtain]

(22) a. Hy versoek die mense [S vir [S NP om kalm te bly]]<sup>24)</sup>

hy requests the people [S for [S NP calm to remain]]

b. Die offisier beveel die soldate [S vir [S NP om te skiet]]

the officer orders the soldiers [S for [S NP to shoot]]

c. Ek waarsku jou [S vir [S NP om weg te bly]]

I warn you [S for [S NP away to keep]]

The sentences in (21) meet the structural description (13) of the control rule (14). As COMP = null in (21)a-c, (14)i does not apply and (14)ii must apply to assign to PRO the index of the nearest controller. None of the verbs oorreed, sê, or aanraai is marked [+ SC] in the lexicon and each is followed by an NP or PP complement. Therefore, by the MDP, PRO is assigned the index of the NP die nar in (21)a, of the PP vir my in (21)b and of the PP (vir) my in (21)c. This indexing correctly predicts the interpretation of PRO by speakers of Afrikaans in each case. In (21)a PRO is interpreted as referring to die nar; in (21)b PRO is interpreted as referring to my; and in (21)c PRO is simi-

larly interpreted as referring to my.

None of the sentences in (22) is interpretable with a lexical NP in subject position in the embedded clause. Thus, (22)a cannot mean "he requests the people for some people other than they themselves to remain calm". And (22)b cannot mean "the officer orders the soldiers for some people other than the soldiers to shoot". Similarly, (22)c cannot mean "I warn you for someone else to keep away". These facts can be explained only by assuming the verbs in question to be verbs of obligatory control and the structures in (22) to be blocked by virtue of the nonapplication of an obligatory rule.

A second category of verbs obligatorily assigning control are verbs that may or may not take an NP or PP complement along with a "bare" infinitival complement. By the MDP, these verbs will assign complement control, unless there is no complement, in which case they assign subject control. This category includes verbs such as smeek 'entreat', dwing 'force/tend', pleit 'plead', verwag 'expect', as in (23)-(26).

- (23) a. Die kinders smeek haar [ $\frac{1}{6}$  PRO om saam te gaan]

the children entreat her [ $\frac{1}{6}$  PRO with to go]

- b. Die oortreder smeek [ $\frac{1}{6}$  PRO om vrygelaat te word t]

the trespasser entreats [ $\frac{1}{6}$  PRO set free to be t]

- (24) a. Die ouers dwing hul kinders [ $\frac{1}{6}$  PRO om te eet]

the parents force their children [ $\frac{1}{6}$  PRO to eat]

- b. Die os dwing al [ $\frac{1}{6}$  PRO om in die verkeerde rigting te trek]

the ox tends all (the time) [ $\frac{1}{6}$  PRO in the wrong direction to pull]

- (25) a. Ek pleit by hom [ $\frac{1}{6}$  PRO om saam te gaan]

I plead with him [ $\frac{1}{6}$  PRO with to go]

- b. Ek pleit [S PRO om saam te gaan]  
I plead [S PRO with to go]

- (26) a. Hy verwag van die studente [S PRO om hul bes te doen]  
he expects of the students [S PRO their best to do]  
  
b. Hy verwag [S PRO om 'n graad te behaal]  
he expects [S PRO a degree to obtain]

Cases (23), (24), and (26) are straightforward. In the (a)-sentences --- i.e. the sentences containing a complement --- PRO is assigned the index of the complement NP or PP, by the MDP. Thus, (23)a can only mean "the children entreat her that she should go with them". And (24)a can only mean "the parents force their children so as to get the children to eat". Similarly, (26)a has to mean "he expects that the students will do their best". These predictions about the possible interpretations of the sentences in question are correct.

In the (b)-cases --- i.e. the sentences lacking a complement NP or PP --- PRO is assigned the index of the subject, by the MDP. Once again the correct predictions as to the interpretation of these sentences are made. In (23)b the subject of the embedded clause is taken to be the trespasser.<sup>25)</sup> In (24)b, PRO is interpreted as referring to the ox; and in (26)b it is he who expects to obtain a degree.

Cases (25)a and b require some discussion. Some speakers of Afrikaans interpret (25)a in exactly the same way as (25)b. That is, for these speakers PRO must refer to the subject of the main clause in both cases, in which case we have two options. We can either regard pleit as a verb marked [+SC] in the lexicon, or we can regard the PP by hom as a PP not thematically related to the verb, which would account for its inability to be a controller. As regards the latter possibility, notice that the passive sounds rather curious:

- (27) ?By hom word gepleit om saam te gaan  
 with him is pleaded with to go

The doubtful acceptability of (27) could be explained by assuming that the PP by hom is not thematically related to the verb pleit and can therefore not appear as the subject of a passive. By contrast, the (a)-sentences of (23), (24) and (26) have perfectly acceptable passives:

- (28) Sy word deur die kinders gesmeek om saam te gaan<sup>26)</sup>  
 she is by the children entreated with to go

- (29) Die kinders word deur hulle ouers gedwing om te eet  
 the children are by their parents forced to eat

- (30) Van die studente word verwag om hulle bes te doen  
 of the students is expected their best to do

Therefore, as there seems to be evidence for assuming that the PP by hom may not be thematically related to the verb, I shall assume this approach to account for the ambiguity of (25)a. If the feature [+SC] is assigned to pleit, it will be impossible to account for the ambiguity in question.

There is another curious phenomenon involving verbs such as smeek and pleit. Consider the sentences in (31).

- (31) a. Ek smeek hom [<sub>6</sub> PRO om te mag saam gaan]  
 I entreat him [<sub>6</sub> PRO to may with go ]
- b. Ek pleit by hom [<sub>6</sub> PRO om te mag saam gaan]  
 I plead with him [<sub>6</sub> PRO to may with go ]

For speakers of Afrikaans, these sentences can be interpreted in only one way, viz. with PRO taken to refer to I, the subject of the matrix

clause. We are, therefore, once again faced with a dilemma. If we assume that these verbs are marked [+ SC] in the lexicon, we can explain the facts of (31), but not the ambiguity of (23)a<sup>27)</sup> and (25)a. If we assume that the relationship between these verbs and an NP or PP in their complement may be ambiguous --- that is, they can be either thematically related or thematically unrelated<sup>28)</sup> --- we can account for the ambiguity of (23)a and (25)a, but not for the facts of (31).. Note that the sentences (31)a and (31)b can be paraphrased as (32)a and b respectively.

- (32) a. Ek smeek hom [ $\overline{S}$  PRO om my toe te laat om saam te gaan]  
 I entreat him [ $\overline{S}$  PRO me to allow with to go]
- b. Ek pleit by hom [ $\overline{S}$  PRO om my toe te laat om saam te gaan]  
 I plead with him [ $\overline{S}$  PRO me to allow with to go]

In the case of (32)a and b, the theory of control once again makes the correct predictions: PRO can only be interpreted as referring to hom. For the moment, then, the least objectionable solution for the problem with smeek and pleit, seems to be not to assign to them the feature [+ SC] and to ascribe the difficulties encountered in the case of (31)a and b to some unclear properties of the om te mag ... construction.<sup>29)</sup>

A third category of verbs obligatorily assigning control are verbs that never take an NP or PP complement with a "bare" infinitival complement and therefore, by the MDP, always assign subject control. Such verbs are neig 'tend', verlang 'wish/want', aandring 'insist', onderneem 'undertake', vergeet 'forget', onthou 'remember', probeer 'try', verkies 'prefer', besluit 'decide', instem 'consent'.<sup>30)</sup>

Consider the following structures:

- (33) a. Hy neig [ $\overline{S}$  PRO om te streng te wees]  
 he tends [ $\overline{S}$  PRO too strict to be]

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- b. Hy neig NP [<sub>S</sub> PRO om te streng te wees]  
 he tends NP [<sub>S</sub> PRO too strict to be ] ]
- c. Hy neig [<sub>S</sub> vir [<sub>S</sub> NP om te streng te wees ] ]  
 he tends [<sub>S</sub> for [<sub>S</sub> NP too strict to be ] ] ]

- (34) a. Ek dring aan op [<sub>S</sub> PRO om saam te gaan]  
 I insist on [<sub>S</sub> PRO with to go ] ]
- b. Ek dring aan NP op [<sub>S</sub> PRO om saam te gaan]  
 I insist NP on [<sub>S</sub> PRO with to go ] ]
- c. Ek dring aan op [<sub>S</sub> vir [<sub>S</sub> NP om saam te gaan ] ]]  
 I insist on [<sub>S</sub> for [<sub>S</sub> NP with to go ] ] ]

In (33)a, PRO is assigned the index of the subject of the matrix clause, by the MDP. In (33)b complement control would have had to apply if a lexical reading of NP could be imagined which would yield an interpretable structure. However, this is impossible. The structure (33)b would probably not even be base-generated, because of the intransitive nature of the verb neig. In (33)c no lexical reading of NP gives an acceptable sentence. We may assume, therefore, that control is obligatory.

Note that we are not claiming that verbs such as verlang 'wish/want', onderneem 'undertake', vergeet 'forget', probeer 'try', verkies 'prefer', besluit 'decide' can never take an NP or PP complement. They obviously can in sentences such as Ek het my boek vergeet 'I have forgotten my book' and Hy verkies die rooi hemp 'He prefers the red shirt'. The question, then, is whether these verbs should not be assigned the feature [+ SC] to ensure that they assign subject control even if they are followed by an NP or PP complement? The answer is no. I think the aim should be to restrict the category of verbs assigned the feature [+ SC] as far as possible, as this feature does not seem to have any explanatory value. Therefore, if there seems to be an inde-

pendent reason why the verbs listed above should assign subject control, it is not necessary to mark them [+ SC] in the lexicon. The reason in this case is simply that these verbs cannot appear in constructions containing both an NP or PP complement and a "bare" infinitival complement.<sup>31)</sup> Thus, subcategorization restrictions on the verbs in question will prevent them from being inserted in deep structures containing an NP or PP complement followed by a "bare" infinitival complement.

A fourth category of verbs obligatorily assigning control, comprises those verbs that can take an NP or PP complement along with a "bare" infinitival complement, but which, even if they do, assign subject control. These are the verbs marked [+ SC] in the lexicon to indicate that they do not obey the MDP. The paradigm case in Afrikaans, as in English, is belowe 'promise':

- (35) Jan belowe (haar) [S PRO om haar vir ewig lief te hê]  
John promises (her) [S PRO her for ever to love]

In (35) PRO must be coindexed with Jan, the subject of the matrix clause to account for the fact that speakers of Afrikaans take the embedded clause to mean "John will love her for ever".

Consider also the following sentences:

- (36) a. Hy het (aan my) 'n eed gesweer [S PRO om weg te bly]  
he has (to me) an oath sworn [S PRO to away stay]  
  
b. Ek het (teenoor hom) onderneem [S PRO om my bes te doen]  
I have (towards him) undertaken [S PRO my best to do]  
  
c. Sy het (by haar kērel) geleer [S PRO om uiesop te maak]  
she has (from her boyfriend) learnt [S PRO onion soup to make]

- (37) a. Ons het oorengekom [ $\overline{S}$  PRO om by die teater te ontmoet]  
 we have agreed [ $\overline{S}$  PRO at the theatre to meet ]
- b. Ek het met hom oorengekom [ $\overline{S}$  PRO om hom daar te ontmoet]  
 I have with him agreed [ $\overline{S}$  PRO him there to meet ]
- c. Ek het met hom oorengekom [ $\overline{S}$  PRO om my daar te ontmoet]  
 I have with him agreed [ $\overline{S}$  PRO me there to meet ]

Notice, in passing, that in all the sentences of (36), as in (35), the complement NP or PP is optional, whereas in the case of verbs assigning complement control, omission of the complement results in ungrammatical sentences such as \*Hij het oorrenged om eksamen te skryf 'He has persuaded to write the exams' and \*Sy doen 'n beroep om kalm te bly, 'She appeals to remain calm'.

Consider, first, the cases in (36). PRO is, in each case, understood to be coreferential with the subject of the matrix clause. It seems, therefore, that we have to do with verbs assigning subject control. Chomsky (unpublished: 46) has suggested a kind of "test" for [+ SC] verbs: "We can therefore accommodate in a natural way the well-known resistance of verbs of subject control to passivization; there is no subject under passive, hence no way for control to be assigned". As is clear from the sentences in (38), the verbs sweer 'swear', onderneem 'undertake', leer 'learn' do in fact resist passivization.

- (38) a. \*Aan my is (deur hom) 'n eed gesweer om weg te bly.  
 to me was (by him) an oath sworn away to stay.
- b. \*Teenoor hom is (deur my) onderneem om 'n uitvoering te gee. <sup>32)</sup>  
 towards him was (by me) undertaken a performance to give.
- c. \*By haar kērel is (deur haar) geleer om uiesop te maak.  
 from her boyfriend was (by her) learnt onion soup to make.

The fact that speakers of Afrikaans find these sentences unacceptable, while their active counterparts seem to be perfectly acceptable, may be

accounted for, then, by assuming that these verbs assign subject control. The sentences in (38) are therefore unacceptable because their verbs lack a subject, my being the subject of is, not of gesweer, etc. It seems, then, that the feature [+ SC] is needed to account for at least one phenomenon other than control.

Notice too, that there is a certain similarity in the pragmatic meanings of the verbs belowe, onderneem, and sweer. They all express an undertaking by the speaker to be the agent in bringing about certain events. This fact is formally expressed, for instance, in the proposed "sincerity rule", which is one of the set of necessary and sufficient rules that have to be obeyed if the speech act being performed is to count as a promise, viz. the speaker must intend to do the act to which the proposition uttered refers.<sup>33)</sup> By contrast, the sincerity rule for the act of, e.g., requesting, would state that the speaker must want the hearer to do the act referred to in the proposition uttered. This would perhaps suggest a way of getting rid of the feature [+ SC]: sentences in which the embedded subject was coindexed with the complement NP of a verb such as belowe (i.e. in the absence of the feature [+ SC]) would simply be blocked by the pragmatic rules defining the pragmatic conditions on the use of the verb belowe.

Let us turn, briefly, to the sentences in (37). Case (37)a is unproblematic: the verb lacks an NP or PP complement and, by the MDP, subject control is assigned. But (37)b and c seem baffling. These sentences are identical as far as the subject and object of the matrix clause are concerned, and yet subject control is assigned in (b) and complement control in (c). The only explanation I have to offer is that the presence of a pronoun in the VP of the embedded clause in some way influences the control pattern of these sentences. If we assume that the embedded pronoun hom in (37)b is coindexed with the NP hom in the matrix clause, then only the remaining NP ek is available as a controller for PRO, and vice versa in (37)c.<sup>34)</sup>

3.3 Structures of obligatory control

Consider the following sentences:

- (39) a. Hulle sal weet [<sub>S</sub> wat [<sub>S</sub> PRO om te doen t]]]  
they will know [S what [S PRO to do t]]]
- b. Die instrukteur vertel hulle [<sub>S</sub> wat [<sub>S</sub> PRO om te doen t]]]  
the instructor tells them [S what [S PRO to do t]]]
- c. Ek het by hom geleer [<sub>S</sub> wie [<sub>S</sub> PRO om te respekteer t]]]  
I have from him learnt [S whom [S PRO to respect t]]]
- d. Piet vra sy onderwyser [<sub>S</sub> waar [<sub>S</sub> PRO om die boek te sit t]]]  
Peter asks his teacher [S where [S PRO the book to put t]]]

The embedded structures in (39) are all of the form (40).

- (40) [<sub>COMP</sub> wh-phrase + WH] [<sub>S</sub> PRO to V ... t ... ]]  
where t is the trace of the wh-phrase

Structures such as (40) are so-called structures of obligatory control, which means that the embedded subject must be PRO for the sentence to be grammatical. It appears that in Afrikaans too, structures such as (40) must contain PRO. Compare, for instance, the ungrammatical sentences in (41).

- (41) a. \*Hulle sal weet wat Jan om te doen  
they will know what John to do
- b. \*Die instrukteur vertel hulle wat die soldate om te doen  
the instructor tells them what the soldiers to do

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- c. \*Ek het by hom geleer wie ek om te respekteer  
I have from him learnt whom I to respect
- d. \*Piet vra sy onderwyser waar die kind om die boek te sit  
Peter asks his teacher where the child the book to put

Thus, lexical NP cannot appear in the embedded subject position of sentences with the structure of (40).

Returning to the sentences in (39), we notice that COMP is filled in all cases, but as the verb has a controller in each case, PRO is assigned the index of the nearest controller by rule (14)ii, viz. the subject NP hulle in (39)a, the complement NP hulle in (39)b, the subject NP ek in (39)c --- leer being a verb of subject control --- , and the subject NP Piet in (39)d.<sup>35)</sup>

### 3.4 Adjective complements

Consider the following structures:

- (42) a. Jy is gelukkig [ $\bar{S}$  PRO om te lewe]  
you are lucky [ $\bar{S}$  PRO to be alive]

- b. Sy is bang [ $\bar{S}$  PRO om alleen te bly]  
she is afraid [ $\bar{S}$  PRO alone to live]

- (43) a. Dit is maklik [ $\bar{S}$  vir [ $\bar{S}$  PRO om te praat]]  
it is easy [ $\bar{S}$  for [ $\bar{S}$  PRO to talk]]

- b. Dit is moeilik vir my [ $\bar{S}$  vir [ $\bar{S}$  PRO om te sê]]  
it is difficult for me [ $\bar{S}$  for [ $\bar{S}$  PRO to say]]

- (44) a. Ek is gretig [ $\bar{S}$  vir [ $\bar{S}$  PRO om te gaan]]  
I am eager [ $\bar{S}$  for [ $\bar{S}$  PRO to go]]

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- b. Ek is gretig [<sub>5</sub> vir [<sub>6</sub> haar om te gaan]]  
I am eager [<sub>5</sub> for [<sub>6</sub> her to go]]

First, the difference in the structures assigned to (43) and (44) respectively requires some explanation. In (43)b the sequence vir NP (= vir my) is part of the VP, while in (44)b it is part of the embedded clause. The reason for this is that, in addition to (43)b, (45) is also acceptable in Afrikaans:

- (45) Dit is vir my moeilik (om te sê).  
It is for me difficult (to say).

In (45) the sequence vir my has been moved to the left of the adjective without changing the meaning of the sentence. A similar movement in the case of (44)b, however, yields an unacceptable string:

- (46) \*Ek is vir haar gretig (om te gaan)  
I am for her eager (to go)

It seems, then, that in (44)b, the sequence vir NP must form part of the embedded clause, while in the case of (43)b it is inconceivable how the sequence vir NP can be moved from a position in the embedded clause to a position in the matrix clause as in (45). Note, too, that (46) would be unacceptable without the embedded clause, which appears in parentheses, while (45) would not.

Given that the analysis of the sequence vir NP is as proposed in (43)b and (44)b, application of the control rule (14) to (42)-(44) yields the desired results. In (42), rule (14)ii applies to coindex PRO and the subject of the matrix verb, in accordance with the requirements of the MDP. In (43)a, COMP being nonnull and V lacking a controller, PRO is assigned the index arb to indicate arbitrary reference. This explains the intuitive judgment of speakers of Afrikaans that (43)a means "it is easy for (some unspecified) people to talk". In (43)b COMP ≠ null,

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but V has a controller in the form of the PP complement vir my and PRO is therefore assigned the index of the complement. In (44)a COMP ≠ null, but V has a controller and PRO is therefore coindexed with the controller, viz. the subject of the matrix clause. In (44)b COMP ≠ null, but the embedded subject NP is lexically expanded so that the rule of control does not apply.

The only remaining problem is, once more, the analysis of the structures in (43). The following is also a possible analysis of these structures:

- (47) a. Dit is maklik [S PRO om te praat]  
it is easy [S PRO to talk]
- b. Dit is moeilik vir my [S PRO om te sê]  
it is difficult for me [S PRO to say]

The analysis (47) even seems to me to be intuitively more adequate than the one in (43). I cannot conceive of an acceptable sentence in Afrikaans of the form dit is ADJ vir NP [S vir NP om te V]. In other words, there being no possibility of the embedded subject NP ever being lexically expanded, there seems to be no reason for assigning a vir complementizer to the embedded sentence. The reason for assigning vir complementizer in (43) was that, by so doing, the control rule (14)i would apply to assign the index arb to PRO in (43)a : that is, in order for (14)i to apply COMP must be nonnull. If we were to assume null Comp in structures such as (43)a, the rule (14)i would have to be changed as follows:

- (48) if V has no controller, then [NP e] is assigned arb

Omission of the stipulation that COMP must be nonnull, does not seem to me to create any problems. For instance, in cases where COMP ≠ null, the amended rule would still give the correct result:

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- (49) Dit is nie duidelik [S wat [S PRO om te doen]] nie  
 it is not clear [S what [S PRO to do]] not

In (49) V lacks a controller and, therefore, even if COMP ≠ null, PRO would be assigned the index arb by (48). Chomsky (unpublished: 46) seems to recognize the possibility that arbitrary control could be assigned even in the absence of a complementizer when he discusses the inability of verbs of subject control to passivize: "Rather, such verbs do not passivize unless arbitrary control is assigned in the complement".<sup>36)</sup>

I shall therefore assume the analysis (47) rather than the analysis (43) for sentences such as Dit is moeilik (vir my) om te sê, and I shall assume that (14)i must be replaced by (48) for Afrikaans (and perhaps for English as well).

### 3.5 Noun complements

Consider the following structures:

- (49) a. Ek soek iemand [S wie [S PRO om die boek voor t te gee]]  
 I look for someone [S whom [S PRO the book to t to give]]
- b. Dit is 'n man [S wie [S PRO om t dop te hou]]  
 it is a man [S whom [S PRO t to keep an eye on]]
- c. Bring vir my 'n boek [S wat [S PRO om t te lees]]  
 bring for me a book [S which [S PRO t to read]]

The structures in (49) resemble the structures of obligatory control discussed in §3.3 above. The only difference between these two types of structures is that in the case of the latter --- i.e. structures of obligatory control --- COMP is expanded as + WH to indicate that the

embedded clause is interrogative, while in the type of structure we are concerned with here --- i.e. noun complements --- COMP is expanded as - WH to indicate that  $\bar{S}$  is a relative clause.

Assuming that the relative pronoun, and therefore the trace of this pronoun as well, is coindexed with the head noun of the relative clause in each case,<sup>38)</sup> application of the rule of control (14) yields the desired results. In (49)a iemand is the raised head noun and the only remaining controller is therefore ek. Coindexing PRO and ek we correctly predict that the sentence must mean "I am looking for someone to whom I can give the book". In (49)b the verb lacks a controller --- the NP 'n man' is coindexed with the relative wie --- and rule (14)i, reformulated as (48), applies to assign the index arb to PRO. We therefore correctly account for the interpretation "This is a man whom (some unspecified) person(s) should keep an eye on". In (49)c the only possible controller is the complement PP vir my --- 'n boek' being coindexed with the relative and there being no overt subject. Coindexing PRO and vir my, we correctly account for the interpretation "Bring me a book which I can read".

It appears, then, that the rule of control applies to embedded noun complements without any additional devices being needed.<sup>39)</sup>

### 3.6     The verb vra 'ask'

In English the verb ask is assigned the feature [+ SC] just in case it occurs with an indirect question complement.<sup>40)</sup> We have not yet examined the status of its Afrikaans equivalent vra. In Afrikaans, as in English, a distinction should be made between (at least) three separate lexical items vra (or three readings of the single lexical item vra): that is, (i) vra in the sense of "politely ordering or requesting (someone to do something)" as in (50)a, (ii) vra in the sense of "politely demanding (something from someone)" as in (50)b, and (iii) vra in the true interrogative sense of "inquiring (something from someone)" as in (50)c.

- (50) a. Jan vra Pieter [<sub>S</sub> PRO om te lees]  
 John asks Peter [<sub>S</sub> PRO to read]
- b. Jan vra [<sub>S</sub> PRO om te lees]  
 John asks [<sub>S</sub> PRO to read]
- c. Jan vra Pieter [<sub>S</sub> wat [<sub>S</sub> PRO om te doen t]]]  
 John asks Peter [<sub>S</sub> what [<sub>S</sub> PRO to do t]]]

Note that (50)a is paraphrasable with "politely orders" or "requests" instead of asks, while (50)b and c are not. By contrast, (50)b is paraphrasable with "politely demands" while (50)a and c are not, and (50)c is paraphrasable only with "inquires". The similarity in meaning between vra in the sense of (50)a and the verb versoek 'request', which was discussed in §3.2, would suggest that these verbs behaved similarly with regard to control. This prediction is borne out by the pattern of control in (50)a: PRO must be assigned the index of the complement NP Pieter to account for the fact that Afrikaans speakers interpret this sentence as "What John asks Peter is that he, Peter, must read". The verb vra on its first reading, i.e. "politely ordering or requesting", is a normal verb of control which obeys the MDP.

Let us turn now to (50)b. In the absence of another possible controller, PRO is assigned the index of the subject NP Jan, which correctly accounts for the interpretation of this sentence by speakers of Afrikaans as "John asks that he, John be allowed to read". The question is whether the verb vra in the sense of "politely demanding" should be assigned the feature [+SC] to account for the pattern of control in (50)b, or whether the MDP and CCP can be relied upon to select the appropriate controller in all sentences in which vra is used in this sense. Consider, for instance, the sentences in (51).

- (51) a. Jan vra 'n boek om te lees  
 John asks a book to read
- b. Jan vra Pieter 'n boek om te lees  
 John asks Peter a book to read

- c. Jan vra 'n boek vir sy vrou om te lees  
 John asks a book for his wife to read
- d. Jan vra Pieter 'n boek vir sy vrou om te lees  
 John asks Peter a book for his wife to read

The sentences in (51) are all of the form "NP vra (NP) [NP 'n boek [S wat vir [S NP om te lees t]]]]", that is,  $\bar{S}$  is a noun complement. The verb vra is used in the sense of (50)b, i.e. in the sense of "politely demands", throughout. Now, where NP = PRO, viz. in (51)a and b, PRO must be coindexed with the subject Jan --- in violation of the MDP in the case of (51)b --- to account for the fact that speakers of Afrikaans take these sentences to mean "John asks (Peter) a book for him, John, to read". Comparing the behaviour of vra in (51) with the behaviour of other verbs in the same context, we see that vra behaves idiosyncratically.

- (52)a. Jan belowe haar [NP 'n huis [S wat vir [S PRO om in t te woon]]]  
 John promises her [NP a house [S which for [S PRO in t to live]]]

- b. Jan {koop (vir haar)  
 bring (vir haar)  
 gee vir haar  
 stuur vir haar} [NP 'n hond [S wat vir [S PRO om mee t te speel]]]  
 John {buys (her)  
 brings (her)  
 gives her  
 sends her} [NP a dog [S which for [S PRO with t to play]]]

In all the cases of (52) PRO is coindexed with the complement (vir) haar if it is present, and with the subject Jan if there is no complement, in accordance with the MDP.<sup>41)</sup> There is, therefore, a marked contrast between the behavior of the verbs in (52) and the verb vra in similar structures, such as those of (51). It seems then that vra in the sense

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of (50)b must be assigned the feature [+ SC] to account for the interpretation of sentences such as those of (51).

The structure (50)c is a case of obligatory control. For speakers of Afrikaans (50)c can only mean "John asks Peter what he, John, should do" and not "John asks Peter what he, Peter, should do". PRO must therefore be assigned the index of the subject Jan, even though a complement NP is also present. This violation of the MDP can only be accounted for by assuming that vra in its third, interrogative reading is assigned the feature [+ SC] in the lexicon.

To summarize: we have distinguished three different readings of the verb vra. In the sense of "politely order or request", vra is a verb of obligatory control which, like its synonym request, obeys the MDP. In the sense of "politely demand", vra need not assign control, but if it does, it always assigns subject control. In the sense of "inquire", vra is always part of a structure of obligatory control and, once again, assigns subject control. The variations in the pattern of control associated with the verb vra can, therefore, be related to three different meanings of this verb.

Note that a similar kind of analysis could solve the problems with the verbs pleit and smeek as well (cf. §3.2 above). The ambiguous interpretation of Ek pleit by hom om saam te gaan 'I plead with him to go along' could be ascribed to ambiguity in the meaning of pleit. Like vra it could be assumed to have two meanings: "demand" and "request". In the sense of "demand" it would obligatorily assign subject control and in the sense of "request" it would assign complement control. This would also account for the necessity of subject control in sentences such as Ek pleit by hom om te mag saamgaan 'I plead with him to be allowed to go along', pleit being used in the sense of "demand" in these sentences. In sentences such as Ek pleit by hom om my toe te laat om saam te gaan 'I plead with him to allow me to go along', the fact that it is the complement of pleit which must be selected as controller, could be explained by assuming that ek and my are already somehow coindexed and that ek is therefore no longer available as a controller,<sup>42)</sup> which leaves the complement NP hom as the only possible controller.

#### 4. On the status of the MDP

In the discussion up to now, I have assumed that Chomsky (unpublished: 43) is correct in stating "that the basic principle of control is the 'minimal distance principle' of Rosenbaum (1967)". Moreover, we have seen that in Afrikaans, as in English, the MDP is an adequate device for selecting the appropriate controller when there are two options, i.e. a subject as well as a complement NP or PP. We also saw, however, that as soon as there are three options, i.e. a subject and two complement NPs or a complement NP and PP, an additional device, the C-command Principle, is needed for the appropriate controller(s) to be selected. I shall now attempt to show that the C-command Principle is an adequate device for selecting the appropriate controller not only in the cases not covered by the MDP, but also in the cases which do fall under the MDP. In addition I shall show that cases which do fall under the MDP, but about which the MDP makes the wrong predictions, can be adequately treated on the basis of the C-command Principle as well.

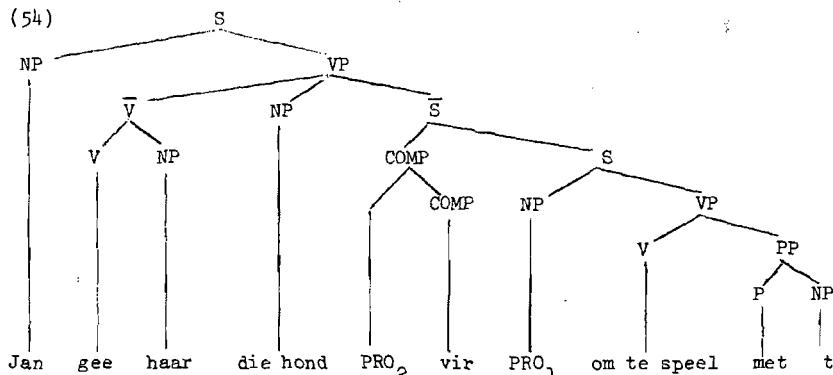
#### 4.1 Cases not covered by the MDP

The C-command Principle was formulated by Chomsky<sup>43)</sup> to provide for the proper selection of a controller in cases not covered by the MDP, viz. those cases where there is more than one possible controller in the VP, as in (53) below.

b.	Jan	$\left\{ \begin{array}{l} \text{koop} \\ \text{bring} \\ \text{gee} \\ \text{stuur} \\ \text{belowe} \end{array} \right\}$	die hond vir haar [S PRO <sub>2</sub> vir [S PRO <sub>1</sub> om mee t te speel]]]
	John	$\left\{ \begin{array}{l} \text{buys} \\ \text{brings} \\ \text{gives} \\ \text{sends} \\ \text{promises} \end{array} \right\}$	the dog for her [S PRO <sub>2</sub> for [S PRO <sub>1</sub> with t to play]]]

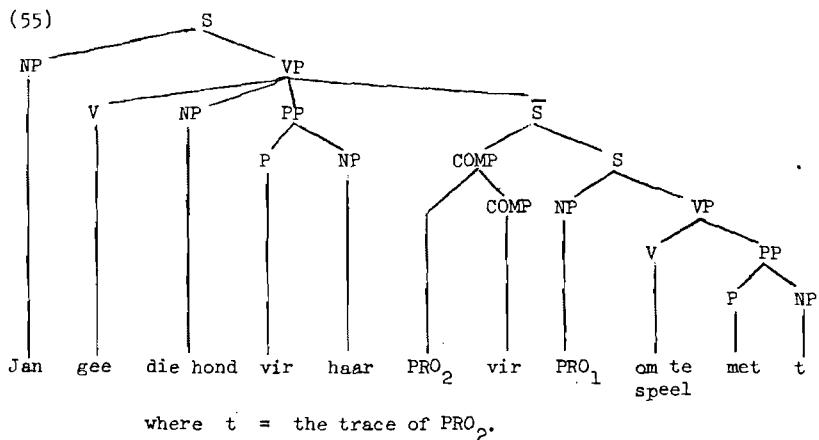
Note that the sequence vir haar is treated as a PP complement to V rather than a complementizer-NP sequence in  $\bar{S}$ . This analysis is corroborated (i) by the fact that PRO<sub>1</sub> in (53) can be lexically expanded as in Jan gee vir haar die hond vir haar boetie om mee te speel (= John gives her the dog for her brother to play with) and (ii) by the fact that vir haar can be moved to the left of the direct object NP where it is no longer adjacent to  $\bar{S}$ .

The structure underlying (53)a may be represented as follows<sup>44)</sup>:



where t is the trace of PRO<sub>2</sub>.

The structure underlying (53)b may be represented as in (55).



In both (54) and (55) the NP(s) (and PP) dominated by VP are c-commanded by  $\bar{S}$  while the NP dominated by S is not. Therefore, by the C-command Principle, the controllers dominated by VP are closer to  $\text{PRO}_1$  and  $\text{PRO}_2$  than the controller dominated by S. Coindexing being a "top-to-bottom" procedure,  $\text{PRO}_2$  is the first element for which a controller has to be selected from among the two possibilities in VP. In (54) the NP die hond is immediately c-commanded by  $\bar{S}$  while the NP haar, being in  $\bar{V}$ , is not. In (55), too, the NP die hond is immediately c-commanded by  $\bar{S}$ , while the NP haar, being part of PP, is not. In both cases, therefore, the NP die hond is selected as "nearest controller" for  $\text{PRO}_2$ . It follows then, that the remaining NP haar, being c-commanded by  $\bar{S}$  --- although not immediately --- and therefore nearer to  $\text{PRO}_1$  than the NP Jan, is selected as controller of  $\text{PRO}_1$ . Both (53)a and b mean "John buys, etc. her the dog so that she can play with the dog".

#### 4.2 Cases covered by the MDP

The C-command Principle also extends to the cases normally accounted for by the MDP. Consider, for instance, the following sentences:

- (56) a. Piet oorreed die nar om te lag. (= (21)a above)  
Peter persuades the clown to laugh.
- b. Sy sê vir my om gou te maak. (= (21)b above)  
she tells for me quickly to make
- c. Hy neig om te streng te wees (= (33)a above)  
he tends too strict to be
- d. Jan belowe haar om haar vir ewig lief te hê (= (35) above)  
John promises her her for ever to love
- e. Die instrukteur vertel hulle wat om te doen (= (39)b above)  
the instructor tells them what to do
- f. Hulle sal weet wat om te doen (= (39)a above)  
they will know what to do
- g. Dit is moeilik vir my om te sê (= (43)b above)  
it is difficult for me to say
- h. Jan koop vir haar 'n hond om mee te speel (= (52)b above)  
John buys for her a dog with to play
- i. Jan koop 'n hond om mee te speel (= (52)b above)  
John buys a dog with to play

Still assuming that everything dominated, directly or indirectly, by VP is also c-commanded by  $\bar{S}$ , and therefore nearer to PRO than any element not dominated by VP, coindexing proceeds as it would have on the basis of the MDP. In (56)a, the NP die nar is dominated by VP and is therefore selected as controller for PRO. In (56)b, the NP my which is indirectly dominated by VP (via PP) is selected as nearest controller. In (56)c there is no NP under VP, and therefore no NP c-commanded by  $\bar{S}$ . The only remaining NP, the subject hy, is now the nearest controller. In (56)d we have the verb belowe which is a verb that obligatorily assigns subject control. Neither the C-command Principle nor the MDP makes the correct prediction in this case, as both would select the NP dominated by VP, viz. haar, as nearest controller. In (56)e, the NP hulle which is dominated by VP is correctly selected as nearest controller. In (56)f there is, once again, no NP dominated by VP and, therefore, no NP c-commanded by  $\bar{S}$ . The only remaining NP, viz. the sub-

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ject hulle, is selected as nearest controller. In (56)g, where we have an adjective assigning control, the C-command Principle still holds. The NP my which is indirectly dominated by VP (via PP) is selected as nearest controller for PRO. In (56)h and i the NP 'n hond' is not available as a controller as it is a raised NP. Having been moved from the object position of the embedded clause by wh-movement, it is coindexed with its trace. Recall that the rule of control is an index-assigning not an index-changing rule. Thus, the remaining controllers that may be selected are Jan and haar in (56)h and Jan in (56)i. In (56)h haar is selected as it is dominated by VP<sup>45)</sup> and therefore c-commanded by S, and in (56)i Jan is selected as there is no longer a controller available under VP.

The examples in (56) are representative of all the types of structures in which control patterns have been assumed to be predictable on the basis of the MDP. I hope to have shown that the C-command Principle makes exactly the same predictions as the MDP. The only case in which the prediction fails, (56)a, is an exception to the MDP too.

#### 4.3 Cases in which the MDP fails

Consider the following structures:

- (57) a. Jan vra hom 'n boek [ $\overline{S}$  PRO om hom te tart]  
          John asks him a book [ $\overline{S}$  PRO him to taunt]
- b. Jan beloewe hom 'n tjeuk [ $\overline{S}$  PRO om hom te paai]  
          John promises him a cheque [ $\overline{S}$  PRO him to soothe]
- c. Jan gee hom 'n pil [ $\overline{S}$  PRO om hom te kalmeer]  
          John gives him a pill [ $\overline{S}$  PRO him to calm]
- d. Jan speel speletjies [ $\overline{S}$  PRO om die tyd om te kry]  
          John plays games [ $\overline{S}$  PRO the time to while away]
- e. Jan koop vir Piet die hond [ $\overline{S}$  PRO om sy suster te beindruk]  
          John buys for Peter the dog [ $\overline{S}$  PRO his sister to impress]

In all the cases of (57),<sup>46)</sup> the MDP makes the wrong predictions. Even assuming that coreferential pronouns in a matrix and embedded clause are, in one way or another, already co-indexed (in all cases but (d)), each of the structures above still contains a complement NP which would automatically be selected as controller by the MDP: 'n boek in (57)a, 'n tjek in (57)b, 'n pil in (57)c, speletjies in (57)d, and die hond in (57)e. This is an undesirable result in all the cases of (57), as PRO is understood to be coreferential with the matrix subject by speakers of Afrikaans.

Notice that the sentences in (57) all have a "purposive" reading. For instance, they can all be paraphrased with met die doel om 'in order to' instead of om 'to'. They differ in this regard from relatives such as Jan koop vir haar 'n hond om mee te speel 'John buys her a dog to play with' (which may be paraphrased as Jan koop vir haar 'n hond waarmee sy kan speel 'John buys her a dog with which to play') on the one hand, and sentences such as Jan koop vir haar die hond om mee te speel 'John buys her the dog to play with', on the other hand. In the latter sentence, the embedded clause is not a relative (I shall therefore call it a "nonrelative"): it is nog paraphrasable as \*Jan koop vir haar die hond waarmee sy kan speel 'John buys her the dog with which she can play'. But neither can it be analyzed in exactly the same way as the "purpositives" in (57). For instance, note the following distributional differences between clear "purpositives" (the (a)-sentences) and "non-relatives" (the (b)-sentences):

- (58) a. Jan koop nie vir haar die hond nie om Anna te beïndruk  
           John buys not for her the dog (not) Anna to impress
- b. \*Jan koop nie vir haar die hond nie om mee te speel  
           John buys not for her the dog (not) with to play
- (59) a. Om Anna te beïndruk, koop Jan vir haar die hond.  
           Anna to impress,     buys John for her the dog
- b. \*Om mee te speel, koop Jan vir haar die hond.  
           with to play,     buys John for her the dog

The distributional data in (58) and (59) seem to indicate that, whereas the infinitive in the (b)-sentences cannot be separated from the VP, for instance by negation or fronting, the infinitive in the (a)-sentences can. I propose, tentatively, that "purposives" such as the sentences in (57) could be distinguished from "nonrelatives" such as the sentences in (53) above by the position of  $\bar{S}$ : whereas  $\bar{S}$  must be a constituent of S in the structure underlying "purposives" such as (57),  $\bar{S}$  is a constituent of VP in "nonrelatives" such as (53), as in (54) and (55) above.<sup>47)</sup> This would entail that the C-command Principle would make correct predictions about control in sentences such as those of (57). The subject NP, being immediately c-commanded by  $\bar{S}$  will in all cases be selected as the nearest controller. By contrast, there is no way in which the MDP can account for the control pattern in sentences such as those of (57) which contain a verb that is not marked [+SC] in the lexicon and that can take one or more NP or PP complement.

#### 4.4 Retrospect

From the discussion above, the following points have emerged:

- (i) The C-command Principle is an essential principle in the general theory of control, since it accounts for phenomena that the MDP admittedly does not cover, viz. sentences in which there are more than two possible controllers.
- (ii) The C-command Principle can also account for all the phenomena for which the MDP was proposed, viz. sentences in which there are one or two possible controllers.
- (iii) The C-command Principle can account for a class of phenomena which fall within the scope of the MDP, but about which the MDP makes the wrong predictions, viz. the class of "purposive" constructions such as (57) above.

This, I think, is sufficient evidence for abandoning the MDP as inadequate and adopting the C-command Principle as "the basic principle of control".

5. Conclusion

The following points have emerged from this study:

- (i) Data from Afrikaans corroborate the theory of control proposed by Chomsky and Lasnik (1977) and worked out in more detail by Chomsky (unpublished).
- (ii) The rule of control proposed for English extends to Afrikaans and may even be simplified by changing (14)i to (48).
- (iii) The feature [+ SC] is needed for Afrikaans verbs as well and has been shown not to be entirely ad hoc. There seems to be a relationship between a need for the feature [+ SC] and the following properties of sentences in which the verbs for which this feature is proposed occur:
  - a. resistance to passivization;
  - b. redundancy of the complement NP or PP; and
  - c. adherence to a pragmatic condition requiring the subject of the verb to be the agent in bringing about a certain state of affairs.
- (iv) The general theory may be simplified by abandoning the MDP and taking the C-command Principle to be the basic principle of control. No extension of the C-command Principle is required.

In addition, there are two points requiring further study:

- (v) The interaction between the rule of control and the rule coindexing coreferential pronouns was merely noted, but the details remain to be worked out.
- (vi) Allusion was made in §2.1 to the C-command Condition on anaphora which requires an anaphor to be c-commanded by its antecedent. In a certain type of structure this condition is not met, viz. structures in which there is an antecedent which is not directly dominated by VP as in (54) and (55) above. The solution to this problem may perhaps be sought in a more precise definition of the term "first branching category", but

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I have no definite proposals to offer at this stage. What is clear, though, is that c-command plays an important role in construal, particularly if the MDP too is replaced by a principle based on c-command. This entails, however, that the position of  $\bar{S}$  in the sentence is all-important. The various positions proposed above --- i.e. final within the VP in the case of normal verb, adjective and noun complements, but final within S in the case of "purposive" constructions --- must therefore be independently motivated for the neat results obtained on the basis of c-command to be of any value.

NOTES

1. Only PRO, i.e. base-generated  $[\underset{NP}{\alpha} e]$ , qualifies as an element that can undergo control. Nonbase-generated  $[\underset{NP}{\alpha} e]$  = trace, which results from movement of an NP or wh-phrase, is automatically coindexed with the moved category.
2. Chomsky and Lasnik (1977:459) define the notion "c-command" as follows: "We say that  $\alpha$  c-commands  $\beta$  if the first branching category dominating  $\alpha$  dominates  $\beta$ : in this case,  $\beta$  is in the domain of  $\alpha$ ."
3. Cf. Chomsky and Lasnik 1977:432.
4. Chomsky (unpublished: 17) formulates this condition as follows: "If  $\alpha$  is in the domain of the subject of  $\beta$ ,  $\beta$  minimal, then  $\alpha$  cannot be free in  $\beta$ ."
5. Chomsky (unpublished: 17) formulates this condition as follows: "A nominative anaphor in S cannot be free in  $\bar{S}$  containing S."
6. Cf. Chomsky unpublished: 33.
7. In Chomsky unpublished: 8 this structure is reformulated as follows:  
 $[\underset{COMP}{\alpha} \underset{wh\text{-phrase}}{\underset{+}{WH}}] [\underset{S}{\beta} \underset{PRO\ to\ V}{\underset{...}{t}} \underset{...}{t}]$  ( $t$  the trace of the wh-phrase)  
The category of "structures of obligatory control" is thereby extended to include structures containing complements introduced by who, whom, and to whom, as well as all the other interrogative pronouns.
8. This feature may be stipulated or predicted by a redundancy rule, for which cf. Chomsky unpublished : 41.

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9. Cf. Chomsky unpublished: 33 for details of the principles of case assignment and the filter N, where N has no case. Note that the complementizer for is not assigned the feature [+P] in all cases. For more details, cf. Chomsky unpublished: 40-41.
10. PRO does not contain lexical N and is, therefore, not subject to the filter.
11. In my dialect (or, perhaps, idiolect) this sentence is not totally unacceptable.
12. Note that there are two classes of verbs that fit the description of "verbs taking bare infinitive complements", but which are not verbs of control. These are the so-called believe-type verbs that have the marked property of being able to assign case across clause boundaries and the obligatory Raising verbs such as seem. For more details, cf. Chomsky unpublished: 38-42.
13. The occurrence of PRO in structures such as these is merely the result of the nonapplication of the optional rule expanding NP.
14. The feature [+F] is used here to denote the property of assigning case across clause boundaries. The restriction to [+F] verbs follows from the fact that for deletes in VP complements and cannot, therefore, assign case --- cf. the reference cited in 9. Case has to be assigned by the matrix verb.
15. The presence of the complementizer for must be assumed to cause case to be assigned to the complement subject NP in structures such as these. According to Chomsky (unpublished: 40-41), for must be assigned the feature [+P] in order for the rules of case assignment to apply. If it is assigned this feature, it is undeletable under the Recoverability Condition. Note, however, that if it is assigned [+P] in structures such as (12)b, it must have this feature in structures such as (11)b as well. But, for must be deleted in (11)b in order to derive the sentence John was eager to win. It may be argued that case need not be assigned to PRO,

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therefore for can be assigned [- P], or simply not be assigned [+ P], in structures such as (11)b. I doubt, however, that it will be possible to present evidence in support of a distinction between for in structures such as (12)b and for in structures such as (11)b.

16. Chomsky (unpublished: 43) refines this somewhat cryptic statement of what he takes to be the "basic principle of control" as follows: "The notion 'complement' must be properly defined to include direct objects and the NP of certain prepositional phrases".
17. This is my term for the principle stated by Chomsky (unpublished: App - 7) to define the term "nearest controller" contained in the rule (14).
18. Cf. Chomsky unpublished: 44.
19. Cf. Chomsky unpublished: 44.
20. More specifically, the C-command Condition, the Opacity Condition, the Nominative Island Constraint, the principles of Case Assignment and the filter \*N, where N has no case.
21. That is, I shall be assuming the base rules that Chomsky seems to assume in Chomsky unpublished, because he does not explicitly state his base rules. Specifically, I shall be assuming that verbs, nouns and adjectives can take sentential complements.
22. Cf. Chomsky unpublished: App-7 for the relevant analysis of VP.
23. I am assuming that the restrictions on the possible positions of control noted in §2.1 and the restrictions on the controller noted in §2.4 carry over to Afrikaans, having found no evidence to the contrary. Note, in particular, that in order to be a controller, an NP or PP must be "thematically related" to the verb. For instance, in the sentence Hy beveel haar [ in 'n kwaai stem ] [ -S PRO om gou te maak ] ("he orders her [pp in an angry voice] [ -S PRO to hurry] ")

The NP within the PP, viz. 'n kwaai stem', is not thematically related to the verb and is, predictably, not available as a controller for PRO. No interpretation of this sentence is possible whereby it is the angry voice that has to hurry.

24. If the subject NP of an embedded infinitival clause is lexical, the clause must be introduced by the complementizer vir 'for', as such an NP has to be assigned case. For the principle of case assignment which is relevant here, cf. fn. 15 above.
25. Note that this is the passive subject, that is the active direct object, with t the trace of PRO. The exact interpretation of this sentence, then, is "the trespasser pleads that some unspecified person should set him free".
26. Notice, incidentally, that the theory of control holds for passives as well. For example, underlying the sentence (28), is the following structure:

Sy word deur die kinders gesmeek t [S<sub>6</sub> PRO om saam te gaan]

she is by the children entreated t [S<sub>6</sub> PRO with to go]

Take t to be the trace of sy. By the MDP, PRO is assigned the index of the NP in the complement of V, viz. t, and t being coindexed with sy, PRO is controlled by the NP sy through its trace. Notice, also, that I find (28) less acceptable than (29) and (30), a fact which will be relevant later on --- cf. §3.6 below.

27. I do not regard (23)a as ambiguous, but some other speakers of Afrikaans do.
28. I find it difficult to imagine circumstances, though, in which the NP complement of smeek could be regarded as thematically unrelated to the verb.
29. This type of construction seems to be quite idiosyncratic. It does not, for instance, occur in English or French:

- (1) a. \*I entreated him to may go  
b. \*Je lui ai demandé de pouvoir aller  
I him have asked to may go

In both these languages, however, the sentences corresponding to (32)a and b are grammatical:

- (2) a. I entreated him to allow me to go  
b. Je lui ai demandé de me permettre d' aller  
I him have asked to me allow to go

30. Notice that this category includes the equivalents of want and prefer in English. It may therefore be appropriate to note at this point that Afrikaans does not seem to have a marked category of verbs such as want and prefer in English. In Afrikaans, these verbs are normal verbs of control.

- (1) a. Ek verlang [ $\bar{S}$  PRO om hom weer te sien]  
I want [ $\bar{S}$  PRO him again to see]  
b. \*Ek verlang [ $\bar{S}$  vir [ $S$  NP om hom weer te sien]]  
I want [ $\bar{S}$  for [ $S$  NP him again to see]]
- (2) a. Ek verkies [ $\bar{S}$  PRO om alleen te gaan]  
I prefer [ $\bar{S}$  PRO alone to go]  
b. \*Ek verkies [ $\bar{S}$  vir [ $S$  NP om alleen te gaan]]  
I prefer [ $\bar{S}$  for [ $S$  NP alone to go]]

Generalizing, we can assume that Afrikaans does not allow case assignment across clause boundaries at all, i.e. Afrikaans does not have the feature [+F] indicating that a verb can assign case across clause boundaries. This would predict that in Afrikaans, believe-type verbs do not have the feature [+F] either. Although judgments are insecure and the constructions rare, these predictions seem to me to be correct. Compare (3)a and b below.

- (a) a. Hy word geag [ $\bar{S}$  t (om) oneerlik te wees]  
he is believed [ $\bar{S}$  t dishonest to be]  
b. ?\*Hulle ag [ $\bar{S}$  hom (om) oneerlik te wees]  
they believe [ $\bar{S}$  him dishonest to be]

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Most speakers of Afrikaans consider sentences in which om te ag is used in its active form as unacceptable or doubtful, in which case it seems that om te ag must be regarded as a normal raising verb, the raised subject being assigned case by the matrix verb word (as in (3)a).

31. However, see §3.5:fn. 39 below for a certain type of construction in which they can take an NP or PP complement and an embedded infinitive.
32. The active form of this sentence is as acceptable as the sentence (36)b above:

Ek het teenoor hom onderneem om 'n uitvoering te gee  
I have towards him undertaken a performance to give

I have changed the sentence to get rid of the possessive my 'my' in (36)b which could influence intuitions.

33. Cf. Searle 1965:238-239.
34. By the principle that "once a controller has assigned control, it is no longer a controller" --- cf. Chomsky unpublished: App-5.
35. As in English, the verb vra 'ask' assigns subject control in structures such as these. We have so far deliberately avoided the verb vra as the problems it creates are discussed in detail in §3.6 below.
36. Cf. also Chomsky unpublished: fn. 31.
37. It may be that (49)b and c require vir complementizer to account for sentences such as (1) and (2):
  - (1) Dit is 'n man vir julle om dop te hou  
it is a man for you to keep an eye on
  - (2) Bring vir my 'n boek vir my dogter om te lees  
bring for me a book for my daughter to read

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- However, the exact analysis of the COMP position is irrelevant here.
38. This assumption follows from the raising analysis of relatives which Chomsky takes over from Vergnaud --- cf. Chomsky and Lasnik 1977: 461 fn. 74.
39. Note that verbs that cannot take a complement NP or PP and a "bare" infinitival complement (cf. §3.2:fn. 31 above) can take a complement NP which is the head of an infinitival complement, as in Ek verkies 'n pop vir my dogter om mee te speel 'I prefer a doll for my daughter to play with', and, Ek verkies 'n pop [vir PRO om mee te speel] 'I prefer a doll to play with', where PRO must still be coindexed with the matrix subject ek, since the complement NP 'n pop' is bound by its trace and therefore not available as a controller.
40. Cf. Chomsky unpublished: 43.
41. Note that even belowe, which is marked [+ SC] in the lexicon, now behaves in accordance with the MDP. It seems, therefore, that the feature applies only if control is obligatory in the narrow sense, i.e. with verbs of obligatory control taking "bare" infinitival complements or in structures of obligatory control, and not if control is "obligatory where applicable", i.e. with vir complementizer.
42. Cf. the discussion in connection with ooreenkoms in §3.2 above.
43. Cf. Chomsky unpublished: App-7.
44. For this and the following analysis, cf. Chomsky unpublished: App-7. Various other analyses of the VP have been proposed, but I am assuming Chomsky's analysis pending further research on the analysis of the VP in Afrikaans.
45. I assume here that the embedded relative clause has been extraposed to the final position in the VP, which would have implications for Baltin's landing-site theory. He (1978:149) proposes that "extraposed relatives move to a final position past the verb phrase".

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46. In (58)b and c the embedded clauses might conceivably be analyzed as the complements of the NPs tjek and pil respectively, i.e. 'n tjek [ 6 wat [t om hom te paai ] ]', in which case there would be no control. Such an analysis is not plausible in the other cases of (57) however.
47. Cf. Chomsky unpublished: fn. 47 for a similar analysis.

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