Afrikaans Verb Clusters:A Functional-Head Analysis

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September 7, 2001

0.1 Acknowledgements

I would like to thank my supervisor, Professor Knut Tarald Taraldsen for his comments and expertise; my informants, Theresa Biberauer, Simone Conradie, Bernd Hutschenreuther, Sean Masterson, Johan Oosthuizen and Wilma Ter Haar for their patience; those who have discussed and contributed to this project at various points, Hans Den Besten, Lucie Medová and Annalena Wiklund for their indulgence; and my friends and colleagues at the Institute for Linguistics at the University of Tromsø for their support and encouragement.

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Chapter 1

Introduction

1.1 Introduction

In this chapter, I shall provide a brief introduction to transparency effects. First the Italian data will be presented. Thereafter it will be shown that similar phenomena are also visible in West-Germanic languages such as German, Dutch and Afrikaans.

1.2 Italian

In Italian, it appears that clause-bound phenomena such as clitic climbing, auxiliary selection and NP-movement behave in a peculiar manner when restructuring verbs are present. Specifically, these verbs are modals, aspectuals and modal verbs.

1.2.1 Clitic Climbing

The following examples of clitic climbing are from Cinque (2000b) and Cinque (2000a).

(1.1) *Gianni vuole far*lo.
Gianni wants make-INF-it
‘ Gianni wants to make it.’

(1.2) *Gianni* lo *vuole fare.*
Gianni it wants make-INF
‘ Gianni wants to make it.’

(1.3) *Lo *detesto vedere in quello stato.*
him I-detest to-see in this state
‘ I detest seeing him in this state.’

(1.4) *Lo *ammetto* *di* *conoscere* *appena.*
him admit-1SG to barely know
'I admit not to know him almost at all.'

(1.5) *Lo *rinuncio* *ad* *avere* *per* *me.*
it I-give-up to to-have for me
'I give up having it for myself.'

(1.6) Lo *volevo* *vedere* *subito.*
him wanted-1SG to-see immediately
' I wanted to see him immediately.'

(1.7) Lo *finisco* *di* *vedere* *domani.*
it finish-1SG to see tomorrow
'I'll finish seeing it tomorrow.'

(1.8) Lo *vengo* *a* *prendere* *domani.*
it come-1SG to fetch tomorrow
' I'll come to fetch it tomorrow.'

1.2.2 Long NP-Movement

(1.9) *Non* *si* *puo'* *fare* *tutte* *queste* *storie.*
NEG SI can-3SG to-do all these stories
' One cannot make all this fuss.'

(1.10) *Tutte* *queste* *storie* *non* *si* *possono* *fare.*
all this fuss NEG SI can-3PL to-do
' One cannot make all this fuss.'

1.2.3 Auxiliary Selection

(1.11) *Gianni* ha *voluto* *venire* *con* *noi.*
Gianni has wanted to-come with us
'Gianni has wanted to come with us.'

(1.12) *Gianni* è *voluto* *venire* *con* *noi.*
Gianni is wanted to-come with us
' Gianni has wanted to come with us.'

1.2.4 Cinque's Functional-Head Analysis

The analysis proposed by Cinque (1999, 2000a,b) centres on the idea that restructuring verbs are actually verbs merged as functional heads corresponding to aspectual positions. Based on the relative orders of adverbial

phrases and functional morphemes in a cross-linguistic survey, Cinque (1999, 2000a,b) propose the following rigid, UG- determined hierarchy of functional modal, mood, tense and aspectual positions.

$Mood_{speechact} \gg Mood_{evaluative} \gg Mood_{evidential} \gg Mod_{epistemic} \gg T_{past} \gg T_{future} \gg Mood_{irrealis} \gg Mod_{alethic} \gg Asp_{habitual} \gg Asp_{repetetiveI} \gg Asp_{frequentativeI} \gg Mod_{volitional} \gg Asp_{celerative} \gg T_{anterior} \gg Asp_{terminative} \gg Asp_{continuative} \gg Asp_{retrospective} \gg Asp_{prosimative} \gg Asp_{durative} \gg Asp_{generic/progressive} \gg Asp_{prospective} \gg Mod_{obligation} \gg Mod_{permission/ability} \gg Asp_{completive} \gg$ Voice $\gg Asp_{celerativeII} \gg Asp_{repetitive} \gg Asp_{frequentativeII}$

When the class of restructuring verbs is analysed more closely, it appears that modals, verbs of motion and aspect correspond to individual projections in this hierarchy.

> The verbs that enter the "restructuring" construction appear to correspond to distinct heads . . . [*in the hierarchy above*] . . . in the sense that each seems to lexicalise the content of one or another functional head (Cinque, 2000a).

Under this analysis, transparency follows from the nature of functional heads. Since verbs merged as functional heads in a monoclausal structure are not barriers, clitics and XPs can raise to higher positions in the structure. Similarly, auxiliary selection can take place where the embedded verb selects an auxiliary across a series of functional heads which do not act as barriers to that relationship.

In earlier work, (Cinque, 1997), it is suggested that when the semantic features of a verb happen to match corresponding features of a functional projection, then the verb may merge as either the head of a VP or as a functional verb in an aspectual or modal projection.

> Only those verbs which happen to match sematically the content of a certain functional head admit of two possibilities. They are either regular verbs, heading a VP (in which case they take a full fledged sentential complement), or "functional" verbs directly inserted in the head position of the corresponding functional projection (Cinque, 2000a).

According to this scenario, the biclausal structure was associated with an obligatory lack of transparency. The monoclausal structure was associated with obligatory transparency effects. However, this analysis is changed in Cinque (2000a). The apparent obligatory nature of transparency effects is analysed and proved to be, in essence, optional. The result is that transparency effects do not necessarily characterise monoclausal structures. This

concedes the possibility that restructuring verbs are always functional heads regardless of whether or not transparency effects are evident. Some of the arguments in support of this analysis are summarised below.

Optional Clitic Climbing

Clitics climb obligatorily in the presence of Long Object-preposing (Cinque, 2000a).

(1.13) *Si vorrebbe vender*gli *queste case a caro prezzo*
SI would-like-3SG to-sell-him these houses at high price
' One would like to sell him these houses at a high price.'

(1.14) **Queste case si vorrebbero vender*gli *a caro prezzo*
these houses SI would-like3PL to-sell-him at high price
'These houses, one would like to sell him at a high price.'

(1.15) *Queste case* gli *si vorrebbero vendere a caro*
these houses him SI would-like-3PL to-sell at high
prezzo.
price
' These houses, one would like to sell him at a high price.'

Example 1.14 is supposedly ungrammatical because the clitic, *gli*, has failed to raise in the presence of long object-preposing. However, it is argued that this is not actually the case (Cinque, 2000a). It is argued that the impersonal passive, *si*, acts similarly to a clitic insofar as it originates with the embedded verb and climbs to appear on the left-hand side (LHS[1]) of the matrix, restructuring verb. In Italian, clitics must either climb together, or remain in situ together. It is not possible for only a single clitic to raise. The ungrammaticality of example 1.14 is thus reduced to the fact that *gli* has been separated from *si*. This means that clitic climbing need no longer be viewed as obligatory. The optional character of transparency effects in restructuring contexts is further demonstrated by auxiliary change.

(1.16) *Maria è dovuta venir*ci *molte volte.*
Marie is must-PST to-come-there many times
' Maria often had to come there.'

(1.17) *Un'ora più tardi sarebbe dovuto esser*vi *arrivato,*
one hour later he-should must-PST to-be-there arrived
ma nessuno lo vide
but nobody him saw
' He should have arrived there one hour later but nobody saw him.'

[1]Similarly, "Right-hand side" is RHS.

Thus, it appears that in standard Italian, clitics may appear in one of two positions: on the restructuring verb or on the embedded verb. This presuposes that there are two clitic positions in Italian. However, there is dialectal variation as to the relative placement of clitics (Cinque, 2000a). In Sardinian, Central and Southern Italian dialects, the clitic may only appear on the restructuring verb. In standard French, clitics obligatorily appear on the embedded verb. In Chilean Spanish, clitics appear simultaneously in both positions.

Optional Long Object-Preposing and *Loro* Climbing

Similarly, long object-preposing and *loro* climbing are optional (Cinque, 2000a). The following examples each show a transparency effect. Yet in of them, *loro* climbing and long Object-preposing are optional.

(1.18) *Gli si vuole vendere queste case a caro prezzo.*
him SI want-3SG to-sell these houses at high price
'To him one wants to sell these houses at a high price.'

(1.19) *Queste case gli si vogliono vendere a caro prezzo*
these houses him SI want3PL to-sell at high price
' These houses, one wants to sell him at a high price.'

(1.20) *Le ho dovute consegnar loro in ritardo*
them I-have must-PST to-deliver to-them late
' Them (I) have had to give to-them in late.'

(1.21) *Le ho loro dovute consgnare in ritardo*
them I-have to-them must-PSTP to-deliver in late
' I have to deliver the things to them with a delay.'

(1.22) *Mi chiedo come sia potuta andar loro incontro*
me I-ask how she-should could to-go to-them toward
' I wonder how she could go toward them to meet them.'

(1.23) *Mi chiedo come sia loro potuta andare incontro.*
me I-ask how she-should to-them could to-go toward
' I asked how she could go toward them to meet them.'

(1.24) *Si sarebbero dovute consegnar loro subito*
si would-3PL must-PST to-deliver to-them immediately
' Something should have been given to them immediately.'

(1.25) *Si sarebbero loro dovute consegnare subito*
si would-3PL to-them must-PST to-deliver immediately
'Somethough would have to be delivered to them immediately.'

Optional Auxilliary Change

Cinque (2000a) does not present a definitive case for why auxiliary change in optional in Italian, but merely points to an apparent empirical paradox where auxiliary change is obligatory in some instances (see examples 1.26 and 1.27) yet does not occur in others (see examples 1.28 and 1.29).

(1.26) **Maria ci ha dovuto venire molte volte.*
Maria there have must-PST to-come many times
' Maria has had to come there many times.'

(1.27) *Maria ci è dovuta venire molte volte.*
Maria there is must-PST to come many times
' Maria has had to come there many times.'

(1.28) *Avremmo loro potuto rimanere più vicini.*
we-will-have to-them could to-remain more close
' We could have to-them remained closer.'

(1.29) *Saremmo loro potuti rimanere più vicini.*
we-will-be to-them could to-remain more close
' We could have to-them remained closer.'

This is regarded as potential evidence that auxiliary change is a preferred option in standard Italian.

> I tentatively interpret this paradox as showing that in Standard Italian Auxiliary Change is per se optional, but is favoured by Clitic Climbing in more careful styles of Italian (Cinque, 2000a).

Since transparency effects in Italian are optional, Cinque (2000a) argues that transparency effects in themselves cannot be a diagnostic of the presence of mono or biclausal structures. Thus there is no independent rationale for proposing biclausal structures at all and hence restructuring verbs are always functional heads.

1.2.5 Italian Super Passives

Another transparency phenomenon apparent with a subset of Italian restructuring verbs is the so-called "super passive". In this construction, the arguments of the embedded verb appear on the left-hand side of the matrix verb. However, the passive morphology appears on the restructuring verb. This construction is also characteristic of Spanish and, Cinque (1997) argues, all of Romance, and German (Wurmbrand, 1998, p147), not to mention Afrikaans.

(1.30) *La casa fu finita di costruire il mese scorso.*
the house was finished to build the last month
‘ The house was finished being built last month.’

(1.31) *Quelle case furono iniziate/?cominciate a costruire negli anni ’20.*
Those houses were started to build in years 20
‘ Those houses began to be built in the 1920s.’

(1.32) *Sarete passati a prendere più tardi.*
You-PL pass-FUT to fetch more later
‘We will pass you to fetch you later.’

(1.33) *Furono mandati a prendere a casa.*
They send-PST to fetch at home
‘They sent them to fetch at home.’

Cinque (1997) argues that super passives can be explained by a functional head analysis. The ability of embedded verb arguments to raise follows from the fact that functional heads are not barriers to movemement. The ability of certain restructuring verbs to obtain passive morphology also follows from a functional-head analysis. Certain functional heads are situated above the voice head responsible for passive morphology. Barring rightward movement, these functional heads are unable to be passivised. However, a few functional heads are situated below the voice head. Nothing prevents these from raising to the voice projection to gain passive morphology. Thus the positions of functional heads relative to the voice head explains why some verbs can be passivised while others cannot.

1.3 West Germanic

Many phenomena similar to Italian transparency effects are found in restructuring contexts in West-Germanic. Germanic transparency effects include extraposition, long-distance extraposition, long NP-scrambling, super passives and quantifier scope.

1.3.1 The Class of Verbs

The class of restructuring verbs is similar across Italian, German and Dutch(Wurmbrand, 1998, pp146-147).

Italian Modals eg. *volere*, ”want”;*andare*, ”go”;*cominciare*, ”begin”;*continuare*, ”continue”;*osare*, ”dare”;*riuscire*, ”succeed”;*sapere*, ”know”;*venire*, ”come”; easy-adjectives.

German Modals; *versuchen*, "try";*beginnen*, "begin";*gelingen*, "succeed";*fortfahren*, "continue";*wagen*, "dare";*vergessen*, "forget"; easy-adjectives. In addition, there is a class of verbs that are subject to speaker variation with regard to whether they are restructuring verbs or not: *versprechen*, "promise";*empfehlen*, "recommend";*entscheiden*, "decide";*erlauben*, "permit";*befehlen*, "order";*verstehen*, "know-how";*beabsichtigen*, "intend";*glauben*, "believe".

Dutch Modals; *beginnen*, "begin";*dreigen*, "threaten";*durven*, "dare";*helpen*, "help";*leren*, "learn/teach";*menen*, "think/believe/mean";*proberen*, "try";*trachten*, "try";*wagen*, "dare";*weigeren*, "refuse".

1.3.2 NP Scrambling

NP-scrambling is evident in restructuring constructions. It appears that the arguments of the embedded verb move from base position to appear to the left of the matrix, restructuring verb. In German, the object may appear to the left of the subject. This is not possible in Dutch. Example 1.38 demonstrates how an embedded direct object can be scrambled across the matrix verb. The verb's external argument is licensed in Spec AgrS which is situated high in the functional hierarchy and c-commands all projections associated with restructuring verbs. The internal argument of the verb is licensed in Spec AgrO which is situated beneath AgrS, but which still c-commands projections associated with restructuring verbs. Additional licensing projections (for instance those associated with clitics and object pronouns) may be present lower in the hierarchy. Wurmbrand (1998) uses NP scrambling as a defining test of a restructuring verb.

(1.34) *weil (dieses Schaf)$_i$ Rob t_i zu schären versuchte.*
since this sheep Rob t to shear tried
' since Rob tried to sheer this sheep.' (German)

(1.35) **weil (dieses Schaf)$_i$ Rob t_i zu schären ankündigte.*
since this sheep Rob t to shear announced.
' Since Rob announced that he would sheer this sheep.'(German)

(1.36) *... daß sie der Mann zu besuchen versprach.*
... that her the man to visit promised.
' ... that the man promised to visit her.' (German:(Hinterholzl, 1999, p7))

(1.37) *... daß der Maria das Buch Hans gestern zu geben versprach.*
... that the Maria the book Hans yesterday to give promised.

‘ . . . that Hans promised yesterday to give the book to Maria.’
(German:(Hinterholzl, 1999, p7))

(1.38) *. . . dat wij het Cecilia hoorden vertellen.*
. . . that we it Cecilia heard tell
‘. . . that we heard Cecilia tell it’ (Dutch:(Hinterholzl, 1999, p15))

1.3.3 Super Passives

As mentioned in section 1.2.5, super passives occur in German. In this construction, the verb arguments appear on the LHS of the matrix verb. Furthermore, passive morphology occurs on the restructuring verb

(1.39) *weil (dieser Turm)$_i$ schon vor zehn Jahren t_i zu*
since this tower already from ten years t to
restaurieren versucht wurde.
restore tried was.
‘ since somebody tried to restore the tower already ten years ago.’(Wurmbrand, 1998, p147)

(1.40) **weil (dieser Turm)$_i$ schon vor zehn Jahren t_i zu*
since this tower already from ten years t to
restaurieren beschlossen wurde.
restore decided was
‘ since somebody decided to restore the tower already ten years ago.’

(1.41) *weil (dieser Kuchen)$_i$ leicht zu backen t_i ging, besorgte*
since this cake easily to bake t went, purchased
ich die Zutaten.
I the ingredients.
‘ since it was easy to bake this cake, I purchased the ingredients.’
(Hutschenreuther, p.c.)[2]

(1.42) *weil (dieses Bier)$_i$ zu trinken t_i ging, besorge ich*
since this beer to drink t went, purchased I
noch ein paar Flaschen.
another a couple bottles
‘ since the beer was not so bad I bought another couple of bottles.’(Hutschenreuther, p.c.)

(1.43) *weil (dieses Buch)$_i$ zu lesen t_i ging, hätte ich nichts*
since this book to read t went, had I nothing
dagegen, wenn man mir eins besorgte.
against if somebody me one bought

[2]Examples 1.41 and 1.42 are not passives. However, they display similar characteristics insofar as the object becomes the subject of the matrix verb.

‘ since this book was readable, I wouldn't have anything against somebody buying me one.'(Hutschenreuther, p.c.)

1.3.4 Long Extraposition

It is a characteristic of transparency constructions in West-Germanic that extraposition is not possible in restructuring contexts[3].

(1.44) **... daß der Lehrer die Kinder zu versuchen*
... that the teacher the children to $try_{restructuring}$
bestärkt (die Aufgaben zu lösen)
encouraged the problems to solve.
‘ ... that the teacher encourages the children to try and solve the problems.'(German:(Hinterholzl, 1999, p9))

(1.45) *... daß der Lehrer die Kinder zu*
... that the teacher the children to
bestärken versucht (die Aufgaben zu lösen)
$encourage_{non-restructuring}$ tried the problems to solve.
‘ ... that the teacher tried to encourage the children to try and solve the problems.'(German:(Hinterholzl, 1999, p9))

(1.46) *... dat ik Jan een liedjie zingen hoorde.*
... that I Jan a song sing $heard_{restructuring}$
‘ ... that I heard Jan sing a song.'(Dutch)

(1.47) **... dat ik hoorde Jan een liedjie zingen.*
... that I $heard_{restructuring}$ Jan a song sing
‘ ... that I heard Jan sing a song.'(Dutch:(Hinterholzl, 1999, p9))

1.3.5 Quantifier and Adverbial Scope

Restructuring verbs also differ from their non-restructuring counterparts with regard to quantifier and adverbial scope (Hinterholzl, 1999). A quantifier or adverbial in a restructuring context has scope over both the matrix and the embedded verb. In contrast, a quantifier or adverbial in a non-restructuring context has narrow scope over the matrix verb only. Thus restructuring verbs are transparent with regard to quantifier and adverbial scope.

(1.48) *Weil er sie nicht geheiratet zu haben bedauerte*
Since he her not married to have resented
‘ Since he resented not having married her.'

[3]Under the OV analysis of West-Germanic, the term "extraposition" referred to *rightward* movement. In this thesis, the term is used in a theory-neutral fashion.

‘ *Since he did not resent having maried her.’ (German: (Hinterholzl, 1999, p8))

(1.49) *Weil er si nicht zu küssen wagte.*
Since he her not to kiss dared.
‘Since he dared to not kiss her.’
‘Since he did not dare to kiss her.’ (German:(Hinterholzl, 1999, p8))

(1.50) *. . . dat wij de kraaien niet zagen vliegen.*
. . . that we the crow not saw fly
‘We saw that the crows were not flying.’
‘We did not see that the crows were flying.’ (Dutch:(Hinterholzl, 1999, p15))

1.3.6 Complementisers Block Scrambling

Unlike in Romance, in West-Germanic, overt complementiser material in C_0 blocks transparency[4]. The fact that they do this implies that no CP is present in transparency constructions.

(1.51) *dat Jan heeft geprobeerd (om) zijn broer die brief te*
that Jan has tried-PST Comp his brother the letter to
schrijven
write
‘That Jan has tried to write the letter to his brother.’ (Wurmbrand, 1998, pp152- 153)

(1.52) *dat Jan (die brief)$_i$ heeft geprobeerd (*om) zijn broer*
that Jan the letter has tried-PST Comp his brother
t_i te schrijven
t to write
‘that Jan has tried to write the letter to his brother.’ (Wurmbrand, 1998, pp152- 153)

(1.53) *dat Jan (zijn broer die brief t_v) heeft proberen te*
that Jan his brother the letter t has try-INF to
schrijven$_v$
write
‘that Jan has tried to write the letter to his brother.’ (Wurmbrand, 1998, pp152-153)

Similar effects occur in West Flemish.

[4]In Romance, complementisers do not necessarily act as barriers. For instance, in example 1.7, *di* is regarded as being in CP.

(1.54) *da* *Marie* *ee* *proberen* *(van)* *hem* *een* *brief* *(te)*
that Marie has try-INF comp him a letter to
schrijven
write
'that Marie tried to write him a letter.' (Wurmbrand, 1998, pp152-153)

(1.55) *da* *Marie* *hem$_i$* *ee* *proberen* *(*van)* *t$_i$* *een* *brief* *(te)*
that Marie him has try-INF comp t a letter to
schrijven
write.
'that Marie tried to write him a letter.' (Wurmbrand, 1998, pp152-153)

1.3.7 Summary

It is significant that Wurmbrand (1998) interprets all these Germanic facts as being similar to the Italian restructuring phenomena. They share the ability of constituents (XPs and clitics) to move from positions relatively low in the structure to higher positions regardless of the presence of restructuring verbs which do not seem to prevent such movement as other verbs do. In NP-scrambling constructions (see section **??**), verb arguments can move across a restructuring verb but not across ordinary verbs. In the super passive construction (see section **??**), the object of the embedded verb becomes the subject of the matrix verb yet the restructuring verb is passivised. Long extraposition (see section **??**) moves an XP only in contexts where a restructuring verb is present. Restructuring verbs are also transparent with regard to quantifier and adverbial scope (see section **??**): in non-restructuring contexts, the adverbial scopes over the matrix verb. However, in restructuring contexts, the adverbial scopes over both matrix and embedded verbs. Transparency effects are evident in all these situations. Similar effects are evident in Italian. Restructuring verbs allow clitics to raise. NPs may also undergo long movement in restructuring contexts. Restructuring verbs are also transparent with regard to the ability of the embedded verb to select an auxiliary. Finally, it can be seen that in West-Germanic, complementisers consistently block scrambling (see section 1.3.6); this can be interpreted as evidence that in restructuring contexts a CP is not present.

This suggests that they are structurally related and might be captured under a single analysis. Wurmbrand (1998) proposes that the nature of this analysis might be captured by "... bare VPs that do not contain an embedded subject" (Wurmbrand, 1998, p142). This analysis is, in spirit, not far removed from the Cinque (1999) analysis of Italian restructuring verbs as functional heads.

1.4 Afrikaans

In the following section the Afrikaans restructuring data will be introduced. It will be shown that the transparency effects present in Italian and West-Germanic also have correlates in Afrikaans.

1.4.1 NP Scrambling

Like German and Dutch, Afrikaans exhibits NP scrambling where the arguments of the embedded verb appear to the left of the matrix, restructuring verb. This effect occurs where the matrix verb is an aspectual, modal or movement verb. A functional-head analysis explains this process operation since a verb merged as a functional head would not act as a barrier to verb-argument extraction.

(1.56) *... dat Jan die man probeer help het.*
... that Jan the man try help have
'... that Jan tried to help the man.'

(1.57) *... dat Jan die man moet help.*
... that Jan the man must help
'... that Jan must help the man.'

(1.58) *... dat Jan die huis loop koop het.*
... that Jan the house walk buy have
'... that Jan went and bought the house.'

1.4.2 Passives

Like German, but unlike Dutch, Afrikaans allows so-called super passives with some types of linking verbs. The embedded object becomes the matrix subject. Direct linking verbs passivise fairly productively. Some semi-direct linking verbs tend not to passivise. Indirect linking verbs tend not to passivise. Perception verbs do not passivise.

Passivisation of Direct Linking Verbs

Direct linking verbs, especially *laat*, tend to passivise fairly productively in Afrikaans. In the following paragraphs, passive constructions with a variety of linking verbs are demonstrated.

laat The verb *laat* passivises by far the most readily of all the linking verbs.

(1.59) *Hierdie huis is deur my oom (ge)laat bou.*
This house is by my uncle let build
'My uncle had this house built.' (Robbers, 1997, p62)

(1.60) *Een van die mans is (ge)laat haal om die slang te verwyder.*
One of the men is let get INf-COMP the snake to chase.
'One of the men was fetched to chase the snake away.' (Robbers, 1997, p62)

It is interesting to note that although *laat* has both causative and permissive readings under normal circumstances, *laat* can never have a permissive reading when it is passivised.

(1.61) *Die huis is laat bou*
The house is let build
'The house was built.'
'*The house was allowed to be built.'

It might be that the mixed judgements on the acceptability of some *laat* passives is the result of ambiguity between $laat_{Caustative}$ and $laat_{Permissive}$. This is left as a question for future research.

kom

(1.62) *Hulle is gekom haal in 'n grys vantjie.*
They is come-PST fetch in a grey van
'They were fetched in a grey van.' (Robbers, 1997, p62)

ophou

(1.63) *... sweetpakke wat in 1970 ophou maak is.*
... track-suits that in 1979 stop make is
'... suits that ended production in 1970.' (Ponelis, 1979, p420)

leer

(1.64) *... dieselfde ontwikkelingspatroon wat reeds in die nuwe Volkswagen leer ken is.*
... the-same development-pattern that already in the new Volkswagen learn know is.
'... the same development pattern that is already apparent in the new Volkswagen.' (Ponelis, 1979, p420)

gaan

(1.65) *...toe (...) is die dokter gaan laat haal.*
...toe (...) is the doctor go let get
'...then the doctor was fetched.' (Ponelis, 1979, p420)

begin

(1.66) *?Die motor is lankal begin verf.*
The car is long-ago begin paint.
'The car's paint-job was started long ago.'

probeer

(1.67) *...dat die motor is al drie keer probeer steel.*
...that the car is already three times try steal.
'...that three attempts to steal the car have been made already.'

leer

(1.68) **...dat die juwele leer steel is.*
...that the jewels learn steal have.
'...that (burglers) were taught how to steal the jewels.'

help

(1.69) **...die dat kat help slaan is.*
...that the cat help hit is.
'...that (somebody) was helped to hit the cat.'

From these examples it can be seen that many Afrikaans linking verbs passivise fairly productively. However, some, including *help, leer* and *begin* are less productive in their ability to passivise.

1.4.3 Passivisation of Perception Verbs

Although it is relatively easy to passivise a perception verb by making the objective subject[5]the matrix subject, it is extremely difficult to make the embedded object the matrix subject. Robbers (1997, p63) claims that judgements were split over whether perception verbs could passivise or not, although the general tendency was for them not to be passivised.

[5]Objective subject: the apparent object of the matrix verb which also acts as an apparent subject of the embedded verb.

(1.70) *?... dat die kos sien eet is.*
... that the food see eat is.
'... that the food was seen being eaten.'

(1.71) *?... dat die storie hoor lees is.*
... that the story hear read is..
'... that the story was heard being read.'

1.4.4 Passivisation of Indirect Linking Verbs

Although speaker judgements vary, it is generally difficult to passivise indirect linking verbs.

(1.72) *??Die perskes is gesit en skil deur die Xhosa-vroue.*
The peaches is sit and peel by the Xhosa-women.
'The peaches were being peeled by the Xhosa women.' (Robbers, 1997, p69)

(1.73) *??Die voëls is gestaan en verwilder deur die seuns.*
The birds is stand and chase by the boys.
'The birds were being chased by the boys.' (Robbers, 1997, p69)

1.4.5 Quantifier and Adverbial Scope

In Afrikaans, like German and Dutch, adverbial and quantifier scope is affected by restructuring[6]. Thus restructuring verbs are transparent with regard to the scope properties of adverbials.

(1.74) *Jan het elke dag probeer skiet.*
Jan have every day try shoot
'Every day, Jan attempted to shoot (and failed to hit the target).'
'Jan tried to do shooting practice every day.'

(1.75) *Jan het elke dag probeer om te skiet.*
Jan have every day try INF-CMP to shoot
'Every day, Jan attempted to shoot (and failed to hit the target).'
'*Jan tried to do shooting practice every day.'

(1.76) *Jan het elke dag begin skiet.*
Jan have every day begin shoot
'Every day, Jan began to shoot (and failed to hit the target).'
'Jan began to do shooting practice every day.'

[6]Some informants claimed that aspectual and motion verbs had ambiguous scope. Other informants allowed a subset of restructuring verbs (typically aspectuals) to take ambiguous scope.

(1.77) *Jan het elke dag begin om te skiet.*
Jan have every day begin INF-CMP to shoot
'Every day, Jan began to shoot (and failed to hit the target).'
'*Jan began to do shooting practice every day.'

1.4.6 The Class of Restructuring Verbs

The class of bare infinitives in Afrikaans bears a close resemblance to the class of restructuring verbs in Italian, German and Dutch in section 1.3.1. However, the verb system represents one of the differences between Afrikaans and European Germanic varieties (Du Plessis, 1990, p74). Owing to creolisation and language change, the Afrikaans verb system has changed substantially from its 17th-Century Dutch antecedents. It has developed a complex system of modals, auxilliaries, aspectual and other IP phenomena to compensate for the simplification resulting from deflection (**?**, p74). The development of lexical verbs into aspectual markers has resulted in change of semantic features in some cases.

> The downgrading goes hand in hand with semantic shift, through which a spesific lexical meaning develops into a general semantic value [author's paraphrase] (Ponelis, 1979, p255)[7]

In the Afrikaans literature, restructuring verbs are typically subdivided into several classes: modals, direct linking verbs (DLVs), indirect linking verbs (ILVs), verbs of perception and *te*-complements.

Modals *kan*, "to be able to"; *mag*, "to be allowed to"; *moet*, "to have to"; *sal*, "will"; *wil*, "to want to".

The imperfect forms of these modals are *kon, mog, moes, sou* and *wou* respectively. Note that *mog* is archaic and infrequently used. In addition, verbs such as *behoort ... te*, "ought to"; *durf ... te*, "dare to"; and *hoef ... te*, "(not) to need to", also occasionally play a modal role (Donaldson, 1993, p247).

Direct Linking Verbs Direct linking verbs play an aspectual role in Afrikaans. *basta*, negative exhortative [8]; *probeer*, "to try"; *kom*, "to come";

[7] The original quotation is as follows:

> Die afgradering gaan gepaard met semantiese verskuiwing, waardeur 'nspesifieke leksikale betekenis tot 'n algemene grammatiese waarde kan ontwikkel.

[8] Some researchers, eg Donaldson (1993), claim that *basta* is also used as a linking verb. Although this may be true, I did not find any examples where it appeared to do so. In most contexts it sees to be an exclamation and is not very productive.

gaan,"to go"; *laat*, "to allow/to let"; *help*, "to help"; *leer*, "to learn"; *bly*, "to stay/to continue doing"; *begin*, "to begin"; *aanhou*, "to continue doing"; *ophou*, "to stop doing"; *beter*, " had better"

Some authors (eg. De Villiers (1951) further subdivide the class of direct linking verbs. *probeer, begin, help* form a separate class.

Indirect Linking Verbs Indirect linking verbs are verbs of bodily posture. They are characterised by an optional pseudo-co-ordinative marker, *en* which occurs to the left of the embedded verb: *lê*, "to lie down"; *loop*, "to walk"; *sit*, "to sit"; *staan*, "stand"

***Te*-Complements.** Some restructuring verbs in Afrikaans obligatorily co-occur with the infinitive marker, *te*. Importantly, these verbs usually cannot select a CP complement with the infinitval complementiser, *om* in C^0. For this reason, this class of verbs is named, *te*-complements. Afrikaans *te*-complements, like those in Dutch, can be divided into two categories: Type-A and Type B(Robbers, 1997, pp89-92). Both types allow transparency effects, although in slightly different ways (see table 1.4.6). Some verbs are members of both classes, eg *begin*

Type-A *te*-Complements *hoef*, "(not) to have to"; *behoort*, "ought to"; *begin*, "to begin"; *durf*, "to dare"[9].

Type-B *te*-Complements *hoef*[10], "(not) to have to"; *weet*, "to know"; *skyn*, "to seem"; *blyk*, "to appear"; *meen*, "to mean"; *wens*, "to wish";

Although they appear to have similar structures, they are in fact quite different, as a comparison of the two types illustrates (Robbers, 1997) (see table 1.4.6.

(1.78) *Jy sal nie* hoef *boeke te lees nie.*
You will not have-to books to read NEG
'You won't have to read books.' (Robbers, 1997, p90) (Type A)

(1.79) *Hierdie metode het* geblyk *'n sukses te wees.*
This method have appear-pst a success to be
'This method appears to be a success.' (Robbers, 1997, p91) (Type B)

[9]Robbers (1997) claims that Type-A verbs never select past-participle morphology. While this is true, it is also the case that most of these verbs cannot be used independently as the only verb in a clause ie they only occur in verb clusters. For this reason, it may be better to regard these verbs as selecting for obligatory IPP.

[10]According to Robbers (1997), it is not clear whether *hoef* is Type-B or not since speaker judgements differed. On the whole, however, it would appear that it usually is of Type-A.

Table 1.1: Comparision of Type-A and Type-B *te*-complements

Type A	Type B
Embedded objects occur on LHS of matrix verb.	Embedded objects occur on LHS/RHS of matrix verb
Many restrictions on intra-cluster material (eg. no pronouns or definite NPs).	Fewer restrictions on intra-cluster material (eg. Mass, definite and indefinite nouns; negation etc.).
IPP.	No IPP.
Temporal auxiliary, *het* appears on the RHS of the embedded verb.	*het* appears on RHS of embedded verb when no intra-cluster material is present; on the LHS of the embedded verb is intra-cluster material is present.

Verbs of Perception The final class of restructuring verbs in Afrikaans are a few verbs of perception: *sien*, "to see"; *hoor*, "to hear"; *voel*, "to feel"

Dialectal Variation Restructuring verbs are subject to dialectal variation. For instance, *ry*, "to ride", is an indirect linking verb;. *kyk*, "to look", is a restructuring verb of perception; *hang*, "to hang" is a direct linking verb; while *maak*, "to make"(Robbers, 1997); and *stuur*, "to send" are probably ambiguous between most classes of restructuring verbs in the dialect of the "velddrifse vissers"(Heiberg, 1950), among other dialects.

1.4.7 Overt Complementisers

Although, like Dutch, Afrikaans has several infinitival forms, the most productive is the *om-te* infinitive. In this construction, the matrix verb selects a CP complement leaded by the infinitival complementiser *om*, which acts as a barrier to extraction[11].

> As a general rule, one can say that an infinitive which is dependent on a preceding finite verb is preceded by *om te* (Donaldson, 1993, p272).

(1.80)

... dat	*Jan*	*besluit*	*om*	*die*	*skottelgoed*	*te*	*was.*
... that	Jan	decides	COMP	the	dishes	to	wash-INF.

'... that Jan decides to wash the dishes.'

[11] Notably, omission of *om te* occurs with modals and the class of verbs mentioned above.

(1.81) *... *dat Jan die skottelgoed besluit was.*
... that Jan the dishes decides wash.
'... that Jan decides to wash the dishes.'

(1.82) ... *dat my pa belowe om sokker te speel*
... that my father promises COMP soccer to play.
'... that my father promises to play soccer.'

(1.83) *... *dat my pa sokker belowe speel.*
... that my father soccer promises play
'... that my father promises to play soccer.'

However, linking verbs display different characteristics. Some linking verbs can optionally select either a CP or a bare-verb complement. Others can do so only at the risk of slight or major semantic changes. When no material is present in C^0 then objects can be extracted from the domain of the embedded verb.

(1.84) ... *dat Jan probeer om die skottelgoed te was*
... that Jan tries COMP the dishes to wash
'... that Jan tries to wash the dishes.'

(1.85) ... *dat Jan die skottelgoed probeer was*
... that Jan the dishes tries wash
'... that Jan tries to wash the dishes.'

(1.86) ... *dat my pa begin om sokker te speel*
... that my father begins COMP soccer to play.
'... that my father is beginning to play soccer.'

(1.87) ... *dat my pa sokker begin speel.*
... that my father soccer begins play
'... that my father is beginning to play soccer.'

1.5 Implementing Some Basic Derivations

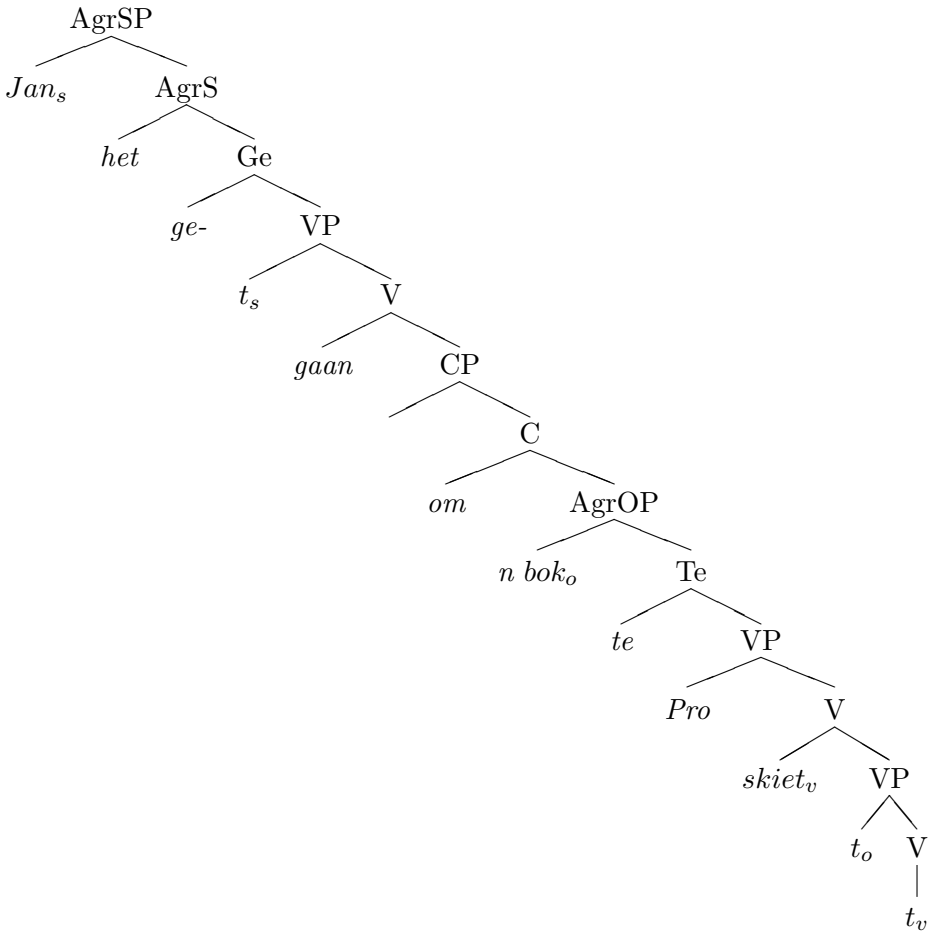
This thesis assumes that the analysis proposed by Cinque (2000a) for Italian, also holds for Afrikaans. This thesis attempts to explore some of the implications that a functional-head analysis would have for Afrikaans. Without futher ado, let us assume the principles espoused by the minimalist programme (Chomsky, 1993, 1995b) and those of Kayne (1994). Concerning, whether V2 is regarded as V-to-I-to-C movement (Vikner, 1995) or as V-to-I movement (Zwart, 1997), I shall assume the Vikner (1995) analysis for the sake of convenience[12].

[12]Note that since V-to-I movement usually entails I-to-C movement, the latter movement will be assumed to take place, unless specified to the contrary. For this and spatial reasons

In order to provide an elementary idea of how a functional-head analysis of restructuring in Afrikaans would work, let us examine a few derivations. The derivation of an *om-te* complement would look like figure 1.1. The matrix VP selects a CP complement. C^0 is filled by the infinitival complementiser *om* which prevents the extraction of the embedded verb's arguments.

(1.88) *Jan het gegaan om die bok te skiet.*
Jan have go-PST COMP the goat to shoot
'Jan went to shoot the goat.'

Figure 1.1: A CP-complement Construction



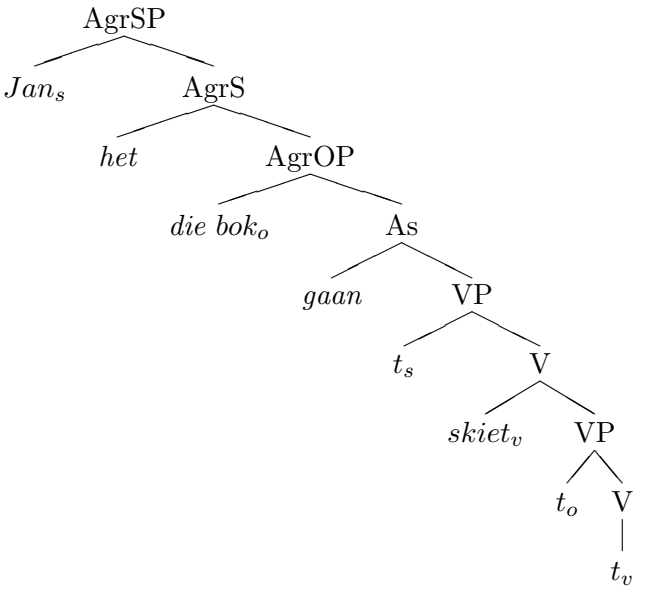
The derivation of a transparent counterpart to example 1.88 according to a functional-head analysis would entail that the verb *gaan*, "go", is merged

some diagrams may appear without a CP layer.

directly as an $aspectual_{Progressive}$ head. A functional head (like an adverbial) cannot block extraction of the verb's arguments. Thus, the matrix verb appears as transparent to argument extraction when the verbal arguments are moved to licensing positions in Spec AgrS and Spec AgrO.

(1.89) *Jan het die bok gaan skiet.*
Jan have the goat go shoot
'Jan went to shoot the goat.

Figure 1.2: A Transparent Construction



1.6 Summary

This chapter introduced restructuring and transparency phenomena in Italian, German, Dutch and Afrikaans. It was demonstrated that these languages exhibit similar transparency effects which can be captured with a single analysis. The analysis of Cinque (2000a) for Italian was explored and assumed to hold for West-Germanic in general and Afrikaans in particular on the basis of the similarities between restructuring constructions in these languages. The remaining chapters will explore some of the insights into the structure of Afrikaans that such an analysis might provide.

Chapter 2

A Hierarchy of Restructuring Verbs

2.1 Introduction

This chapter will present additional data about Afrikaans direct linking verbs. It will focus specifically on the word-order characteristics of direct linking verbs and will demonstrate that word-order peculiarities can be explained if one assumes the existence of a rigid hierarchy of functional heads. First, a set of diagnostics will be described through which the hierarchy of functional heads will be determined. Then the data itself will be presented for DLVs, ILVs, verbs selecting *te*-complements and lexical verbs.

2.2 Differences Between Restructuring Verbs

There are many syntactic differences between Afrikaans restructuring verbs. They differ with regard to passivisation (see section 1.4.2 in chapter 1) , participle distribution and IPP effects (see chapter 4) as well as their ability to select simplex and complex initials (see chapter 3). There are also clear differences between the classes of Afrikaans restructuring verbs with regard to their relative word orders, insofar as some linking verbs display slightly free-er word order than others. The research of Van Niekerk (1993, 1995) has shown that a hierarchy of restructuring verbs exists, although the hierarchy proposed there is not a rigid one as will be suggested in this chapter. It has also been suggested by Van Niekerk (1993, 1995)that word order of restructuring verbs was dependent a fuzzy-category scale based on the degree of auxiliaryness of the respective verbs. Many researchers, including De Stadler (1990b,a, 1992) and Du Plessis (1990), have commented that there seems to be a gradient or "squish" (Du Plessis, 1990) between the categories of verb, auxiliary, modal and particle. In other words, the category of a word is a function on the degree of grammaticalisation it has

undergone (Van Niekerk, 1995).

In contrast, it is argued in this dissertation that by assuming a hierarchy of discrete functional heads, the overwhelming majority of word-order variations in verb clusters can be explained without recourse to fuzzy logic. Ultimately this translates into descriptive as well as explanatory adequacy. The evidence presented in this chapter demonstrates that word-order is based, not on amorphous categories, but on an absolute hierarchy of functional heads.

2.3 Tests for Verb Ranking

In any particular construction, modals, auxiliaries and aspectuals are ranked in a strict configuration that is generally not subject to much variation. This behaviour is exploited by various tests in an effort to determine the underlying structure. In this section, the *uitryging* and *het-opskuif* tests will be described. It will be argued that these tests are unable to determine finer-grained distinctions between DLVs which are essential in the construction of a functional hierarchy. Finally, a test based on the properties of V2 will be proposed.

2.3.1 The *Uitryging* Test

According to Van Niekerk (1995), the *uitryging*, "unravelling", test is based on the fact that the most auxilliary-like elements in a string undergo V2. On the surface it appears that the leftmost verb in the string (with the exception of the auxiliary, *het*, undergoes V2. Structurally speaking, it is the least- embedded verbs that undergo V2. This process is demonstrated in the following examples.

(2.1) *Sannie moet$_i$ die brief môre t_i kan begin tik.*
Sannie must the letter tomorrow t can begin type.
'Sannie must be able to begin typing the letter tomorrow.' (Van Niekerk, 1995, p148)

(2.2) **Sannie kan$_i$ die brief môre moet t_i begin tik.*
Sannie can the letter tomorrow must t begin type.
'Sannie must be able to begin typing the letter tomorrow.' (Van Niekerk, 1995, p148)

(2.3) **Sannie begin$_i$ die brief môre moet kan t_i tik.*
Sannie begin the letter tomorrow must can t type.
'Sannie must be able to begin typing the letter tomorrow.' (Van Niekerk, 1995, p148)

(2.4) *Sannie kan$_i$ die brief môre ... t$_i$ begin tik.*
Sannie can the letter tomorrow ... t begin type.
'Sannie can begin typing the letter tomorrow.' (Van Niekerk, 1995, p148)

(2.5) *Sannie begin$_i$ die brief môre ... ... t$_i$ tik.*
Sannie begin the letter tomorrow ... ... t type
'Sannie will start typing the letter tomorrow.' (Van Niekerk, 1995, p148)

(2.6) *Sannie tik$_i$ die brief môre ... ... t$_i$.*
Sannie type the letter tomorrow ... ... t
'Sannie will type the letter tomorrow.' (Van Niekerk, 1995, p148)

2.3.2 The *Het-opskuif* Test

The *het-opskuif*, "have shift", test (Van Niekerk, 1995) is similar to the *uitrygingt*est and is also designed to distinguish between modals and linking verbs. The test is based on the fact that the auxiliary *het* only undergoes V2 if no other modals or auxiliaries are present in the construction. Thus, if the auxiliary undergoes V2, it stands to reason that all other verbs in the sentence are DLVs.

(2.7) *Hy moet Duits leer praat* het
He must German learn speak have
'He had to learn to speak German.' (Van Niekerk, 1995, p149)

(2.8) *Hy* het *Duits leer praat*
He have German learn speak
'He learned to speak German.' (Van Niekerk, 1995, p149)

Based on these tests, Van Niekerk (1995) derives a fuzzy-scale hierarchy of verbal elements occurring in clusters. This scale is depicted in figure 2.1.

The problem with these types of tests is that they are designed to differentiate between DLVs, modals and auxiliaries. They are not effective in determining the finer-grained distinctions that pertain within the class of DLVs. If one examines the scale developed by Van Niekerk (1995), for example (see figure 2.1), it can be seen that verbs such as *laat, leer, maak, hoor* and *ruik* are not ranked with regard to each other. A similar lack of relative rankings occur with most of the other verbs depicted in this diagram. Another problem with these tests is that they yield a "fuzzy" continuum of linking verbs. One of the aims of this chapter will be to rank linking verbs relative to each other and thus correct the problem evident in the work of

Van Niekerk (1995). A further aim will be to demonstrate that fuzzy categories are not required in order to explain word-order characteristics of linking verbs. It is argued in this thesis that there is no need for reliance on fuzzy categories. The use of an appropriate test can distinguish linking verbs as discrete categories. For this purpose a different type of test needs to be used.

2.3.3 Systematic Ranking Using the V2 Test

The following section marshals systematic evidence of a hierarchy of functional heads in Afrikaans. The test with which this is done, is similar to the *het-opskuif* and *uitryging* tests, insofar as is is based on the fact that it is always the highest c-commanding verb which undergoes V2. Thus, the ability of a verb to undergo V2 translates into it c-commanding the other verb, ie. it is situated higher in the functional hierarchy.

The V2 test used here, crucially differs from the previous tests insofar as only three verbs per construction are used. The first two verbs are restructuring verbs and the most deeply embedded verb is a lexical verb. Constructions are paired and are designed to test alternative orders of the restructuring verbs. In the following examples, various direct linking verbs are systematically ranked in relation with each other. The direct linking

Figure 2.1: A Fuzzy Gradient for Verb Clusters (Van Niekerk, 1995, p43)

verbs being studied are *kom, gaan, bly, laat, beter, leer, help, begin* and *probeer*. The verbs *aanhou* and *ophou* are not tested here due to their V2 peculiarities (see section 2.3.4 for discussion). The positions of these verbs in the functional hierarchy will be determined later in this chapter by their position in non-V2 contexts.

In essence then, assuming right-branching, the ordering of verbs can be observed from word order alone. The question may then be raised as to why the test is required at all. The main advantage of using the V2 test is that it tends to elicit much stronger grammaticality judgements than, say examination of word-order in non-V2 contexts such as in embedded clauses (see section 2.3.4 where this procedure is used). This is especially useful when examining structures which obtain judgements of marginal grammaticality, or when informants' judgements vary. The second advantage of using this test stems from its reliance on minimal pairs (test pairs) which previous studies using the *het-opskuif* and *uitryging* tests have not done. Finally, by limiting the number of verbs in the cluster to three, the V2 test is able to limit extraneous variables which may be introduced by larger numbers of verbs. Such variables may include the fact that long verb strings are generally avoided in Afrikaans, and that certain verbs may be incompatible with the use of others.

Notes on Interpreting the Data

The V2 test can provide three types of outputs. The manner in which these must be interpreted is outlined below.

A Functional Head Hierarchy Let it be assumed that of a given test pair, one construction is grammatical and the other ungrammatical.

(2.9) A $\gg$ B

(2.10) *B $\gg$ A

It can be assumed that the relative ordering of functional heads is completely determined by a rigid hierarchy stipulated by UG. Given any pair of heads, the functional hierarchy will allow one order and prevent the other. Since example 2.10 is ungrammatical, it can be deduced that head A c-commands head B. The fact that example 2.9 is grammatical supports this deduction. Thus, in any test pair where only one construction is ungrammatical, there is a hierarchically-determined c-command relation between the pair.

Semantic Subcategorisation Another possible output of the V2 test is that of a given test pair, both constructions are ungrammatical.

(2.11) $*A_{moveaway} \gg B_{movetoward}$

(2.12) $*B_{movetoward} \gg A_{moveaway}$

There are two ways of interpreting this data: either both heads are ruled-out by some semantic clash between them, or both verbs are instantiations of the same aspectual head and are thus situated at exactly the same location in the hierarchy.

With regard to the first possibility one might consider examples 2.46 and 2.47). The head, *kom* has deictic value which implies that an agent comes towards the speaker before beginning the action. In contrast, the head, *loop* has deictic content which implies that an agent moves away from the speaker before beginning the action. Since each head implies a directional component which conflicts with that of the other, a semantic clash results. The fact that a clash of this nature can occur implies that scope does not play a role in ameliorating semantic clashes. It does not seem to be the case that the c-commanding head scopes over its complement, thereby embedding semantic features that might otherwise clash.

The second possibility may be exemplified by the verbs *bly* and *aanhou* which seem to instantiate the same functional head. Since changing the order of the heads will not remove the fundamental problem, neither half of the test pair can be grammatical. Pairs of this nature do not provide any clues to the underlying hierarchy.

Ambiguity Another possible output of the V2 test is a situation where both examples of a particular test pair are grammatical.

(2.13) A $\gg$ B

(2.14) B $\gg$ A

This type of pattern can be explained by assuming that the heads concerned are ambiguous between two separate functional positions. Thus, such pairs are useful in determining which functional heads have two or more positions in the hierarchy. For instance, many test pairs involving *gaan* display this characteristic. When *gaan* is in V2 position, it invariably has future reference and cannot be interpreted as having an aspectual reading. On the other hand, when *gaan* is not in V2 position, it readily has an aspectual reading. Thus, *gaan* has two separate positions in the hierarchy: $gaan_{future}$ and $gaan_{ingressive}$.

2.3.4 Tests for *aanhou* and *ophou*

As mentioned before, *aanhou* and *ophou* cannot be placed in a hierarchy based on their performance in the V2 test. For this reason, their position in the hierarchy must be determined by their linear ordering. These are particle verbs and in Afrikaans, verb particles appear not to move from clause-final position.

(2.15) *Sanet het die piesang elke dag opgetel.*
Sanet have the banana every day up-PST-pick
'Sanet picked up the banana every day.'

(2.16) *Sanet tel die piesang elke dag op.*
Sanet picks the banana every day up
'Sanet picks up the banana every day.'

Based on this, it might be expected that the linking verbs, *aanhou* and *ophou* could undergo V2, provided the particle remained in situ. However, this appears not to be the case.

(2.17) **Sanet ophou die piesang eet*
Sanet up-hold the banana eat
'Sanet stops eating the banana.'

(2.18) **Sanet hou nou op die piesang eet*
Sanet hold now up the banana eat
'Sanet stops eating the banana.'

(2.19) **Sanet hou die piesang op eet*
Sanet hold the banana up eat
'Sanet stops eating the banana.'

(2.20) **Sanet hou die piesang eet op*
Sanet hold the banana eat up
'Sanet stops eating the banana.'

Given the problems associated with V2 and particle verbs, an alternative test must be used to determine the position of *aanhou* and *ophou* in the functional hierarchy. One possible test is to determine their positions based on linear order in non-V2 contexts. Another option is to allow an auxiliary to undergo V2 instead of a direct linking verb. This test is implemented in section 2.4.10

2.4 V2 Test: Data

Having outlined the various tests to be used, let us proceed to outlining the DLV data itself. The following test pairs were evaluated by two mother-tongue speakers of Afrikaans. The following conventions apply.

- ♡ Informants agree: sentence grammatical
- * Informants agree: sentence ungrammatical
- % Informants disagree. Interestingly, in all these instances, it was consistently the same informants who agreed and disagreed. This indicates that the different informants had slightly different grammars.
- ≫ The item on the left-hand side c-commands the item on the right-hand side.
- ? It is not possible to determine the relative ranking of the two items.

2.4.1 *kom*

(2.21) *bly* ≫ kom

(2.22) **Jan kom die man bly skiet*
Jan come the man stay shoot.

(2.23) %*Jan bly die man kom skiet*
Jan stay the man come shoot

(2.24) *laat* ≫ kom

(2.25) %*Jan kom die man laat skiet*
Jan come the man let shoot

(2.26) ♡*Jan laat die man kom skiet.*
Jan let the man come shoot

(2.27) *gaan* ≫ kom

(2.28) ♡*Jan gaan die man kom skiet*
Jan go the man come shoot

(2.29) **Jan kom die man gaan skiet*
Jan come the man go shoot

(2.30) *beter* ≫ kom

(2.31) **Jan kom die man beter skiet*
Jan come the man beter shoot

(2.32) ♡*Jan beter die man kom skiet.*
Jan beter the man come shoot

(2.33) *kom* ≫ leer

(2.34) ♡*Jan kom die man leer skiet*
Jan come the man learn shoot

(2.35) **Jan leer die man kom skiet*
Jan learn the man come shoot

(2.36) *kom* ≫ help

(2.37) ♡*Jan kom die man help skiet*
Jan come the man help shoot

(2.38) **Jan help die man kom skiet*
Jan help the man come shoot

(2.39) *begin* ? *kom*

(2.40) %*Jan kom die man begin skiet*
Jan come the man begin shoot
[1]

(2.41) %*Jan begin die man kom skiet*
Jan begin the man come shoot
[2]

(2.42) *probeer* ? *kom*

(2.43) %*Jan kom die man probeer skiet*
Jan come the man try shoot

(2.44) %*Jan probeer die man kom skiet*
Jan try the man come shoot

[1] One informant claimed the example was ungrammatical. The other claimed it was semantically "weird".

[2] One informant claimed the example was ungrammatical. The other claimed it was semantically "weird".

(2.45) *loop* ? *kom*

(2.46) **Jan kom die man loop skiet*
Jan come the man walk shoot

(2.47) **Jan loop die man kom skiet*
Jan walk the man come shoot

2.4.2 *gaan*

(2.48) *gaan* ≫ bly

(2.49) ♡*Jan gaan die man bly skiet*
Jan go the man stay shoot

(2.50) **Jan bly die man gaan skiet*
Jan stay the man go shoot

(2.51) *gaan* ≫ laat

(2.52) ♡*Jan gaan die bom laat ontplof*
Jan go the bomb let explode

(2.53) **Jan laat die bom gaan ontplof*
Jan let the bomb go explode
[3]

(2.54) *beter* ≫ gaan

(2.55) **Jan gaan die man beter skiet*
Jan go the man beter shoot
[4]

(2.56) ♡*Jan beter die man gaan skiet*
Jan beter the man go shoot

(2.57) *gaan* ≫ leer

(2.58) ♡*Jan gaan die man leer skiet*
Jan go the man learn shoot

[3]Examples 2.52 and 2.53 use an inanimate object because the examples with animate objects tend to be interpreted as utilising $laat_{permissive}$. The use of an inanimate object clarifies that *gaan* ≫ $laat_{causative}$.

[4]In this example, *beter* has an adverbial reading. Thus this example is ungrammatical insofar as an aspectual reading is concerned.

(2.59) **Jan leer die man gaan skiet*
Jan learn the man go shoot

(2.60) *gaan* ≫ help

(2.61) ♡*Jan gaan die man help skiet*
Jan go the man help shoot

(2.62) **Jan help die man gaan skiet*
Jan help the man go shoot

(2.63) *gaan* ≫ begin

(2.64) ♡*Jan gaan die man begin skiet*
Jan go the man begin shoot

(2.65) **Jan begin die man gaan skiet*
Jan begin the man go shoot

(2.66) *gaan* ≫ probeer

(2.67) ♡*Jan gaan die man probeer help*
Jan go the man try help

(2.68) %*Jan probeer die man gaan help*
Jan try the man go help

(2.69) *gaan* ≫ loop

(2.70) ♡*Jan gaan die man loop skiet*
Jan go the man walk shoot

(2.71) **Jan loop die man gaan skiet*
Jan walk the man go shoot

2.4.3 *bly*

(2.72) *laat* ≫ bly

(2.73) **Jan bly die man laat skiet*
Jan stay the man let shoot

(2.74) ♡*Jan laat die man bly skiet*
Jan let the man stay shoot

(2.75) *beter* ≫ bly

(2.76) ♡*Jan beter die man bly skiet*
Jan beter the man stay shoot

(2.77) **Jan bly die man beter skiet*
Jan stay the man beter shoot

(2.78) *bly* ≫ leer

(2.79) %*Jan bly die man leer skiet*
Jan stay the man learn shoot

(2.80) **Jan leer die man bly skiet*
Jan learn the man stay shoot

(2.81) *bly* ≫ help

(2.82) ♡*Jan bly die man help skiet*
Jan stay the man help shoot

(2.83) **Jan help die man bly skiet*
Jan help the man stay shoot

(2.84) *bly* ? *begin*

(2.85) **Jan bly die man begin skiet*
Jan stay the man begin shoot

(2.86) **Jan begin die man bly skiet*
Jan begin the man stay shoot

(2.87) *bly* ≫ probeer

(2.88) **Jan probeer die man bly skiet*
Jan try the man stay shoot

[5]

[5]One informant claimed this was ungrammatical. Another was unsure about its status. On average it would appear to be ungrammatical.

(2.89) ♡*Jan bly die man probeer skiet*
Jan stay the man try shoot

(2.90) *bly* ? *loop*

(2.91) %*Jan bly die man loop skiet*
Jan stay the man walk shoot

(2.92) %*Jan loop die man bly skiet*
Jan walk the man stay shoot

2.4.4 *laat*

(2.93) *beter* ≫ laat

(2.94) **Jan laat die man beter skiet*
Jan let the man beter shoot
6

(2.95) ♡*Jan beter die man laat skiet.*
Jan beter the man let shoot

(2.96) *laat* ≫ leer

(2.97) **Jan leer die man laat skiet*
Jan learn the man let shoot

(2.98) ♡*Jan laat die man leer skiet*
Jan let the man learn shoot

(2.99) *laat* ≫ help

(2.100) %*Jan laat die man help skiet*
Jan let the man help shoot

(2.101) **Jan help die man laat skiet.*
Jan help the man let shoot

(2.102) *laat* ≫ begin

[6] In this example *beter* has adverbial reading and is thus ungrammatical with regard to an aspectual reading.

(2.103) ♡*Jan laat die man begin skiet*
Jan let the man begin shoot

(2.104) %*Jan begin die man laat skiet*
Jan begin the man let shoot

(2.105) *laat* ? *probeer*

(2.106) ♡*Jan laat die man probeer skiet*
Jan let the man try shoot

(2.107) ♡*Jan probeer die man laat skiet*
Jan try the man let shoot

(2.108) *laat* ≫ loop

(2.109) ♡*Jan laat die man loop skiet*
Jan let the man walk shoot

(2.110) **Jan loop die man laat skiet*
Jan walk the man let shoot

2.4.5 *beter*

(2.111) *beter* ≫ leer

(2.112) ♡*Jan beter die man leer skiet*
Jan beter the man learn shoot

(2.113) **Jan leer die man beter skiet*
Jan learn the man beter shoot
[7]

(2.114) *beter* ≫ help

(2.115) ♡*Jan beter die man help skiet*
Jan beter the man help shoot

(2.116) **Jan help die man beter skiet*
Jan help the man beter shoot
[8]

[7] *beter* is an adverbial and is thus not a verb merged as a functional head in this context.
[8] *beter* is an adverbial and is thus not a verb merged as a functional head in this context.

(2.117) *beter* ≫ begin

(2.118) ♡*Jan beter die man begin skiet*
Jan beter the man begin shoot

(2.119) **Jan begin die man beter skiet*
Jan begin the man beter shoot
[9]

(2.120) *beter* ≫ probeer

(2.121) ♡*Jan beter die man probeer skiet*
Jan beter the man try shoot

(2.122) **Jan probeer die man beter skiet*
Jan try the man beter shoot
[10]

(2.123) *beter* ≫ loop

(2.124) ♡*Jan beter die man loop skiet*
Jan beter the man walk shoot

(2.125) **Jan loop die man beter skiet*
Jan walk the man beter shoot
[11]

2.4.6 *leer*

(2.126) *help* ? *leer*

(2.127) ♡*Jan leer die man help skiet*
Jan learn the man help shoot

(2.128) ♡*Jan help die man leer skiet*
Jan help the man learn shoot

(2.129) *begin* ≫ leer

[9] *beter* is an adverbial and is thus not a verb merged as a functional head in this context.
[10] *beter* is an adverbial and is thus not a verb merged as a functional head in this context.
[11] *beter* is an adverbial and is thus not a verb merged as a functional head in this context.

(2.130) **Jan leer die man begin skiet*
Jan learn the man begin shoot
[12]

(2.131) *%Jan begin die man leer skiet*
Jan begin the man learn shoot

(2.132) *probeer* ≫ leer

(2.133) **Jan leer die man probeer skiet*
Jan learn the man try shoot

(2.134) *♡Jan probeer die man leer skiet*
Jan try the man learn shoot

(2.135) *leer* ? *loop*

(2.136) **Jan leer die man loop skiet*
Jan learn the man walk shoot
[13]

(2.137) **Jan loop die man leer skiet*
Jan walk the man learn shoot
[14]

2.4.7 *help*

(2.138) *help* ? *begin*

(2.139) *♡Jan help die man begin skiet*
Jan help the man begin shoot

(2.140) *♡Jan begin die man help skiet*
Jan begin the man help shoot

(2.141) *help* ? *probeer*

[12] One informant claimed this was ungrammatical. Another was unsure about its status. On average it would appear to be ungrammatical.

[13] One informant claimed this was ungrammatical. Another was unsure about its status. On average it would appear to be ungrammatical.

[14] One informant claimed this was ungrammatical. Another was unsure about its status. On average it would appear to be ungrammatical.

(2.142) ♡*Jan help die man probeer skiet*
Jan help the man try shoot
15

(2.143) ♡*Jan probeer die man help skiet*
Jan try the man help shoot

(2.144) *loop* ≫ help

(2.145) **Jan help die man loop skiet*
Jan help the man walk shoot
16

(2.146) %*Jan loop die man help skiet*
Jan walk the man help shoot

2.4.8 *begin*

(2.147) *begin* ? *probeer*

(2.148) %*Jan begin die man probeer help*
Jan begin the man try help

(2.149) %*Jan probeer die man begin help*
Jan try the man begin help

(2.150) *begin* ? *loop*

(2.151) **Jan begin die man loop skiet*
Jan begin the man walk shoot

(2.152) **Jan loop die man begin skiet*
Jan walk the man begin shoot

2.4.9 *probeer*

(2.153) *probeer* ? *loop*

[15] One informant claimed this was grammatical. Another was unsure about its status but conceded it was probably grammatical. On average it would appear to be grammatical

[16] One informant claimed this was ungrammatical. Another was unsure about its status. On average it would appear to be ungrammatical.

(2.154) ♡*Jan probeer die man loop skiet*
Jan try the man walk shoot
17

(2.155) ♡*Jan loop die man probeer skiet*
Jan walk the man try shoot
18

2.4.10 *Aanhou* and *ophou*

The tests to determine the relative rankings of *aanhou* and *ophou* are based on verb clusters in where an auxiliary has undergone V2 instead of the linking verb, as explained in section 2.3.4[19].

(2.156) *aanhoudend* ≫ bly

(2.157) ♡*Jan het die man aanhoudend bly skiet*
Jan have the man keep-on stay shoot.

(2.158) %*Jan het die man bly aanhoudend skiet*
Jan have the man stay keep-on shoot

(2.159) *aanhoudend* ≫ laat

(2.160) ♡*Jan het die man aanhoudend laat skiet*
Jan have the man keep-on let shoot

(2.161) *laat* ≫ aanhou

(2.162) ♡*Jan het die man laat aanhou/(*aanhoudend) skiet*
Jan have the man let keep-on-V/(*keep-on-ADV) shoot
20

[17] One informant claimed this was grammatical. Another was unsure about its status but was more inclined to judge it as grammatical. On average it would appear to be grammatical.

[18] One informant claimed this was grammatical. Another was unsure about its status but was more inclined to judge it as grammatical. On average it would appear to be grammatical.

[19] Interestingly, my informants preferred to use an adverbial derived from *aanhou* instead of the verb form, which they regarded as ungrammatical in most instances. This is presumably subject to dialectal variation. The sole exception is in the example pair, *Jan het die man laat aanhou skiet* and **Jan het die man laat aanhoudend skiet.*

[20] It would appear that the adverbial *aanhoudend* is higher in the hierarchy than aanhou. It is possible that *aanhoudend* is used to describe punctillar events (such as shooting hence its widespread use in these examples) while *aanhou* is used to describe non-punctillar events. The resulting hierarchy is thus: $aanhoudend_{punctillar} \gg laat_{causative} \gg aanhou_{non-puntillar}$.

(2.163) *aanhoudend* ≫ kom

(2.164) %*Jan het die man kom aanhoudend skiet*
Jan have the man come keep-on shoot

(2.165) ♡*Jan het die man aanhoudend kom skiet*
Jan have the man keep-on come shoot

(2.166) *aanhoudend* ≫ gaan

(2.167) ♡*Jan het die man aanhoudend gaan skiet*
Jan have the man keep-on go shoot

(2.168) **Jan het die man gaan aanhoudend skiet*
Jan have the man go keep-on shoot

(2.169) *aanhou* ≫ beter

(2.170) ♡*Jan het die man beter aanhou skiet*
Jan have the man better keep-on shoot

(2.171) ♡*Jan het die man aanhou beter skiet*
Jan have the man keep-on beter shoot

(2.172) *aanhoudend* ≫ begin

(2.173) ♡*Jan het die man aanhoudend begin skiet*
Jan have the man keep-on begin shoot

(2.174) %*Jan het die man begin aanhoudend skiet*
Jan have the man begin keep-on shoot
[21]

(2.175) *aanhou* ≫ ophou

(2.176) **Jan het die man aanhou ophou skiet*
Jan have the man keep-on stop shoot

(2.177) **Jan het die man ophou aanhou skiet*
Jan have the man stop keep-on shoot

(2.178) *ophou* ? *begin*

[21] One informant claimed this was grammatical but semantically "weird".

(2.179) %*Jan het die man ophou begin skiet*
Jan have the man stop begin shoot
[22]

(2.180) %*Jan het die man begin ophou skiet*
Jan have the man begin stop shoot

(2.181) *gaan* ≫ ophou

(2.182) **Jan het die man gaan ophou skiet*
Jan have the man go stop shoot

(2.183) **Jan het die man ophou gaan skiet*
Jan have the man stop go shoot
[23]

(2.184) *laat* ≫ ophou

(2.185) **Jan het die man ophou laat skiet*
Jan have the man stop let shoot

(2.186) ♡*Jan het die man laat ophou skiet*
Jan have the man let stop shoot

2.4.11 Summary of DLV Combination Possibilities

In an attempt to compress the sheer volume of data, the results of the tests are summarised in table 2.1. Since the table contains a lot of information, it is worth explaining how it works in some detail. Simply put, the verb in the left-most column c-commands the verb in the topmost row. The column on the extreme left-hand side contains the c- commanding DLV (ie the DLV that underwent V2 in the tests above and which is highest in the hierarchy of functional heads). The topmost row contains the embedded DLVs (ie. Those that did not undergo V2 in a particular construction). For example, consider example 2.38 where *help* is the verb that undergoes V2 while *kom* occurs in clause-final. Since *help* undergoes V2, it must be located in the extreme left-hand column. Since *kom* is c-commanded, by *help*, it is located in the topmost row. By triangulating these two positions, it is possible to see that example 2.38 is ungrammatical.

[22] One informant claimed this was grammatical but semantically "weird".

[23] One informant judged this as ungrammatical. Another informant was unsure of its status. On average it would appear that this example is ungrammatical.

Key to table of DLV combination possibilities The following conventions are used in table 2.1.

- * indicates that a particular construction in the pair is ungrammatical.
- % indicates that informants disagreed over the grammaticality.
- ♡ indicates that a particular example is grammatical.
- A shaded area indicates that the verb ranking could not be determined by that particular test pair.
- The small number in each cell is the number of the particular example under consideration.

2.5 Indirect Linking Verbs in Verb Clusters

When comparing the relative orders of DLVs and ILVs, it appears that generally, ILVs occur at the end of a cluster of DLVs. DLVs may not follow ILVs in the same clause. In cases where DLVs do follow ILVs, the ILVs lose their aspectual meanings; in other words the action expressed must literally take express lying, sitting, standing and walking rather than progressive aspect. In addition, the nature of the pseudo-co-ordination changes when DLVs follow ILVs. The pseudo-co-ordinative marker is no longer optional

(2.187) *Ons gaan môre Rugby gaan ry kyk.*
We go tomorrow rugby go ride see.
'Tomorrow we're going to watch rugby.' (Heiberg, 1950, p63)

(2.188) *Moenie nog bly staan kyk lag nie, jong! Ek moer vir jou.*
Mustn't still stay stand look laugh not young. I hit for you
'Don't stand there laughing, man, I'll hit you!.' (Heiberg, 1950, p66)

(2.189) *Laat hom lê vrek.*
Let him lie die.
'Let him die.' (Heiberg, 1950, p68)

(2.190) *Pa het ons later die kar stuur help loop maak.*
Dad did us later the car send help walk make.
'Dad sent us later to help fix the car.' (Boonzaier, 1982, p222)

Within the class of ILVs, a limited hierarchy is evident. *kom* precedes all other ILVs. Furthermore, ILVs of motion such as *loop* and *kom* precede ILVs of static posture such as *sit* and *lê*. The hierarchy of ILVs is thus as follows: *kom* ≫ *loop* ≫ *staan/sit*.

Table 2.1: Summary of DLV Combination Possibilities

	probeer	begin	help	beter	gaan	laat	kom	loop	leer	bly	aanhou	ophou
probeer		% 2.149	♡ 2.143	* 2.122	% 2.68	♡ 2.107	% 2.44	♡ 2.154	♡ 2.134	* 2.88		
begin	% 2.148		♡ 2.140	* 2.119	* 2.65	% 2.104	% 2.41	* 2.151	% 2.131	* 2.86	* 2.174	% 2.180
help	♡ 2.142	♡ 2.139		* 2.116	* 2.62	* 2.101	* 2.38	* 2.145	♡ 2.128	* 2.83		
beter	♡ 2.121	♡ 2.118	♡ 2.115		♡ 2.56	♡ 2.95	♡ 2.32	♡ 2.124	♡ 2.112	♡ 2.76	♡ 2.170	
gaan	♡ 2.67	♡ 2.64	♡ 2.61	* 2.55		♡ 2.52	♡ 2.28	♡ 2.70	♡ 2.58	♡ 2.49	* 2.168	* 2.182
laat	♡ 2.106	♡ 2.103	% 2.100	* 2.94	* 2.53		♡ 2.26	♡ 2.109	♡ 2.98	♡ 2.74	♡ 2.162	g 2.186
kom	% 2.43	% 2.40	♡ 2.37	* 2.31	* 2.29	% 2.25		* 2.46	♡ 2.34	* 2.22	* 2.164	
loop	♡ 2.155	* 2.152	% 2.146	* 2.125	* 2.71	* 2.110	* 2.47		* 2.137	% 2.92		
leer	* 2.133	* 2.130	♡ 2.127	* 2.113	* 2.59	* 2.97	* 2.35	* 2.136		* 2.80		
bly	♡ 2.89	* 2.85	♡ 2.82	* 2.77	* 2.50	* 2.73	% 2.23	% 2.91	% 2.79		% 2.158	
aanhoudend		♡ 2.173		♡ 2.171	♡ 2.167	♡ 2.160	♡ 2.165			♡ 2.157		! 2.176
ophou		% 2.179			* 2.183	* 2.185					* 2.177	

(2.191) *Die man het kom sit en skiet.*
The man have come sit and shoot
'The man came to sit and shoot.'

(2.192) *Die man het kom staan en skiet.*
The man have come stand and shoot
'The man came to stand and shoot.'

(2.193) **Die man het sit kom en skiet.*
The man have sit come and shoot
'The man came to sit and shoot.'

(2.194) **Die man het staan kom en skiet.*
The man have stand come and shoot.
'The man came to stand and shoot.'

Interestingly, although ILVs do tend to occur at the end of DLV clusters, it is possible to recurse DLVs in the complement of ILVs.

(2.195) *Die man het (ge)staan en laat skiet.*
The man have (past)-stand and let shoot
'The man stood and shot.'

(2.196) *Die man het (ge)staan en begin skiet.*
The man have (past)-stand and begin shoot
'The man stood and began shooting.'

(2.197) *Die man het bly staan en leer skiet.*
The man have stay stand and learn shoot
'The man stayed standing ane learned to shoot.'

2.6 *Te*-Complements in Verb Clusters

Te-complements appear relatively high in the functional hierarchy. Thus, they tend to occur on the left-hand side of the cluster. Furthermore, Type-B verbs precede Type-A verbs because while Type-B verbs can take objects on either the left or right-hand sides, Type-A can only take objects on the right-hand side subject to restrictions on definiteness etc (Robbers, 1997). Based on the data presented here it would appear that Type-A verbs are ranked above modals of ability and necessity.

(2.198) *behoort* $\gg$ *moet*

(2.199) **Hy moet die kêrel behoort te roep.*
He must the guy should to call

(2.200) *Hy behoort die kêrel te moet roep.*
He should the guy to must call
[24]

(2.201) *behoort* ≫ *kan*

(2.202) ♡*Hy behoort die kêrel te kan roep.*
He should the guy to can call

(2.203) **Hy kan die kêrel behoort te roep.*
He can the guy should to call

(2.204) *behoort* ≫ *gaan*

(2.205) ♡*Hy behoort die kêrel te gaan roep.*
He should the guy to go call

(2.206) **Hy gaan die kêrel behoort te roep.*
He go the guy should to call

2.7 Perception Verbs in Verb Clusters

Verbs of perception also occur fairly high in the functional hierarchy as these examples demonstrate.

(2.207) *behoort* ≫ *sien*

(2.208) ♡*Jan behoort die man te sien loop*
Jan should the man to see walk

(2.209) **Jan sien die man behoort te loop*
Jan see the man should to walk

(2.210) *wil* ≫ *sien*

(2.211) ♡*Jan wil die man sien loop*
Jan should the man to see walk

(2.212) **Jan sien die man wil loop*
Jan should the man to see walk

(2.213) *gaan* ? *sien*

[24] Informants suggest this is semantically odd but nevertheless grammatical

(2.214) ♡*Jan gaan die man sien loop*
Jan go the man see walk

(2.215) ♡*Jan sien die man gaan loop*
Jan see the man go walk

(2.216) *beter* ≫ *sien*

(2.217) ♡*Jan beter die man sien loop*
Jan beter the man see walk
'Jan will see the man walking.'

(2.218) **Jan sien die man beter loop*
Jan see the man beter walk
[25]

2.8 Main Verbs in Verb Clusters

In verb clusters, the main verb (with subject and object arguments) is the most highly embedded. Thus it appears on the extreme right-hand side of the cluster. This is evident in all the preceding examples.

2.9 The Functional Hierarchy

Based on the data that has already been presented, the following functional hierarchy can be posited.

Type-B verbs ≫ Type-A verbs ≫ $Modal_{necessity}$ ≫ $modal_{ability}$ ≫ ... ≫ $gaan_{future}$ ≫ $beter_{obligative}$ ≫ perception verbs ≫ $gaan_{ingressive}$ ≫ $ophou_{terminative}$ ≫ $aanhoudend_{repetitive}$ ≫ $laat_{permissive}$ ≫ $aanhou_{durative}$ /$bly_{durative}$ ≫ $help_{I}$ ≫ probeer ≫ $laat_{causative}$ ≫ $begin_{inchoativeI}$ ≫ kom ≫ $loop_{andative}$ /leer ≫ $help_{II}$ ≫ $loop_{ILV}$ /kom_{ILV} ≫ sit_{ILV} /$l\hat{e}_{ILV}$ ≫ Lexical Verbs

2.10 Constructing a Hierarchy

This section will discuss some of the data and attempt to interpret it in such a way that a functional-head hierarchy may be constructed from the raw data.

[25] In this example *beter* has an adverbial reading and is thus ungrammatical with regard to an aspectual reading.

2.10.1 Semantic Clash

Given the large number of combinatorial possibilities it is somewhat surprising that so few semantic clashes resulted. In addition to examples 2.46 and 2.47 already discussed in section notes on interpreting the data, a few other examples of semantic clash were evident in the data. Another semantic clash can be seen in examples 2.151 and 2.152. $Begin_{inceptive}$ implies that an event is in its initial stages or has not begun at all. In contrast, *loop* can be progressive (in addition to andative). Progressive aspect implies that an event has been in progress for some time, which clearly contradicts the inceptive aspect. Furthermore, the act of beginning itself is a momentary event that cannot be extended. This is yet another reason why progressive and inceptive aspects are mutually exclusive. It is also possible that the ungrammaticality of example 2.73 is due to feature clash. $Laat_{causative}$ combines with the punctillar event denoted by *skiet*. Thus the act of causing a shooting event is momentary and unable to sustain the durative aspect denoted by $bly_{durative}$. The final semantic clash evident in this data set can be seen in examples 2.86 and 2.85. $Bly_{continuative}$ implies that an action has been in progress for some time. It thus has certain similarities with progressive aspect above. It is thus incompatible with $begin_{inceptive}$ for the same reasons as those previously described[26].

2.10.2 *help*

The data provide conflicting information about the position of the verb, *help*. Example 2.142 suggests that *help* $\gg$ *probeer*. Yet example 2.143 suggests otherwise. In addition, functional heads such as *begin* and *leer* seem to be able to take *help* either to the right or the left-hand side. In contrast to these variable positions, *beter, gaan* and *bly* seem to display clear grammaticality judgements and consequently always seem to c-command *help*. One option is to assume that *help* has two alternative positions in the functional hierarchy, although the function of each is unclear. The resultant order of functional heads and the direction in which they selct *help*is given in the following table.

$help_I \gg$	probeer$\gg$	laat$\gg$	begin$\gg$	kom$\gg$	loop$\gg$	leer$\gg$	$help_{II} \gg$	ILV
	$\leftarrow\rightarrow$	%$\rightarrow$	$\leftarrow\rightarrow$	$\rightarrow$	%$\rightarrow$	$\leftarrow\rightarrow$		

This shows that most verbs c-commanded by *probeer* select *help* on either the left or the right-hand side. Two exceptions are *kom*, which only selects *help* on the right, and *loop* which displays a preference for selecting *help* on the right. A possible reason this might be the case is that both *kom* and *loop* are ambiguous between DLV and ILV status in certain dialects such as Griekwa Afrikaans (Fourie, 1985). By selecting *help* on the right of the

[26]It will be noted that examples 2.137 and 2.136 are also mutually incompatible. This, however, is not due to semantic clash but the fact that both *loop* and *leer* are equally ranked in the functional hierarchy. This prevents their co-occurrence.

direct linking verb, speakers are able to differentiate between the DLV and ILV usage of these two verbs. If, however, *help* was selected on the left, the verbs would be indistinguishable between their ILV and DLV structures, resulting in possible parsing errors.

2.10.3 *beter*

A peculiar property is associated with *beter*. Whenever it undergoes V2, it is has a reading of obligation. However, when it occurs in any other position, it is an adverbial modifying the embedded verb. This suggests that *beter* is merged to a very high position in the functional hierarchy, possibly as a modal of obligation. When it appears in other positions, this reading is unavailable and hence it is interpreted as an adverb.

2.10.4 *laat* and *gaan*

The opposite phenomenon occurs with the verbs *laat* and *gaan*. Whenever these undergo V2, they appear to lose their aspectual readings. In these cases, *gaan* is always interpreted as having future reference instead of its more usual deictic reading, and *laat* has a permissive reading that is consistent with its usage as a lexical verb, instead of its aspectual reading.

(2.219) *Gaan kom jy met my gesels?.*
go come you with me talk.
'Are you going to come and talk to me?' (Robbers, 1997, p59)

(2.220) *...toe is die dokter gaan laat haal.*
...then is the dokter go let fetch.
'Then the doctor was fetched.' (Robbers, 1997, p63)

(2.221) *Hy het die brame gaan loop pluk.*
He did the blackberries go walk pick.
'He went to pick the blackberries.' (Robbers, 1997, p60)

(2.222) *Gaan laat begin werk gou die motor.*
Go let start work quick the car.
'Quickly go and get that car working.' (Heiberg, 1950, p67)

(2.223) *Hy het Jan vir haar die tuinblomme laat leer ken.*
He did John for her the garden-flowers let learn know.
'He let John teach her to know the names of the garden flowers.'
(Robbers, 1997, p61)

For this reason, it is assumed that *gaan* is ambiguous between two positions in the hierarchy. The highest, $gaan_{future}$ c- commanding a lower

projection, $gaan_{ingressive}$. The existence of two functional projections corresponding to *gaan*is illustrated by example 2.224[27].Similarly, *laat* may be interpreted as having two projections, $laat_{permissive}$ and $laat_{causative}$. Although *laat* can also be recursive (example 2.225, it appears that this verb has an object control reading. When the object is non-animate, the construction in ungrammatical (see example 2.226).

(2.224) *Jan gaan die man gaan skiet*
Jan goes the man go shoot.
'John is going to go and shoot the man.'

(2.225) *Jan laat die man laat skiet*
Jan lets the man let shoot.
'John allows the man to shoot.'

(2.226) **Jan laat die bom laat ontplof*
Jan lets the bomb let explode.
'John allows the bomb to explode.'

(2.227) *As dit môre mooiweer is, gaan ons gaan visvang.*
If it tomorrow good-weather is, go us go fishing
'If there is good weather tomorrow we are going to go fishing.'
(Heiberg, 1950, p63)

(2.228) *Ons gaan vanaand gaan gool..*
We go tonight go drink
'Tonight we are going to go drinking.' (Heiberg, 1950, p64)

2.10.5 *Begin* and *probeer*

There appear to be two separate aspectual projections corresponding to the verb *begin*, one for the initiating of an event with a natural endpoint (for example, a race) and one for the initiation of an event with no natural endpoint (for example, a riot). This is supported by Cinque (1999), which although it did not thoroughly explore the location of inceptive aspect suggested that there are, in fact, two inceptive aspects, one corresponding to the initiation of an unbounded event and the other the inception of a bounded event. Consider the following sentences.

(2.229) *Jan began the race.*
Jan $begin_{bounded}$ the race
'Jan began to run a race.'

[27]Note that these examples are grammatical, but that the first *gaan* is stressed, while the second is reduced. A similar process holds for the *laat* example.

(2.230) *Jan started the race.*
Jan $begin_{unbounded}$
'*Jan began to run the race and finished.'
'Jan began to run the race but did not finish.'
'Jan pulled the trigger of the starting gun.'

(2.231) *Jan began the riot*
Jan $begin_{bounded}$ the riot
'*Jan began to riot.'
'Jan instigated the riot.'

(2.232) *Jan started a riot*
Jan $begin_{unbounded}$ a riot
'John initiated a riot.'

A race is an event with a natural end point. When the verb *started* in example 2.230 is used, it implies that either Jan did not finish the race or that he never ran at all. In contrast, a riot has no natural endpoint and the verb *begin* cannot be used to imply that Jan took part in the riot in example 2.231. This seems to imply that there are at least two types of *begin* which could explain the discrepancy in the Afrikaans data. Unlike the *help* positions, the *begin* positions tend not to have a free option as to whether they appear on the left or right-hand side of a particular linking verb; their position depends on the type of inceptive aspect in question. For this reason, placement of *begin* will be different for different constructions. It is left to future research to determine which inceptive aspectual position is which.

2.10.6 *Aanhou* and *ophou*

It has been demonstrated that in linking verb contexts, *aanhou* and *ophou* appear not behave in the same manner as lexical particle verbs. Although this does not constitute a problem for the hierarchy proposed here, it does pose some interesting questions. The peculiar behaviour of *aanhou* and *ophou* in linking verb contexts is indirect support for a functional-head analysis insofar as it provides evidence that DLVs are not simply heads of VPs, but have a different syntactic structure altogether to their lexical- verb counterparts. On the other hand, it can also be interpreted as a consequence of a functional-head structure, given certain assumptions about the nature of functional heads.

It has been argued that verbs merged as functional heads do not have internal or external arguments since functional heads lack VP projections (Cinque, 2000a). Consequently, they should lack projections for verb-particles

too. The fact that such particles exist at all in DLVs is suprising. However, since they do exist, they cannot be particle projections dominating VP since functional heads do not head VPs. One possibility is that such particles are merged with the verb *before* it is merged as a functional head (ie at a pre-word level, or in a previous syntactic phase, to use the terminology of derivational morphology (Marantz, 2000)). In other words, the particle is spelled out as part of the verb and therefore cannot be separated from it. However, the head and edge of a phase are still visible to syntax during the subsequent phase. Thus, the features of the particle are still visible and since particles cannot undergo V2 along with the verb these features are sufficient to prevent the spelled out particle+verb complex from undergoing V2 in DLV contexts.

The question, then arises, as to why functional heads are phases. One answer might be that in order for a verb to be merged as a functional head, it would first have to check (or strip away) any uninterpretable features which might interfere with the derivation. According to an implementation of phases where phases occur when all features are checked (Svenonius, 2000), then all functional heads with checked features would then be phases.

Quo Vadis, Verb Particle? According to the ranking tests for *aanhou* (see section 2.4.10), it is clear that $aanhoudend_{repetetive}$ (which probably can be lexicalised by *aanhou* in some dialects) c-commands *bly*. Also consider the following example where a constituent larger than a single verbal head has been moved. It is clear that *aanhou* precedes *bly*.

(2.233) *Aanhou bly kyk of jou lyn nie roer nie.*
Keep stay look if your fishing-line not move NEG-AGR.
'Keep looking to see that your line doesn't move.' (Heiberg, 1950, p66)

Assuming an Attract version of movement, if neither *aanhou* nor *ophou* can undergo V2, the next highest head with the appropriate features must move. This is indeed what appears to happen.

(2.234) *As die reën eers begin, bly hy aanhou kom val.*
If the rain first begin stay he on-keep come fall
'Once it starts raining, it keeps on falling.' (Heiberg, 1950, p67)

(2.235) *Jan bly die man aanhoudend skiet.*
Jan stay the man on-keep shoot
'John kept shooting the man.'

In a V2 context, it is *bly*that undergoes V2, not *aanhou*. This can be explained if *aanhou* is somehow cemented in place. Since *aanhou* cannot move to check the features in I, the next highest head, *bly* moves instead.

2.11 The Functional Hierarchies Compared

An important question concerns whether the functional hierarchy proposed here corresponds with that claimed as a universal by Cinque (1999). Based on the available evidence it appears that this question is premature and cannot be answered adequately. However, abstracting away from these problems, it would seem that there is some similarity between the Cinque hierarchy and that proposed here. In the first instance, it is clear that in both hierarchies Tense ($gaan_{future}$) is situated high in the hierararchy. Similarly, there is a tendency for the modal system to precede the aspectual system in both proposals. Within the aspectual system itself, several correspondences can be seen. Both hierarchies have the ranking *Terminative* $\gg$ *Continuative* $\gg$ *Durative*. Similarly, both utilise the ranking *Voice* $\gg$ *Perception* $\gg$ *Causative* $\gg$ *Inceptive*. Interestingly, it would appear that most of Cinque (1999) focusses on the hierarchy which precedes *Voice*. Only Cinque (1997) attempts to shed some light on the nature of the hierarchy below *Voice*. However, in Afrikaans, given the ability of most DLVs and Perception verbs to passivise, it can be postulated that the *Voice* head occurs relatively high in the functional hierarchy for Afrikaans. Thus, the Afrikaans data studied in this chapter would seem to fall into the less well-studied area of the hierarchy. This could possibly account for some of the discrepancies between the two systems. Nevertheless, enough similarities exist to make this a fruitful area of future research.

2.12 Conclusion

Verb clusters exhibit ordering characteristics that can be explained by assuming the existence of a rigid hierarchy of functional heads which determines the relative orders of DLVs, ILVs, perception verbs and *te*-complements in relation to these. The hierarchy proposed is as follows:

Type-B verbs $\gg$ Type-A verbs $\gg$ $Modal_{necessity} \gg modal_{ability} \gg \ldots \gg$ $gaan_{future} \gg beter_{obligative} \gg$ perception verbs $\gg$ $gaan_{ingressive} \gg ophou_{terminative}$ $\gg$ $aanhoudend_{repetitive} \gg laat_{permissive} \gg aanhou_{durative}$ /$bly_{durative} \gg$ $help_{I} \gg$ probeer $\gg$ $laat_{causative} \gg begin_{inchoativeI} \gg$ kom $\gg$ $loop_{andative}$ /leer $\gg$ $help_{II} \gg loop_{ILV}$ /$kom_{ILV} \gg sit_{ILV}$ /$l\hat{e}_{ILV} \gg$ Lexical Verbs

In addition, it appears that DLVs are subject to semantic restrictions that serve to constrain the set of orders in which they may appear.

Chapter 3

Syntactic Structures of Verb Clusters

3.1 Introduction

In this chapter I shall postulate some syntactic structures which underpin the various categories of infinitival constructions. It has been suggested that all restructuring verbs are functional heads. In this chapter it is argued that certain types of restructuring verbs, namely ILVs and some *te*-complements, may admit other types of structures. I shall argue that direct linking verbs and Type-A *te*-complements are very similar constructions that both benefit from a functional head analysis. On the other hand, Type-B *te*- complements are Remnant Extraposition (The Third Construction) structures. It will be argued that ILVs are functional heads of a specific kind that c-command lexical verbs, but are, in turn, c-commanded by DLV projections.

3.2 Sentential Complements, Perception Verbs and Type-B *te* Complements

Before continuing to the constructions which are the focus of this chapter, for the sake of completeness it is necessary to briefly mention transparency structures with Afrikaans perception verbs. On the surface, Afrikaans perception verbs appear as verb clusters.

(3.1) *Jan het die man sien loop*
John die the man see walk.
'John sees the man walking.'

It has been suggested by Cinque (2000a) that object-control verbs cannot be functional heads. If this is indeed true, then Afrikaans perception verbs, which invariably have objects, would seem to be object-control structures

of the kind that occur in many languages. The object of the matrix verb becomes the subject of the embedded verb. However, these verbs require further research to explain the puzzling presence of IPP, the fact that they do not admit long passives and their transparency effects. It is tempting to analyse perception verbs as functional heads with the additional (atypical) property that they admit objects. Their transparency can thus be explained by their functional-head nature. IPP can also be explained in functional-head terms: perception verbs are situated above the projection containing past-participle morphology and hence are not able to obtain such morphological marking (see chapter 4). Their inability to passivise is explained by their being positioned above VoiceP in Afrikaans. Indeed, it is possible to speculate that grammaticalisation processes might result in functional heads with object-control properties. If one considers that grammaticalisation in this case may be the process by which a lexical verb (projecting a VP) gradually becomes a functional head (projecting no features), then it is possible that an intermediate stage may be a "semi-functional head" which has a limited argument structure. Tempting as this possibility might be, its existence is purely speculative until further research proves otherwise.

3.3 Direct Linking Verbs

DLVs have some peculiar properties. They overwhelmingly tend to select simplex initials. The few occasions when complex initials do occur are analysed as single lexemes similar to *salt 'n pepper; fish 'n chips* etc in English. DLVs exhibit IPP, and occur in a strictly fixed order. These peculiarities suggest that DLVs have a functional-head structure. However, as has been indicated, not all DLVs behave alike. In some dialects, a particular group of DLVs (*probeer, help, begin, leer, aanhou* and *ophou*) have interesting properties. They tend to have a less fixed position in the functional hierarchy, they almost always select simplex initials, can be replaced by an *om-te* infinitive without any difference in the meaning of the construction, often are null with regard to IPP and in some (older) usage appear to be *te*-complements. This association with *te*-complements indicates that such infinitives merit a closer look.

3.4 Type-A *te* Complements

It was suggested in chapter 1 that Afrikaans *te*-complements can be subdivided into two types with different properties. In this section it will be argued that Type-A *te*-complements display similar properties to those of DLVs (see chapter 1 for discussion of these properties)[1]. Since DLVs and

[1]If verbs selecting Type-A complements are functional heads then it would be expected that they have a place in the functional hierarchy. The evidence discussed in chapter 2

Type-A *te*-complements are usually described as disparate classes, the reasons for their being analysed as functional-head structures will be made clear.

There are several reasons why it can be argued that DLVs are similar in structure to Type-A *te*-complements. Firstly, they are both transparent to verb arguments which typically occur on the left-hand side of both DLVs and Type-A *te*-complements.

Secondly, they exhibit similar restrictions on the type of non-verbal material that can intrude in the cluster. Robbers (1997) notes that the restrictions in intra-cluster material in Type-A *te* Complements are very similar to the restrictions in open-final strings (DLVs in our terminology)(Robbers, 1997, pp71-86). DLV clusters allow a variety of non-verbal material to intrude into the cluster, although it is rare (although not impossible) for more than one constituent to occur. Intruding items may include indefinite NPs, PP predicates, adjectival predicates, some VP adverbs and negative quantifiers. However, some items may not occur inside a verb cluster including, definite NPs, pronouns, adjectival predicates and sentential adverbs. In comparison, Type A *te*-complements allow indefinite NPs to occur within the cluster but prohibit the intrusion of definite NPs and pronouns. According to Robbers (1997, p91), "this means it is not clear whether it is an AgrOp or just a verb accompanied by particle-like elements". Consequently, she analyses both constructions in a similar way(Robbers, 1997, p215). The fact that Type-A *te* and DLV complements select similar material is a function of the fact that they have very similar structures. The fact that some types of non-verbal material occur inside the cluster is explained by the fact that, depending on the placement of the functional-head in the hierarchy, it will c-command various positions such as PredP, and XPs associated with non-definite objects etc. Crucially, positions associated with definiteness (including pronoun positions) are not c-commanded by these functional heads, which accounts for the inability of definite constituents to appear within these clusters.

Thirdly, Type-A complements have optional infinitival particle, *te* as well as null IPP. Thus they are indistinguishable from DLVs from the perspective of the language learner.

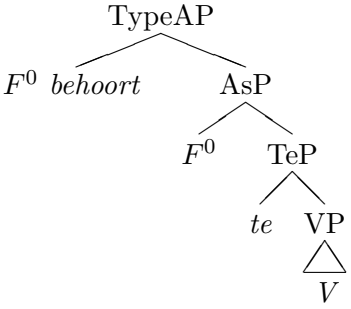
Fourthly, historical linguistic evidence seems to indicate that DLVs may be related to Type-A *te*-complements. De Villiers (1951) notes that direct linking verbs like *gaan, kom, laat, bly* etc. are distinct from verbs like *probeer, help, leer, begin, aanhou, ophou* and *durf*. This latter class of verbs may all

suggests that these verbs occur relatively high in the hierarchy. However, their precise location was not fully explored and is left for future research

select a *te*-complement in the older texts (De Villiers, 1951, p13). This suggests that these verbs have developed from *te*-complements with an overt infinitival marker into functional heads. At the very least they have developed into structures that select a null infinitival marker. It is quite possible that at least some members of this class are ambiguous between DLV and remnant extraposition structures. This could provide an explanation for why this class of verbs seem to form a subclass insofar as their position in the functional hierarchy was often difficult to ascertain (see chapter 2). The reason for this ambiguity could be that in some dialects and speaker grammars, the reanalysis/grammaticalisation process is more or less progressed than in others.

Type-A *te* complements can be regarded as functional head structures where the head also selects *te*. As can be seen from figure 3.1.

Figure 3.1: The Functional-Head Structure of Type A *te*-Complements



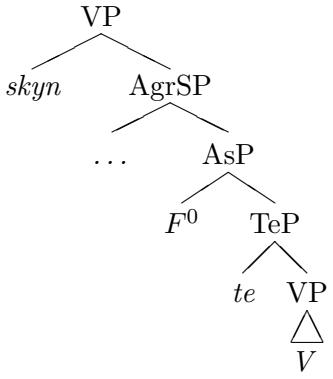
3.4.1 Type-B *te* Complements

Type-B *te*-complements appear very different to their Type-A counterparts. They are not necessarily transparent and objects can appear on either the left or the right-hand side of the matrix verb. They do not display the IPP effect, but behave like lexical verbs with regard to past-participle morphology. This suggests that unlike the so-called "raising" structures, Type-B *te*-complements are not actually an integral part of the cluster. In addition, Type-B *te*-complements place fewer restrictions in non-verbal material that can intrude within the cluster and admit, objects, definite and non-definite nouns, pronouns, sundry XPs and sentential adverbs including negation. Robbers (1997, p92) concludes that Type-B *te*-complements contains elements that belong to at least at TP. This indicates that we are probably dealing with Remnant Extraposition (also known as the Third Construction: see figure 3.4.1) (Robbers, 1997, p216).

One the other hand, if empirical research ultimately proves the existence of functional heads with internal arguments, then it would be possible to

analyse Type-B *te* complements as functional heads with internal arguments. Although these constructions are not examined in any detail in chapter 2, the evidence reviewed there seems to suggest that these verbs are situated relatively high in the functional hierarchy. However, if it is proved than functional heads cannot be object- controllers then it is necessary to analyse these verbs as Remnant Extraposition structures.

Figure 3.2: Remnant Extraposition



3.5 Indirect Linking Verbs

Following the spirit of Cinque (1999) and because ILVs also display restrictions on intra- cluster material similar to those applying to DLVs, it is possible that ILVs can also be analysed as functional heads. According to the data reviewed in chapter 2 it is evident that ILVs share projections fairly low in the functional hierarchy. In fact, they are the lowest of all functional elements, c-commanding only lexical verbs. All DLVs c-command ILVs.

3.6 Simplex and Complex Initials: Some Data

In this section it will be demonstrated how the proposed structures interact to shed light on the derivation of simplex and complex initials. Afrikaans is unique among the West-Germanic languages in that it has complex initials in non-imperative contexts[2]. In V2 structures, it is usually only the highest linking verb which raises, giving rise to simplex initials (example 3.2). Sometimes, however, the linking verb may raise along with its bare verb

[2]Complex initials occur in early and dialectal Dutch (Ponelis, 1993, p330). This is significant because it is precisely in imperative contexts that verbal morphology is minimal, if not completely absent. This seems to add substance to the claim of Ponelis (1993) that complex initials are linked to an absence of verbal morphology. An analysis that captures this generalisation will be explored later in this chapter.

complement, resulting in a complex initial (example 3.3). In fact, more than two verbs may undergo V2, provided that at least one of them in an ILV (example 3.4).

(3.2) *Sy gaan vandag die boek lees*
She go today the book read.
'She's going to read the book today.' (Ponelis, 1993, p326)

(3.3) *Sy gaan lees vandag die boek*
She go read today the book
'She's going to read the book today.' (Ponelis, 1993, p326)

(3.4) *Nou gaan staan en verf hulle die ding groen.*
Now go stand and paint they the thing green
'Now they just painted the thing green.' (Robbers, 1997, p172)

An important fact about complex initials is that a complex initial must include *all* the verbs in a cluster. V2 can apply to a single verb and leave the remainder in situ (ordinary V2: see example 3.5), or V2 can apply to all verbs leaving none in situ (complex initials: see example 3.6). However, V2 cannot apply to some verbs leaving some in situ (see example 3.7.

(3.5) *Jan kom die bok laat skiet*
Jan come the buck let shoot
'Jan comes and shoots the buck.'

(3.6) *Jan kom laat skiet die bok*
Jan come let shoot the buck
'Jan comes and shoots the buck.'

(3.7) **Jan kom laat die bok skiet*
Jan come let the buck shoot
'Jan comes and shoots the buck.'

Although most linking verbs can optionally select complex or simplex initials, there are statistical tendencies that give clues to subcategories. Table 3.1 has been adapted from (Ponelis, 1993, p328)[3].

The data demonstrate that direct and indirect linking verbs have different patterns. Table 3.1 shows the tendency of direct linking verbs to select simplex initials, despite the fact that some of these are so closely linked that

[3]The original table has zero entries for the ILV, *loop*. However, in the table presented here it is listed as having 0% simplex initials (ie 100% complex initials). This is owing to De Stadler (1992) who claims that *loop* always occurs in complex initials. Since no instances of *staan* were discussed by Ponelis (1993), the complex-simplex tendencies of this verb remain unknown.

they are regarded as being single constituents (eg *laat waai* etc). Interestingly, however, some direct linking verbs display slightly different characteristics. Whereas most direct linking verbs can optionally take either complex or simplex initials, a few may only take simplex initials (although the data set presented in table 3.1 upon which this observation is based is rather limited). These verbs are *begin*, *help*, *leer* and *probeer*. In stark contrast, ILVs tend to select complex initials exclusively. The table implies that indirect linking verbs always have complex initials, although this is not true in practice. It is indeed possible for an indirect linking verb to have a simplex initial, although the relationship is a complex one. Although perception verbs are not included in the survey conducted by Ponelis (1993), they display a strong tendency to select simplex initials as the following examples indicate.

(3.8) *Jan* hoor *die man sing*
John hear the man sing
'John hears the man sing.'

(3.9) *??Jan* hoor sing *die man*
John hear sing the man
'John hears the man sing.'

(3.10) *Jan sien die man huil*
John see the man cry

Table 3.1: Complex and Simplex Initials

Verb	Complex	Simplex	% Simplex
begin	0	37	100 %
help	0	1	100 %
leer	0	4	100 %
probeer	0	31	100 %
bly	1	5	83.3 %
laat	6	27	81.8 %
gaan	68	200	74.6 %
kom	26	15	36.6 %
Total	101	320	76 %
lê (en)	1	0	0 %
loop (en)	N.A.	0	0 %
sit (en)	5	0	0 %
staan (en)	0	0	N.A.
Total	107	320	0 %

'John sees the man crying.'

(3.11) *??Jan sien huil die man*
John see cry the man
'John sees the man crying.'

(3.12) *Jan voel die aarde beweeg*
John feel the earth move
'John feels the earth move.'

(3.13) *??Jan voel beweeg die aarde*
John feel move the earth
'John feels the earth move.'

3.6.1 Factors in the Development of Complex and Simplex Initials

Ponelis (1993) suggests several factors that may have influenced the development of complex initials in Afrikaans. Complex initials, especially in imperative contexts are evident in early Dutch (Ponelis, 1993, p330). This is significant because it is precisely in imperative contexts that verbal morphology is minimal or entirely absent. This confirms the intuition of Ponelis (1993) that a lack of verbal morphology is somehow related to the existence of complex initials; a lack of verbal morphology is a necessary precondition for the formation of complex initials. In addition, complex initials appear similar to the V+V compounds in Khoi. Ponelis (1993) claims that lexicalisation could lead to complex initials such as *gaan haal, laat blyk, laat geld, laat kom, laat spaander* and *laat staan*. It is also mused that the loss of verbal inflection may have played a role.

> A finite verb is marked, by concord inflection, for combining directly with the subject, and the lack of this marking in non-finite verbs just as clearly indicates their lack of a direct link with the subject and bars them from occurring in finite positions as part of a complex initial as in standard Dutch (Ponelis, 1993, p329).

3.7 Deriving Simplex Initials

Since V2 resulting in simplex initials is the norm for Germanic V2 languages, it is assumed that the standard V2 analysis applies in such cases. Uninterpretable Tense features associated with EPP features in T attract the closest bearer of interpretable Tense features (ie the verb or the verbal functional head merged in the highest aspectual position). The verb raises and features

are checked. Subsequently, the verb raises to C in order to check features on C.

3.8 Deriving DLV Complex Initials

Complex initials present more of a problem than simplex initials do. Owing to the fact that complex initials with DLVs are not the norm and that those that do occur are interpreted in the literature as being single lexical items, it may be sufficient to say that lexicalisation is the cause of complex initials with DLVs. While this may be an adequate argument for some constructions, it is less satisfying in contexts where complex initials are productive, ie where lexical verbs freely select a complex initial. Complex initials using the causative verb, *laat* are especially productive in this regard. In these cases it would appear that the Aspectual functional projection (including the lexical verb it dominates) undergoes V2. It may be worthwhile to speculate on the mechanism behind this operation.

3.8.1 The Mechanism of Complex Initials in DLVs

When one examines the complex initials found amongst DLVs, one is struck by the fact that so many of them utilise the causative verb, *laat*. For instance, *laat blyk, laat geld, laat kom, laat spaander* and *laat staan*. It may be possible to analyse such compounds as being instances of a DLV being spelled out within a single phase.

It seems to be the case that the overwhelming majority of all complex initials utilising *laat* imply a causative reading instead of the permissive reading associated with the lexical verb, *laat*[4].

(3.14) *Jan laat bou die huis.*
Jan let build the house
'John had the houses built.'
'*John allowed the houses to be built.'

(3.15) *Daar laat val hy die kop.*
There let fall he the cup
'There he drops the cup.' (Ponelis, 1993, p326)
'*There he allows the cup to be dropped.'

(3.16) *Laat blyk hy niks?*
Let appear he nothing
'Doesn't he give anything away?' (Ponelis, 1993, p329)
'*Doesn't he allow anything to be given away?'

[4]Personally, I would claim that all complex initials utilising *laat* have causative readings.

In contrast, it was shown in Chapter 2 that when *laat* undergoes V2 by itself, then it always has a permissive reading. This implies that there may be a relationship of some kind between causative readings and complex initials (although not necessarily vice versa).

Phase Theory: Before continuing, let us detour into a brief introduction to Phases as suggested by Chomsky (1999). It has long been noted that syntax appears to be constrained by cyclicity and locality of operations. Phases are an attempt to integrate these two sets of constraints. In essence, a derivation is subdivided into discrete "phases" where v* and C are "strong" phase boundaries on the basis of their being ϕ-complete. When either v* or C is merged, the preceding phase becomes opaque to subsequent derivations. For example, once C is merged, the sister of v* becomes subject to the phase impenetrability condition and nothing can be extracted from that phase; it is spelled out. An alternative suggestion is that phases are spelled out when all uninterpretable feature in them are deleted (Svenonius, 2000). Chomsky (1999) proposes that only the sister of v* is spelled out when C is merged. This provides an escape hatch for those constituents which are to be extracted, provided they undergo movement into the escape-hatch positions before the phase impenetrability condition comes into action. The effect of this is that operations are restricted to a single phase, enforcing a relatively local area for syntactic operations as well as define the moment of SpellOut, thus redefining the notions of overt and covert syntax.

Having digressed, let us return to the issue of complex initials. The key to complex initials lies in the fact that phases are triggered by (transitive, causative etc) v*, even though v* itself may not necessarily be filled by phonological material. The fact that causatives often appear as complex initials is a function of the fact that causatives are light verbs. Consider, for example, the nature of the causative head. If category labels are functions of the features that project them, in a Bare Phrase Structure approach(**?**) there will be no difference between $v*_{causative}$ and $AsP_{causative}$. Thus any phase boundary could potentially (but not necessarily) be spelled out as $laat_{causative}$. Let us now briefly explore the implications of a strong-phase boundary.

Implementation of Phase Mechanics

Phase theory (Chomsky, 1999) is unclear about the exact nature of phase boundaries apart from the following formulation:

> Phase Impenetrability Condition: The domain of H is not accessible to operations at ZP, but only H and its edge (Chomsky, 1999, p11).

There are at least two potential implementations of this suggestion: the "Glass Window" and the "Wishing Well" metaphors. These will be discussed below.

The Glass Window Metaphor: The strongest version of strong phase boundaries is to compare it to the window to a shop. A customer can look through the window and evaluate the prices of the merchandise. However, they cannot touch or manipulate the display. SpellOut occurs at either C or v*.

> YP is spelled out at the level HP ... the effects of SpellOut are determined at the next highest strong phase: C or v* (Chomsky, 1999, p11).

Similary, when a strong phase (v* and C) is spelled out at the next strong phase contents (including the edge) are spelled out with the result that the contents of the phase (including the edge) cannot be manipulated, even though the features of the edge are still "visible" to the syntax. Thus, according to this interpretation, the term "accessible" (Chomsky, 1999, p11) implies that features are visible but not necessarily manipulable ie. features cannot be changed, deleted or revalued in any way. Under this conception of phases, the PIC can be stated as:

> Phase Impenetrability Condition (Glass Window): The domain of H is not accessible to operations at ZP.

The Wishing Well Metaphor: A weaker version of strong phase boundaries may be compared to a wishing well of varying depth and which has coins scattered on its bottom. A passer-by can potentially reach into the water in the shallow part of the pool and take out some of the coins. However, they cannot reach deeper parts of the pool with the result that the coins cannot be retrieved. Similarly, the edge of a strong phase may correspond to the shallow parts of the pool insofar as features can be visible and manipulated by the syntax. However, the complement of the edge (VP) corresponds to the deeper part of the pool and features are not manipulable. According to this implementation of phases, the PIC can be formulated as Chomsky (1999) does.

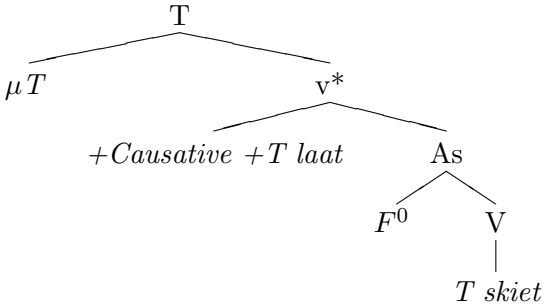
> Phase Impenetrability Condition: The domain of H is not accessible to operations at ZP, but only H and its edge (Chomsky, 1999, p11).

Although Chomsky (1999) argues that Spec v* must be accessible after the phase has been spelled-out in order to facilitate verb-argument movement, WH extraction and other XP movement operations. It is also argued that v* itself must be accessible in order for verb raising to occur. This would seem to suggest that the "glass window" metaphor is too strong. However, this is not necessarily the case. It could be argued that both Spec v*P and v* are also subject to the PIC on the grounds that subjects would raise to TP and verbs to T (in V2 contexts) before C is merged and the PIC comes into operation. Thus it is plausible to employ a stricter implementation of phases such as the "glass window" metaphor. Ultimately, this is an empirical question. In later sections, data will be discussed that seem to indicate that under certain circumstances, v* is not able to be manipulated (ie that the "glass window" metaphor applies to v*). For the sake of argument, then, let us adopt the "glass window " metaphor where the edge of the phase (including v* and v*P) are not accessible to the next phase.

3.8.2 Light Verbs and Complex Initials: An Analysis

Let us now return to the issue of complex initials in DLVs. The following analysis is based on the observation that, abstracting away from labeling conventions, syntactic projections are a function of the features that project them. In fact, in a bare phrase structure framework such as that proposed by Chomsky (1995a), there are no category labels other than those projected by the constituent. Under this approach, an aspectual head with the features [+Causative] is, in principle, identical to a light verb (v*) with the same features. Thus, if a light, causative verb, v* marks a phase boundary, then the aspectual verb, $laat_{causative}$ also always marks a phase boundary. Consider structure 3.3[5].

Figure 3.3: Phases and Simplex Initials



Simplex Initial Assuming, then the "glass window" implementation of phases and that v* ($laat_{causative}$) defines a phase and that v* is filled by

[5]Note that μF stands for "uninterpretable" feature, F.

phonological material, the following derivation applies. When T containing μT features is merged, v* itself (containing interpretable T features) can raise to T to check μT[6]. This means that when the PIC comes into operation (when C is merged), v* is not affected[7]. Thus, when T-to-C movement applies (as part of V2), then the v* in T can raise to C. This is the standard V2 situation and results in a simplex initial.

Complex Initial Consider a derivation where v* does not raise to T. This depends entirely on the presence or absence of verbal inflection. If v* has verbal inflection, it must also raise to T to check its inflectional features. This occurs in West-Germanic V2 languages such as German, Dutch, Icelandic etc. In a case where v* has no verbal inflection, then there is nothing forcing movement to T since no inflectional features exist to be checked. This is the case for Afrikaans. Since Afrikaans verbs display no verbal inflection, there is no need for them to raise to T. This captures the generalisation alluded to earlier, that a lack of verbal inflection is a necessary precondition for the development of complex initials. It is movement to T that is driven by the need to check verbal morphology and it is also movement to T that is crucial in the derivation of a simplex initial. Thus the lack of verbal morphology can be directly linked to a lack of movement to T and hence, the derivation of complex initials[8].

If v* did not raise to T, then it would be subject to the PIC (assuming the "glass window" metaphor). Thus it would not be able to be raised after C is merged. This is precisely what happens when V2 applies (assuming V2 as I-to-C movement). When C is merged, it has verbal features which need to be checked. The only available option is to move the entire, spelled-out v*P and everything it dominates[9]. Presumably, this projection "tucks-in" at C (in the sense of Richards (1998)). The result would be a complex initial[10].

It can be seen that this analysis accounts for complex initials with DLVs. It should be noted that complex initials which do not use the verb *laat*, merely

[6]It is noted that V2 always applies to phonological material regardless of the presence or absence of v*. In other words, there do not seem to be instances where a phonologically null light verb raises and checks μT, giving rise to a non-V2 construction. Thus it is assumed that a light verb that is phonologically null cannot check μT on T. The reasons for this seem unclear.

[7]It should also be noted that when Spec AgrO and TP are merged respectively, both the external and the internal arguments of the verb would also have been extracted from v*P before the implementation of the PIC.

[8]Note that lack of verbal morphology is a necessary, not a sufficient condition. It is left for other factors to motivate verb movement in Afrikaans V2 contexts.

[9]Actually, there is another option: copy without trace deletion. This is discussed briefly in section 3.8.3

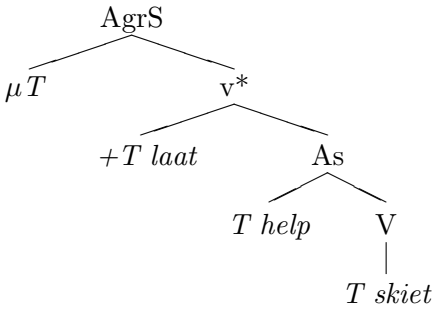
[10]One of the consequences this might have is that V2 might have to be reconceptualised as remnant VP movement in these cases. Possibilities in this direction are discussed in section 3.9

make use of a phonologically null v* phase boundary. In the following section an alternative formulation of the PIC will be explored.

3.8.3 In Support of the "Glass Window" Metaphor of Phases

It has been assumed thus far that the "glass window" implementation of phases applies. In this section, I shall briefly discuss empirical evidence that seems to support this more stringent version of the PIC.

Figure 3.4: Phases and the Glass Window



Let us assume that as in the derivation discussed in the previous section, movement to T does not take place. The Glass Window metaphor dictates that the features of the edge of the phase (ie $v*_{laat}$) are visible to the syntax but cannot be manipulated, ie deleted or changed in any way[11]. This would leave two possibilities open to the derivation.

In the first instance, as has been suggested in the previous analysis, the entire v*P must be moved to a specifier position of C to check the relevant features. Thus, both $laat_{causative}$ and the lexical verb would undergo V2 as a single constituent. This would result in a complex initial.

In the second instance, it is conceivable, that since the features on v* are visible (although not manipulable), that these features (crucially including the phonological features) are copied to C where they check uninterpretable features. However, since the features of v* cannot be manipulated themselves, because they are already spelled out, they cannot be deleted as would be expected of a normal trace. This would result in a situation where the causative verb is spelled out once in C and once in v*. In fact, constructions of this type do seem to appear in some dialects of Afrikaans where a linking verb, but not necessarily causative *laat* occur twice in a construction.

[11]This presupposes that features within a spelled out phase could potentially establish an Agree relationship with a probe outside of YP. Usually, however, since no features could be deleted or valued, such an Agree relationship would have few consequences.

(3.17) *Hier* kom *ou Lang Koos nou* kom *heuning uithaal.*
Here come old Long Koos nou come honey out-take
'Here comes old John Smith to take out honey.' (Boonzaier, 1982, p216)

(3.18) *Hy* sit *nog so* sit *slaap toe fluit die osriem om*
He sit still so sit sleep then whistle the ox-hide around
sy blaaie.
his shoulders
'He was fast asleep until the whip whistled around his shoulders.' (Boonzaier, 1982, pp217 218)

(3.19) *Ek* staan *nog so* staan *kyk, toe gooi die perd hom*
I stand still so stand look then throw the horse him
af.
off.
'I was standing there watching when suddenly the horse threw him off.' (Boonzaier, 1982, p218)

(3.20) *Hy* loop *vir almal* loop *vertel hy het Daantjie*
He walk for everybody walk tell he have Daantjie
Papskuilsvlei se plek onder hom uitgekoop.
Papskuilsvlei GEN place under him out-PST-buy
'He walked around telling everybody that he's bought John Smith's place from beneath his feet.' (Boonzaier, 1982, p218)

Summary

In this section, an analysis has been proposed that explains the derivation of complex initials in terms of Phase Theory. The fact that *laat* is so widespread within DLV complex initials is simply that $laat_{causative}$ and v* are identical in terms of their category labels. On the other hand, it is also possible that other verbs may merge in the complement of a phonologically null v*, which would result in complex initials without the verb *laat*. Finally, evidence supporting the "glass window" implementation of phases was discussed.

3.9 The Particle Paradox

A problem exists with regard to particle verbs. Traditionally, it is assumed that simplex initials are derived when the matrix verb undergoes V2. A complex initial derives when the matrix and embedded verbs undergo V2 as a single constituent. However, this analysis runs into trouble on account of the manner in which particles seem to behave. It may be noted that complex initials must strand a verbal prepositional particle in clause final position

(see examples 3.21 and 3.22). It is impossible for the particle to occur inside the complex initial (see example 3.23).

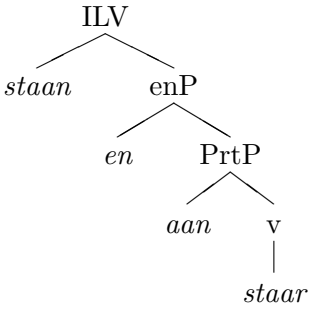
(3.21) *Hoekom sit en staar sy hom die heeltyd aan?*
Why sit and stare she him the whole-time at
'Why does she sit and stare at him the whole time?.' (Robbers, 1997, p177)

(3.22) *Hoekom sit sy hom die heeltyd en aanstaar?*
Why sit she him the whole-time and at-stare
'Why does she sit and stare at him the whole time?.' (Robbers, 1997, p177)

(3.23) **Hoekom sit en aanstaar sy hom die heeltyd?*
Why sit and stare she him the whole-time at
'Why does she sit and stare at him the whole time?.' (Robbers, 1997, p177)

The problem is that there is no projection containing the two verbs but which excludes the stranded preposition. Thus, it is not possible to create a complex initial by moving a maximal projection (see structure 3.9)[12].

Figure 3.5: A "Trapped" Particle



It is clear that such a structure would "trap" the particle within the cluster. If V2 giving rise to a complex initial applies to this structure the result would be similar to example 3.23. The paradox then, is that while complex initials appear to be XP movement, the fact that the particle is always stranded seems to imply head movement. The following sections will speculate on possible solutions to this paradox.

[12]Vanden Wyngaerd (1996) claims that separable verb-particles occur in the complement of the verb. Note that the following diagram presents the particle in its moved position. Also note that it has been assumed here that the particle has not undergone head movement, but has moved to a specifier position, which for convenience is labelled PrtP. Whether one adopts these assumptions or those of Vanden Wyngaerd (1996), the nature of the paradox remains unchanged. In both instances, a particle is "trapped" within the cluster.

There are a number of possible solutions to the particle paradox and they may be divided into two main classes. The first group of solutions treat the particle as part of the cluster and operations are done on the cluster in such a way as to exclude the particle from the V2 operation. Section 3.9.1 presents an argument based on XP movement with variable spellout conditions on chains. The second group of solutions attempt by various means to remove the particle from the verb cluster before V2 occurs. Section 3.9.2 presents some of the problems encountered by attempts to solve the particle paradox in this way.

3.9.1 SpellOut and Chains

As has been proposed in previous sections, one method for accounting for the particle paradox, is to assume that V2 may be XP movement. This possibility is allowed for by Chomsky (1999).

> ... it has always been taken for granted that the strong V feature is satisfied by V-raising to T (French vs. English), not VP raising to Spec-T ... but the theoretical apparatus provides no obvious basis for this choice (Chomsky, 1999, p32).

An additional stipulation is needed: that V is spelled out at the highest copy of the movement chain whereas particles are spelled out at the lowest copy of the movement chain. In this way, v*P (including a verbal particle) could undergo V2, yet the particle would always be spelled out in clause-final position while the verbal material would always be spelled out in a specifier position of C.

3.9.2 Particle Movement

The second group of solutions to the complex initial paradox attempt to remove the particle from the cluster before V2 takes place. In some constructions it appears that the particle itself moves leftwards to the extreme left-hand side of the cluster. At the outset, one of the problems bedevilling this line of analysis is that verbal particles seem somewhat less inclined to move leftwards in Afrikaans clusters (although quite productive in Dutch).

(3.24) *Omdat hij mij op wou bellen*
Because he me up wanted ring-INF.
'... because he wanted to call me up.'(Dutch:(Hoekstra, 1997, p157))

(3.25) *Omdat hij mij wou op bellen*
Because he me wanted up ring-INF.
'... because he wanted to call me up.'(Dutch:(Hoekstra, 1997, p157))

(3.26) *Omdat hij mij op bellen wou.*
because he me up ring-INF wanted.
'...because he wanted to call me up.'(Dutch:(Hoekstra, 1997, p157))

(3.27) **Omdat hij mij bellen op wou.*
because he me ring up ring-INF wanted.
'...because he wanted to call me up.'(Dutch:(Hoekstra, 1997, p157))

Leftward movement of the particle would allow the cluster to undergo V2 as a complex initial. Unfortunately, such an analysis suffers from undue stipulations to the effect that particles must move, even though the reasons for doing so are extremely unclear. Furthermore, positing the existence of some hypothetical feature motivating movement merely postpones the stipulation to another level. There is a more serious problem. Putting aside the exact details of how to analyse particles as c-commanding a verbal complex, it can be seen immediately that this analysis too has troublesome consequences, the most telling of which is that it would generate ungrammatical word-orders in which the particle would precede the verb complex in non-V2 contexts (see example **??**). There does not appear to be any non-stipulative solution to this problem.

Summary In this section, the particle paradox has been presented. It appears that complex initials make use of XP movement, however, the stranding of particles seems more akin to head movement. Several potential analyses of the particle paradox have been examined and discarded. These issues are left for future research to resolve.

3.10 Conclusion

In this chapter various proposals have been put forward regarding the structures of verbs in Afrikaans verb clusters. It has been suggested that contra Cinque (2000a), perception verbs are DLVs with the additional property of being able to admit object control. If one allows for this possiblity, then it is also possible to suggest that Type-B *te* complements are functional heads which also have object-control properties. Whether or not this is possible must be the subject of future research. In the event that it is proven that functional heads can never be object controllers, then, it may be the case that they are lexical verbs after all. It has also been argued that DLVs, Type-A *te* complements and ILVs are all functional-head structures which differ in terms of their relative positions in the functional hierarchy and their ability to select a *te* (or in the case of ILVs, an *en* complement). The possibility is left open that in some dialects some types of DLVs may be less grammaticalised than in others and are more akin to Type-B *te* complements than

functional heads. An analysis of complex initials is presented based on the properties of phases (Chomsky, 1999), and a possible implementation of the PIC is discussed. It is noted that the particle paradox remains unresolved, although several lines of research and their attendant problems, assumptions and directions for further research are noted.

Chapter 4

IPP and Verbal Inflection

4.1 Introduction

In this chapter, I shall introduduce the IPP effect and argue that it is the predicted outcome of a functional head analysis.It shall also be argued that optional IPP such as it exists in Afrikaans may be reduced to optional head movement as a result of competing grammars.

4.2 The IPP

The Infinitivum Pro Participio (henceforth IPP) effect is the absence of expected morphological past-participle marking on modals, aspectuals and linking verbs. It is present in all West-Germanic dialects where (a) a prefixal past-participle marker occurs and (b) where the "the auxiliary precedes its complement in the verbal cluster" (ie 1-2 order applies)(Zwart, 1996, pp234–235). The generalisation may be stated as follows:

> . . . if V1 is an auxiliary, V2 is a participle . . . [but]If V1 is a modal verb, a perception verb,or a causative verb, V2 is an infinitive. . . . In three- verb clusters. . . if V1 is an auxiliary, both V2and V3are infinitives (Zwart, 1995, p217).

This description can be simplified somewhat, and in Hoekstra's terms,

> If the participle [linking verb] takes an infinitive [main verb], the participle itself shows up in the form of an infinitive (Hoekstra, 1997, p159).

Simply put, in a verb cluster, the linking verb always occurs in its "bare", infinitive form[1]

[1]Note that Afrikaans examples are difficult to obtain with only two verbs because of optional IPP in two-verb clusters. For this reason three-verb clusters are used in these examples.

(4.1) *. . . omdat Jan dat zo heeft willen doen.*
. . . because Jan that so has want-INF do.
'. . . because Jan wanted to do that.'(Dutch: (Hoekstra, 1997, p159))[2]

(4.2) **. . . omdat Jan dat zo heeft gewild doen.*
. . . because Jan that so have want-PST do.
'. . . because Jan wanted to do that.'(Dutch: (Hoekstra, 1997, p159))

(4.3) *. . . daß Jan das Buch hat lesen können.*
. . . that Jan the book have read-INF can-INF.
'. . . that Jan could have read the book.'(German: (Zwart, 1996, p234))

(4.4) **. . . daß Jan das Buch hat lesen gekonnt.*
that Jan the book have read-INF can-PST.
'. . . that Jan could have read the book.'(German: (Zwart, 1996, p234))

(4.5) *Hy het Jan vir haar die tuinblomme laat leer ken.*
He have Jan for her the garden-flowers let-INF learn-INF know-INF.
'He let Jan teach her to know the garden flowers.'

(4.6) **Hy het Jan vir haar die tuinblomme gelaat leer ken.*
He have Jan for her the garden-flowers let-PST learn-INF know-INF.
'He let Jan teach her to know the garden flowers.'

(4.7) *Ik hew loup te dromen.*
I have walk-INF to dream-INF.
'I dreamed as I walked.'(West Flemish: (Hoekstra, 1997, p165))

(4.8) **Ik hew loupen te dromen.*
I have walk-PST to dream-INF.
'I dreamed as I walked.'(West Flemish: (Hoekstra, 1997, p165))

It has been proposed that the past-participle circumfix *ge . . . d* is responsible for the IPP (Hoekstra, 1997, p159, citing Lange (1981)).This is defined as "the circumfix generalisation".

[2]The examples from Hoekstra (1997) have very approximate glosses since they do not in the original.

> The circumfix generalisation: If the perfective participle is realised with a circumfix, the IPP effect will be observed and vice versa.

This is contradicted by the Afrikaans data.Afrikaans displays the IPP effect (examples 4.5 and 4.6), but does not have a circumfix, merely a prefix. In addition, there is absolutely no reason to suspect the existence of a null infinitival suffix in Afrikaans[3].

Thus, the generalisation can be restated as:

> The Prefix Generalisation: If the perfective participle is realised by a prefix, the IPP effect will be observed and vice versa.

4.2.1 Subdividing the IPP

The IPP can be subdivided into several distinct phenomena based on the Prefix Generalisation:

1. the non-appearance of past participle morphological participle markings on the matrix linking verb (ie. the matrix verb appears in the form of an infinitive);

2. the presence or absence of participle morphology on the remainder of the verbs in a cluster (ie. the verbs in the cluster appear as infinitives (Standard Dutch, Standard German, Standard Afrikaans), or as participles (sundry dialects, eg. Kharkhams Afrikaans).

Essentially, IPP covers only point 1.The Generalisation does not make any predictions about the form of a verb when there is no prefix (Hoekstra, 1997, 160). Similarly, the analysis provided later in this chapter will only address point 1.Point 2 will be assumed to be dependent on language specific factors and I shall only point directions of future research on this issue.

4.3 Optionality of IPP in Afrikaans

IPP is an absolute phenomenon in Standard Dutch and Standard German. However, IPP appears to be optional in Afrikaans. This optionality appears to be linked to several factors including formality, the number of verbs in a cluster and the differences between direct and indirect linking verbs. This

[3]There is a certain amount of truth in the circumfix generalisation in the sense that languages with circumfixed past participle markers display absolute IPP, whereas Afrikaans, which has a prefixed past participle marker has variable, or "optional" IPP.The reasons why these different types of verb marking give rise to different IPP patterns is discussed in this chapter.

points to a conspiracy of structural and social factors giving rise to optionality. In this chapter it is assumed that two competing grammars are at work, one which allows IPP and one which does not.Which grammar is chosen depends on discourse-specific variables such as degree of formality etc.

(4.9) *Hy het (ge)lê en slaap.*
he have lie and sleep.
'He lay and slept.' (Donaldson, 1993, pp225-226)

(4.10) *Hy het (ge)staan en praat.*
he have stand and talk.
'He stood and talked.' (Donaldson, 1993, pp225-226)

(4.11) *Hy het (ge)sit en skryf.*
He have sit and write.
'He sat and wrote.' (Donaldson, 1993, pp225-226)

(4.12) *Hy het (ge)loop en fluit.*
He have walk and whistle.
'He walked and whistled.' (Donaldson, 1993, pp225-226)

(4.13) *Dit het op(ge)hou reën.*
It have stopped rain.
'It stopped raining.' (Donaldson, 1993, pp225-226)

(4.14) *Hy het (ge)bly praat.*
He have stay speak.
'He kept on speaking.' (Donaldson, 1993, pp225-226)

(4.15) *. . . dat hy dit (ge)laat val het.*
that he it let fall have.
'. . . that he let it fall.' (Robbers, 1997, p59)

(4.16) *. . . dat ek vir haar (ge)leer lees het.*
that I for her teach read have.
'. . . that I taught her to read.' (Robbers, 1997, p59)

Optional IPP effects exhibit themselves as statistical tendencies as these figures from a small corpus indictate(Robbers, 1997). IPP is generally absent amongst ILVs (Robbers, 1997, p67) but is generally present amongst DLVs. Perception verbs pattern withDLVs in this respect and have also been included (see table 4.1).

4.3.1 Formality

The optionality of the IPP in Afrikaans is considered non-standard (Donaldson, 1993, p225) although very common in ordinary speech.Usually, this optionality correlates with formality of style and context (Robbers, 1997, p59, citing Ponelis, 1993).The more formal the style, the more likely it is that the IPP will be present. In certain idiomatic contexts, however, it is regarded as being perfectly normal (Donaldson, 1993, p226).

This suggests that there is no simple relationship between IPP (its presence or absence) and what is considered standard usage.

4.3.2 The Number of Verbs in a Cluster

(Robbers, 1997, pp60-61) notes that optionality appears to be linked to the number of linking verbs in a cluster.IPP is optional when there are two verbs (excluding the auxilliary) in a cluster.But the IPP is obligatory when there are three or more verbs (excluding the auxilliary) in the cluster

(4.17) *Hy het Jan vir haar die tuinblomme laat leer*
He have Jan for her the garden-flowers let-INF learn-INF
ken.
know-INF.

Table 4.1: Optional IPP

Verb	-IPP	+IPP	% with IPP
lê (en)	2	2	50 %
sit (en)	10	2	16.6
staan (en)	17	3	15 %
loop (en)	2	0	0 %
Total	31	7	8.4 %
leer	0	5	100 %
gaan	0	71	100 %
voel	0	1	100 %
laat	1	49	98 %
bly	1	17	94.4 %
sien	1	16	94.1 %
hoor	1	2	66.6 %
help	2	1	33.3 %
aanhou	0	0	0 %
begin	-	-	-
Total	6	162	96.4 %

'He let Jan teach her to know the garden flowers.'

(4.18) **Hy het Jan vir haar die tuinblomme gelaat*
He have Jan for her the garden-flowers let-PST
leer ken.
learn-INF know-INF.
'He let Jan teach her to know the garden flowers.'

4.3.3 Direct and Indirect Linking Verb

(Robbers, 1997, pp60 67)also shows that the optionality of the IPP also correlates with direct and indirect linking verbs.

> A difference between the two types of verbs is the fact that the IPP-effect is almost always present with direct linking verbs, whereas it is predominantly absent with indirect linking verbs (Robbers, 1997, p67).

Given this asymmetry, verb clusters which combine these different types of linking verbs will display peculiar properties. Robbers (1997, p67) claims that in these types of clusters, the IPP is, once again, optional (thus not conforming to the generalisation that the IPP is obligatory in three-verb clusters described in section 4.3.2.)

(4.19) *Julle het tog nie die voëls loop staan en*
You-PL have surely not the birds walk-INF stand-INF and
verwilder nie?
chase-INF not
'Surely you haven1t been frightening away the birds?'

(4.20) *Julle het tog nie die voëls geloop staan*
You-PL have surely not the birds walk-PST stand-INF
en verwilder nie?
and chase-INF not
'Surely you haven1t been frightening away the birds?'

(4.21) *Hulle het die ding kom staan en groen*
They have the thing come-INF stand-INF and green
verf.
paint-INF
'They came and have been painting the thing green.'

(4.22) *Hulle het die ding gekom staan en groen*
They have the thing come-PST stand-INF and green
verf.
paint-INF
'They came and have been painting the thing green.'

4.3.4 The *gaan* Asymmetry

Interestingly however, at least one linking verb, *gaan*, "go", appears immune to optional IPP, being ungrammatical when it appears without the IPP.Examples from (Donaldson, 1993, p225).

(4.23) *Hy het gaan slaap.*
He have go-INF sleep.
'He went to sleep.'

(4.24) **Hy het gegaan slaap.*
He have go-PST sleep.
'He went to sleep.'

(4.25) *Ek moes na die uitstalling gaan kyk het maar*
I should to the exhibition go-INF see-INF have but
ek was te moeg.
I was too tired.
'I should have gone to see the exhibition but I was too tired.'

(4.26) **Ek moes na die uitstalling gegaan kyk het maar*
I should to the exhibition go-PST see-INF have but
ek was te moeg.
I was too tired.
'I should have gone to see the exhibition but I was too tired.'

(4.27) *In die middel van die straat waar hy op die*
In the middle of the street where he on the
tremspoor gaan staan het, begin hy gil.
tram-tracks go stand have begin he yell.
'In the middle of the tram tracks where he had placed himself, he began to yell.'

(4.28) **In die middel van die straat waar hy op die*
In the middle of the street where he on the
tremspoor gegaan staan het, begin hy gil.
tram-tracks go-PST stand have begin he yell
'In the middle of the tram tracks where he had placed himself, he began to yell.'

The statistics collected by Robbers (1997) support the judgement of Donaldson (1993). Of 71 citations of *gaan* as a linking verb, all of them have IPP. It is uncertain as to whether or not these ies are significant or not.IPP is not an absolute phenomenon in Afrikaans, but a statistical tendency with some verbs selecting more IPP than others in a gradient scale.Thus it is not suprising that some verbs select IPP exclusively while others do not.

4.3.5 Verb Order and IPP

It has been noted that in the Germanic languages, verb order correlates with morphology (IPP) (see Robbers (1997), Zwart (1996),Solà (1996),Lattewitz (1997) and Haegeman (1998) amongst others). It should be noted that this fact is not directly relevant to Afrikaans since this language has limited word-order variation with regard to verb clusters. Thus, although Afrikaans verb order is similar to Germanic dialects with IPP, Afrikaans itself does not permit alternative orders, with the marginal exception of some *maak* "make" constructions

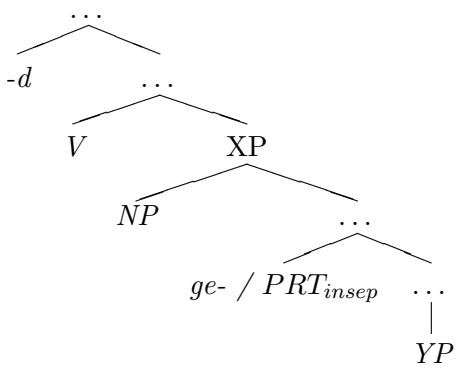
4.4 Afrikaans Past-Participle Marking

Having attempted to describe the Afrikaans IPP data in some detail, an analysis will now be proposed.First the structures underlying past-participle morphology in German and Dutch will be described.It will be argued that Afrikaans past-participle marking differs from these languages with regard to the underlying structure. Secondly, Afrikaans IPP will be analysed in terms of functional heads and the functional hierarchy proposed by Cinque (1999). Finally, the optionality of Afrikaans IPP will be discussed and explained with a head-raising analysis.

4.4.1 Participle Formation in Continental West Germanic Dialects

This section discusses the derivation of continental West Germanic past participles as proposed by Vanden Wyngaerd (1996). Dutch and German participles consist of three elements: a verb root, a prefix *ge-* and a suffix *-d*, *-t* or *-en*. The structure according to which these are derived is illustrated in figure 4.1.

Figure 4.1: The Structure of Participles in West-Germanic



> The *ge-* prefix occurs in the complement of the verb .... The participle is formed by raising *ge-*, left-adjoining it to the verbal root, and subsequently raising the complex thus formed to the suffix, left-adjoining it there (Vanden Wyngaerd, 1996, p288).

This analysis is supported by the behaviour of Dutch particle verbs. Like Afrikaans, Dutch has both separable and inseparable particles. However, inseparable particles never co-occur with past participle morphology suggesting that both past participle markers and verb particles merge to the same position in the complement of V (Vanden Wyngaerd, 1996, p291). It is a peculiar fact about inseparable-prefix verbs in Dutch and German that they do not trigger verb raising[4]. This is because the inseparable prefix serves to block verb raising, presumably because it adjoins to the same position to which a raised verb would adjoin. Since the participle marker, *ge-* merges to the same structural position as the inseparable prefix, it is reasonable to assume that it too blocks verb raising. This translates into the IPP. Where no participle marker is present, verb raising occurs[5]. Where the participle marker is present, no raising can occur.

4.4.2 Past-participles in Afrikaans

Since Afrikaans and Dutch are closely related languages, the minimal assumption is that the Dutch structure for participles holds for Afrikaans as well. In other words, the participle marker is merged in the complement of V from where it subsequently raises to adjoin to V. However, Afrikaans inseparable-particle verbs display slightly different characteristics however. In Standard Afrikaans, like Dutch, inseparable-particle verbs generally do not receive past- participle morphology. However, in a variety of Afrikaans dialects including those the the Knysna Boswerkers (Calitz, 1957), Griekwa Afrikaans (Heiberg, 1950) etc), verbs with inseperable prefixes can obtain past-participle morphology. This fact is also noted for colloquial Afrikaans(Donaldson, 1993).

(4.29) *Dit het gebegin reën*
It have begin-PST rain.
'It began to rain.' (Knysna Boswerker dialect: (Calitz, 1957, p17)

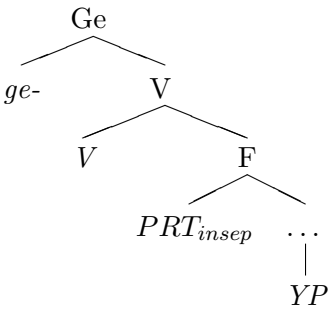
In fact, it is noted that some inseperable prefix verbs take participle morphology as a preferred option in standard Afrikaans when the verb concerned is three syllables or longer (Donaldson, 1993, p225). This suggests that whereas Dutch cannot have participle morphology on inseperable-prefix

[4]It is assumed that verb raising is covert in Afrikaans and Dutch.

[5]Note that the fact that the past-participle marker is absent and the fact that the verb appears with infinitive morphology are, strictly speaking, two separate research questions.

verbs for structural reasons, in Afrikaans it is merely for phonological reasons[6]. This suggests that unlike Dutch, Afrikaans participle markers do not share the same projection as inseperable verb prefixes. Instead, it is plausible that *ge* is not an adjoined structure at all, but an independent projection which c-commands V. The Afrikaans structure is illustrated in figure 4.2.

Figure 4.2: The Structure of Participles in Afrikaans



However, this raises a new possibility. Since *ge* is not merged to the same position as inseparable particles, it stands to reason that *ge* cannot block verb raising. This implies that IPP is not obligatory . This accounts for the optionality of IPP in some Afrikaans dialects.

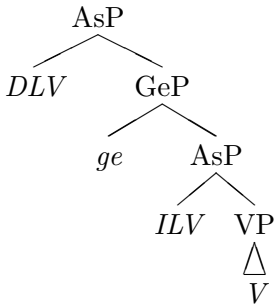
Summary In this section I have argued that the analysis of Vanden Wyngaerd (1996) with regard to participle marking in German and Dutch cannot be transposed to Afrikaans. Importantly, it has not been argued that the analysis of Dutch and German is incorrect. It has merely been shown that it is inadequate with regard to the Afrikaans data. Evidence is presented, based on the participle marking of Afrikaans inseparable prefixes, that suggests that the Vanden Wyngaerd (1996) analysis cannot account for these constructions in Afrikaans. It is demonstrated that the only way to account for these data is to postulate the existence of an independent participle projection, GeP headed by *ge* which c-commands the verb. This introduces the possibility that IPP in Afrikaans, unlike Dutch, is not an absolute fact optional IPP can occur. In subsequent sections, this analysis will be expanded in more detail and it will be demonstrated how it can provide explanations for a number of Afrikaans verb-cluster phenomena.

[6]Another factor that in all likelihood plays a role is that Afrikaans speakers attempted to emulate Dutch which was a status language until relatively recently. It should be noted that Dutch was the official language of the Union of South Africa (together with English) and was taught in schools until 1924.

4.4.3 IPP in Verb Clusters

IPP, the lack of past-participle verbal morphology, is an expected outcome of a functional-head analysis. Verbs are merged in functional positions directly from the lexicon (either as roots, or as "default" infinitives[7]. Depending on their position in the hierarchy relative to morphological projections (in this case, the past-participle projection, "GeP"), the functional heads may or may not be able to check morphological features.For instance, functional verbs merged in the complement of GeP will be able to check features associated with past-participle marking and hence be marked as past-participles. However, those functional verbs merged higher than GeP will not be able to receive past-participle morphology by virtue of the fact that they cannot undergo rightward movement[8]. It is proposed in this analysis that the past-participle projection is merged in the complement of aspectual positions associated with DLVs.It is also proposed that the past-participle projection dominates those positions associated with ILVs (see structure 4.3).

Figure 4.3: The Relative Placement of DLVs, ILVs and Participle Projections in the Functional Hierarchy



IPP effects for the major classes of Afrikaans linking verbs can be explained as follows: according to this analysis, DLVs are higher in the hierarchy than GeP.Consequently, DLVs are not able to obtain participle morphology.Thus, DLVs appear in the same form that they were merged; bare infinitives.In contrast, ILVs are dominated by GeP (and by implication

[7]By the term "default infinitives", I suggest that in the absence of any specific morphological features or projections, a word (in this case a verb) is merged, not necessarily as a bare root, but with morphological markings corresponding to the most unmarked form of the verb, in this case the infinitive form.This conception requires further research. Whichever way this topic is approached, it does not make any difference to the analysis proposed here because Afrikaans verbal roots and infinitives have the same morphological form. However, this question must be addressed before the analysis proposed here can be profitably extended to German or Dutch, whose infinitives are not identical to verbal roots, but appear to be derived.

[8]The analysis of IPP proposed in this section has similarities with the analysis of Romance passives in restructuring contexts by Cinque (1997).

DLVs) .There is nothing to prevent ILVs from obtaining participle morphology.Thus, ILVs appear as participles. The prediction this analysis makes is that DLVs always precede ILVs in linear order. This is true, as has been shown in chapter 2 section 2.5.

4.4.4 Explaining Optional IPP in Afrikaans

Thus far, optionality of Afrikaans IPP has only been briefly discussed. Clearly, the apparent optionality of the IPP in Afrikaans poses a serious challenge to any analysis. If morphology is a reflex of checking, then it must be explained how linking verbs can optionally undergo checking relations.In the following section, it will be suggested that optional IPP can be reduced to optional head movement[9]. This in turn is mediated by competing grammars, one which allows checking by head movement and another which does not. Whichever grammar is chosen is determined by discourse- specific factors such as degree of formality etc.

Alternatives to a Head-Movement Account

Before embarking on an account of optional IPP in terms of head-movement, it is necessary to dwell briefly on possible alternative analyses.

The most obvious of these would be to suggest that optional IPP is related to the functional hierarchy.It might be suggested that GeP could merge in a variety of positions.In cases where GeP merged in the complement of a linking verb, IPP would occur.In cases where GeP merges in a position dominating a linking verb, IPP would not occur.This analysis is undesirable for a number of reasons. Firstly, it loses the generalisation that DLVs and ILVs have different IPP properties. If GeP could merge in a variety of positions then there is no explanation for why ILVs tend not to exhibit IPP while DLVs do.Secondly, this analysis loses the generalisation of the functional hierarchy itself.The hierarchy is rigid, as is clear from the fact that aspectual verbs, modals, adverbials etc cannot change their relative orders freely.It was this observation that prompted the notion of a functional hierarchy in the first place.It is an ad hoc solution to stipulate that only GeP of all the functional projections can merge freely in multiple positions.Thirdly, such an analysis provides no principled reason for why, participle morphology does not always occur in a cluster; if GeP could merge freely, then it becomes unclear why IPP should exist at all. Fourthly, such an analysis cannot satisfyingly explain why optional IPP exists in Afrikaans but not in Continental West-Germanic, without stipulating that GeP can freely merge in Afrikaans and not in Dutch or German (see section 4.4.4). Finally, this analysis cannot

[9]Importantly, *ge* is able to undergo head movement precisely because it differs from the Dutch and German past-participle structure as discussed in section 4.4.1.

provide an explanation for why the number of verbs in clusters should be relevant to the presence or absence of the IPP.For these reasons, optional IPP cannot be

explained by recourse to variable merging of GeP.Head-movement is a natural alternative.

Optional IPP and Head Movement

In this section it will be proposed that optional head movement is responsible for optional IPP in Afrikaans.

Head movement is governed by the Head Movement Constraint (Travis, 1984), which is also captured by relativised minimality:

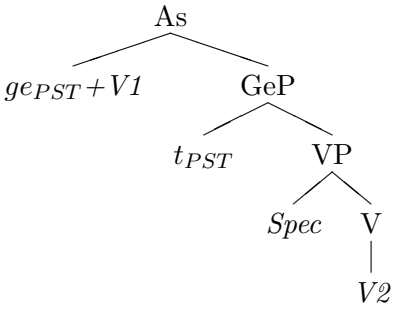
> An X^0 may only move to a Y^0 which properly governs it.

This may be paraphrased as:

> ...the requirement that a moved head can only move into the head position in the next-highest phrase immediately containing it (Radford, 1997, p510).

Thus, in a two-verb cluster , the past-participle morpheme can raise from GeP, across the linking verb head and left adjoin to it (see structure 4.4).

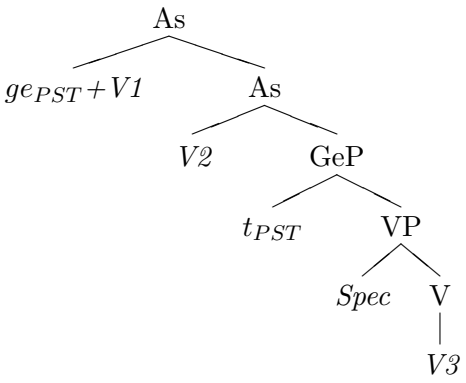
Figure 4.4: Participle Marking and Head Movement



It should be noted that Dutch and German do not have access to this possibility. It has been argued by Vanden Wyngaerd (1994, 1996) that for these languages participle morphology is generated in the complement of the lexical verb (see figure 4.1). In these languages, head movement always results in the lexical verb obtaining participle morphology.Linking verbs can never obtain participle morphology in Dutch and German because it would result in an HMC violation.This explains why IPP is absolute in German and Dutch, but is optional in Afrikaans.

In a 3-verb cluster, the past participle morpheme incurrs and violation of the HMC if it attempts to raise past the V2 head (see structure 4.5).This explains why IPP is obligatory in three-verb clusters (see section 4.3.2).Note that this accounts for point 1 of the IPP in section 4.2.1

Figure 4.5: HMC Violation in Three-Verb Clusters



Optionality and Grammar Conflict

Head Movement has come under scrutiny recently and may not be motivated by the same uninterpretable features which are presumed to cause XP movement.Indeed, Chomsky (1999) suggests that head movement may be a PF phenomenon. Despite these questions, it is assumed here that uninterpretable features are the cause of head movement.

At the very least, it would seem that the highest functional head has an uninterpretable feature.However, for the sake of uniformity, it is probably better to assume that all verbs merged as functional heads have an uninterpretable feature. For the

sake of argument, let us assume that this is a participle feature, μPART. Presumably, this feature must be checked by the past-participle marker (which has an interpretable participle feature) in order to T-bind the functional heads so that they denote a single temporal event. These uninterpretable features may be checked by at least three mechanisms: covert movement, overt movement by means of head movement and overt successive cyclic XP (or possibly X^0) movement.Which of these strategies is used is parameterised and determined by different grammars.Which grammar is chosen depends on discourse variables such as degree of formality, dialect etc.

Grammar 1:Standard Afrikaans The grammar for standard Afrikaans allows features to be checked by head-movement of *ge-* to the dominating linking verb.However, where an HMC violation occurs, the uninterpretable features on the remainder of the linking verbs must be checked

by covert movement.It is possible that this is also the grammar for standard Dutch.Note, however, that since Dutch participles are merged in the complement of the lexical verb, head movement will always result in the lexical verb obtaining participle morphology.Linking verbs can never obtain participle morphology by head movement because this would result in an HMC violation.

Grammar 2:Formal Afrikaans This grammar restricts head movement. Consequently, all features must be checked covertly.Presumably, this grammar arose when Afrikaans speakers attempted to emulate Dutch.

Grammar 3:High German In this grammar, uninterpretable features on linking verbs are checked when XPs move successive cyclically to the immediately dominating aspectual position. Features are thus checked in a spec-head relationship (see Lattewitz (1997) for a similar argument)[10].

This analysis not only explains optional IPP in Afrikaans, but also the peculiar phenomenon where it is obligatory in three-verb clusters.Furthermore, it also explains why IPP is absolute in German and Dutch.

4.4.5 Dialectal Variations

It was mentioned in section 4.2.1 that the IPP could be subdivided into two parts (reprinted here for convenience):

1. the non-appearance of past participle morphological participle markings on the matrix linking verb;

2. the presence or absence of participle morphology on the remainder of the verbs in a cluster .

The previous sections addressed point 1.The following section will attempt to analyse point 2, the morphological nature of the embedded aspectual heads and lexical verb in a cluster.

The analysis of IPP as a result functional heads being unable to check features as a function of their position relative to GeP in a functional hiearchy, poses some questions.One of these concerns feature-checking options.It is proposed that feature-checking mechanisms are parameterised (as is suggested by the three grammars proposed previously).

[10]According to Chomsky (2001) Spec-Head relations do not exist, but are a function of localised Agree. Assuming that Spec-head agreement is discarded, then this will have to be reformulated in terms of Agree.

For instance, it is theoretically possible to imagine a dialect where the participle remains in situ and checks all uninterpretable features covertly.This is indeed the case.

Although IPP is fairly consistent across dialects, the morphological form of the embedded linking verbs and lexical verb is subject to a wide range of variations.Some dialects (like standard Afrikaans) have all the verbs bare.Others (like Kharkams Afrikaans, the dialect of the Velddrifse Vissers and some Dutch dialects) have a past-participle marker on the lexical verb. In these dialects, the past participle remains beside the main verb. It can be assumed that it remains in its merged position. The existence of these dialects supports the idea that past participles originate low in the functional hierarchy (dominating the lexical verb) and then undergo head raising to linking verbs. In these dialects, it is probable that past participles raise covertly, whereas they raise overtly in standard Afrikaans.

(4.30) *Ons had ook mos maar laat geploeg.*
We have-PPL also ADV ADV let PST-plough.
'We also (began) ploughing.' (Kharkams Afrikaans: (Links, 1989, p77)

(4.31) *So het ons koring loop geoes by die boere..*
So have we corn walk PST-harvest at the farmers.
'Then we went and harvested corn for the farmers.' (Kharkams Afrikaans: (Links, 1989, p77)

(4.32) *Hy het net sy pa kom gegroet.*
He have only his father come PST-greet.
'He only came to greet his father.' (Kharkams Afrikaans: (Links, 1989, p77)

(4.33) *Daar het my ma my loop neergesit.*
There have my mother me walk down-PST-sit.
'My mother went went and put me down there.' (Kharkams Afrikaans: (Links, 1989, p77)

(4.34) *Ek het toe daar loop kalwer opgepas.*
I have then there walk calves up-PST-care.
'Then I went there and took care of calves.' (Kharkams Afrikaans: (Links, 1989, p77)

(4.35) *Hy't aanhou gerondloop tot hy gevang is.*
He-have keep-on PST-round-walk until he PST-catch is
'He kept on walking around until he was caught.' (Velddrifse Vissers dialect: (Heiberg, 1950, p65)[11]

[11]In the dialect of the Velddrifse Vissers (Heiberg, 1950), the participle marker occurs to the left of the verb's seperable prefix.

It should be remembered that IPP only pertains to the morphological form of the first linking verb in the cluster.As such, my analysis can easily account for this, since it is a a function of the analysis that DLVs as functional heads do not have inflectional projections. However, the analysis proposed here has the added advantage of being able to explain the morphological form of the remaining verbs of the cluster in Afrikaans.However, it should be noted that there is room for variation with regard to which verbs are inflected, how features might be checked and the positioning of phase boundaries.

One such variation might relate to different Last Resort deletion strategies.For instance, in some dialects, only the offending features are deleted, leaving the morphological element in place. This results in dialects where the past participle occurs on the lowest lexical verb (ie in base position: Kharkams Afrikaans).Other dialects may delete both unchecked features and their phonological material.This would result in dialects (Standard Afrikaans, Dutch) where the participle marker is entirely absent from the cluster.The nature of these dialects is left to future research.

4.5 Predictions Arising from the Analysis

The head-movement analysis of optional IPP makes some interesting predictions. The first relates to the nature seperable prefixes. In languages like Afrikaans and Dutch, verbs with certain prefixes never have past-participle morphology. It might be assumed that participle projections are absent where these verbs are present. If this is the case, then, there would be no opportunity for participle head-raising in these constructions. Hence optional IPP should be absent in clusters where lexical verbs never select overt past participle morphology. The second prediction relates to the position of ILVs in the functional hierarchy. It has been argued that participle projections c-command ILV projections in the functional hierarchy. If this is the case, then no HMC violation would be incurred if the participle marker head-adjoined where an ILV is present. Thus the presence of ILVs should re-introduce optional IPP in three-verb clusters.

4.5.1 Prediction: Verbs Not Selecting Participle Morphology

In standard Afrikaans (although not in dialects such as those of the Knysna Boswerkers (Calitz, 1957) citation) and the Velddrifse Vissers (Heiberg, 1950)), certain verbs never select past participle morphology (Donaldson, 1993, p224).These are:

1. *Verbs with unstressed prefixes:*

2. Verbs with unstressed prefixes (*aan-*; *agter-*; *deur-*; *om-*; *onder-*; *oor-*; *voor-*; *be-*; *er-*; *ge-*; *her-*; *ont-*;*ver-*): *aanvaar*, *belowe*, *verstaan*, *ervaar*, *begin*, *beloof*, *gesels* etc.(Donaldson, 1993, p270) notes however that "in very colloquial" Afrikaans, *ge-* may be added to some of these types of verbs, especially in cases where the prefix seems to have lost its original meaning and the prefix-verb complex has been lexicalised as a single lexeme: *geontmoet*, "met"; *gebegrawe*, "buried"; *geherkou*, "rechewed".

3. *Verbs ending in* -eer*:*

4. Verbs ending in -eer may appear without perfective prefixes, but usually occur with it anyway: *(ge)regeer*, "governed"; *(ge)studeer*, "studied".However there are a few verbs that very seldom (if ever) take perfective morphology: *probeer*, "try", *blameer*, "blame"; *hanteer*, "handle"; *loseer*, "loose" ; *makeer*, "matter" etc[12]

5. *Foreign verbs with final stress:*

6. Verbs of foreign origin with final stress may omit perfective morphology: *baklei*, *baljaar*, *galop*, *kapok*, *makeer* etc.

It has been suggested that past-participle morphology originates with low in the functional hierarchy dominating the lexical verb and raises to adjoin to dominating functional heads.If this is indeed the case, then it would be expected IPP would be obligatorily absent where the lexical verb in a cluster is one that never selects participle morphology.This is simply because it is the past-participle morpheme of the lexical verb that raises, assuming, of course, that a lexical verb selects an appropriate participle projection for morphological reasons.If the lexical verb either selects a null participle marker or none at all, then there is nothing that could adjoin to a higher head.The result is that IPP is obligatorily present.

(4.36) *Jan het laat probeer.*
Jan have let try.
'Jan tried.'

(4.37) **Jan het gelaat probeer.*
Jan have PST-let try.
'Jan tried.'

(4.38) *Jan het laat begin.*
Jan have let begin..
'Jan began.'

[12]It is interesting to note that *ge-* is preferred with verbs of three or more syllables (Donaldson, 1993, p225).

(4.39) **Jan het gelaat begin.*
Jan have PST-let begin.
'Jan began.'

These may be compared to a minimal pair with ordinary lexical verbs that do select participle morphology.

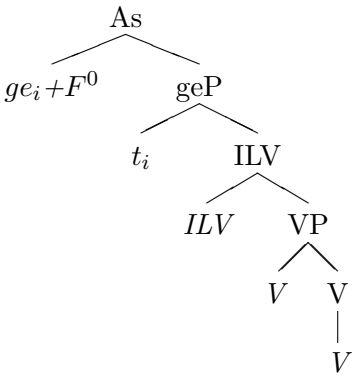
(4.40) *Jan het laat skiet.*
Jan have let shoot.
'Jan shot.'

(4.41) *??Jan het gelaat skiet.*
Jan have PST-let shoot.
'Jan tried.'

4.5.2 Optional IPP in Three-Verb Clusters

It is noted by (Robbers, 1997, pp60-61) that IPP is obligatory when there are three or more verbs in a cluster (see section 4.3.2).Assuming the analysis in section 4.4.3, an ILV embedded in a three-verb cluster should reintroduce optional IPP in three-verb clusters.This is because an ILV is dominated by GeP with the result that it can obtain participle morphology.The participle marker should then be able to adjoin to a higher head without violating the HMC (see structure 4.6).

Figure 4.6: Optional IPP with ILVs



This is exactly what happens when indirect linking verbs occur within a verb cluster.The examples from section 4.3.3 are reprinted here for convenience.

(4.42) *Julle het tog nie die voëls (ge)loop staan en*
You have surely not the birds (PST)-walk stand and
verwilder nie?
chase NEG .
'Surely, you haven't been frightening away the birds?.' (Robbers, 1997, p67)

(4.43) *Hulle het die ding (ge)kom staan en groen verf?*
They have the thing (PST)-come stand and green paint.
'They came and have been painting the thing green.' (Robbers, 1997, p67)

(4.44) *. . . met steekwonde aan sy rug nadat hulle omstreeks*
. . . with stab-wounds on his back after they about
3vm. 'n geraas buite gehoor en gaan kyk het.
3am a noise outside hear-PST and go-INF look-INF have.
'(they found somebody) with stab-wounds in his back after they heard a noise at about 3am and went to investigate.' (Beeld, 1998)

4.6 Conclusion

In this chapter I have described the IPP and its related effects in Afrikaans.I have indicated that these are the expected effects of a functional head structure and that an analysis based on head- raising to functional heads not only captures the IPP effect in Afrikaans, but also explains its apparent optionality with regard to various structures.In addition, it has been suggested that the second half of the IPP phenonemon could also be addressed through this analysis. Predictions raised by the analysis have been supported by data.

Chapter 5

Conclusions

5.1 Introduction

This dissertation examines verb cluster transparency phenomena in Afrikaans. Special attention is paid to aspectual and posture verbs, the so-called Direct and Indirect Linking Verbs. Transparency phenomena are analysed using a Cinque-esque (1999) hierarchy of functional verbs. In the following sections, a few conclusions will be highlighted.

5.2 Chapter One

Chapter One introduces Cinque's (1999) analysis of Italian transparency phenomena as being the product of a hierarchy of functional verbs which are transparent too block clitic climbing, Long NP-movement and auxiliary selection. The analysis is extended to continental West- Germanic languages and it is demonstrated how a functional hierarchy can also explain transparency phenomena such as NP scrambling, super passives, long extraposition and quantifier scope. Finally, Afrikaans transparency data are introduced. It is demonstrated that they, by analogy with the West-Germanic data, can be explained by a functional-head analysis. Modals, aspectual and motion verbs are merged as functional heads in a hierarchy determined by UG. These heads do not act as barriers to XP movement, clitic climbing, adverbial scope and other transparency phenomena. The functional hierarchy has additional consequences for the checking of features, such as those associated with Voice. Cinque (1997) applies a functional-head analysis to Romance passives. It is found that the position of VoiceP is crucial. Heads merged above VoiceP cannot obtain passive morphology or check passive features. In contrast, heads merged below VoiceP can. A similar effect occurs in Afrikaans where most DLVs are below VoiceP and can thus passivise. Other heads, such as verbs selecting Type-A *te* complements are positioned too high in the hierarchy and consequently cannot passivise.

5.3 Chapter Two

Chapter Two explores the relative orders of projections within the Afrikaans functional hierarchy. It is argued that not only does a hierarchy exist, but that it can be defined without resort to the fuzzy categories that made a number of earlier studies problematic. A number of tests are utilised to determine the relative orders of direct linking verbs, indirect linking verbs, verbs of perception and verbs selecting te-complements within the functional hierarchy. Several issues surrounding these orderings, such as the existence of double projections, are discussed. An Afrikaans functional hierarchy is proposed.

Type-B verbs $\gg$ Type-A verbs $\gg$ $Modal_{necessity} \gg modal_{ability} \gg \ldots \gg gaan_{future} \gg beter_{obligative} \gg$ perception verbs $\gg gaan_{ingressive} \gg ophou_{terminative} \gg aanhoudend_{repetitive} \gg laat_{permissive} \gg aanhou_{durative}$ $/bly_{durative} \gg help_{I} \gg$ probeer $\gg laat_{causative} \gg begin_{inchoativeI} \gg$ kom $\gg loop_{andative}$ /leer $\gg help_{II} \gg loop_{ILV}$ $/kom_{ILV} \gg sit_{ILV}$ $/l\hat{e}_{ILV} \gg$ Lexical Verbs

It is argued that this hierarchy bears several similarities with the one proposed by Cinque (1999), providing support for the hypothesis that the functional hierarchy is a universal determined by UG.

5.4 Chapter Three

Chapter Three discusses the syntactic structures associated with transparency verbs in Afrikaans vis a vis the functional hierarchy. It is suggested that DLVs, ILVs and verbs selecting Type-A *te* complements are all functional heads. More controversially, it is suggested that other transparency verbs such as perception verbs and verbs selecting Type-b *te* complements may also be functional heads insofar as they display ranking characteristics. However, these verbs are unusual in that they select objects, and by implication assign theta roles. This is not a typical property of functional heads Cinque (2000a). Clearly further research is needed to determine the status of transparency constructions utilising these types of verbs. Special attention is paid to the derivation of so- called Complex Initials in Afrikaans where a verb string undergoes V2. An analysis of complex initials in terms of phase theory (Chomsky, 1999) is explored. The analysis also clarifies the relationship of the lack of verbal morphology to complex initials. Data is presented that suggests that a stronger version of the Phase Impenetrability Condition should be implemented. Finally, a data paradox is presented for the sake of future research.

5.5 Chapter Four

Chapter Four examines the implications a functional-head analysis has for verbal inflection, with special emphasis on the IPP effect in West-Germanic. It is argued on the basis of participle-marking of inseparable verb prefixes in some Afrikaans dialects that Afrikaans has a different structure associated with participle marking than do German and Dutch. It is proposed that the participle marker heads a projection, GeP which is c-commanded by DLVs but which, in turn, c-commands ILVs. This difference allows the participle marker to occur on the embedded verb in dialects such as Kharkhams and Griekwa Afrikaans. Since the marker is subject to relativised minimality, it is also able to undergo head movement, a phenomenon which results in optional IPP in Afrikaans. This analysis makes predictions about the nature of three-verb clusters with ILVs and of verb clusters including verbs with inseparable prefixes. Both predictions are born out by the data.

5.6 Final Remarks

It can be concluded that the evidence and data provided this dissertation supports the hypothesis that the functional hierarchy is determined by UG, insofar as several transparency phenomena in Afrikaans profit from such a functional-head analysis.

Chapter 6

Appendix

6.1 *Om-te* Equivalence Test

It is interesting to note that not all linking verbs are equal with regard to their ability to select a CP infinitival complement. Some linking verbs can select either a bare verb or a full CP complement with few or no semantic effects. These verbs are tabulated in the following table.

probeer; begin; leer; help; aanhou; ophou

(6.1) *Jan het probeer loop*
John did try walk.
'John tried to walk.'

(6.2) *Jan het probeer om te loop*
John did try CP-INF to walk.
'John tried to walk.'

(6.3) *Jan het begin loop*
John did begin walk.
'John began to walk.'

(6.4) *Jan het begin om te loop*
John did begin CP-INF to walk.
'John began to walk.'

(6.5) *Jan het leer skiet*
John did learn shoot.
'John learned to shoot.'

(6.6) *Jan het geleer om te skiet.*
John did learn CP-INF to shoot.
'John learned to shoot.'

(6.7) *Jan het gehelp om te skiet.*
John have help CP-INF to shoot.
'John helped to shoot.'

(6.8) *Jan het help skiet.*
John have help shoot.
'John helped to shoot.'

(6.9) *Jan het aangehou om te skiet.*
John have continue CP-INF to shoot.
'John continued to shoot.'

(6.10) *Jan het aanhou skiet.*
John have continue shoot.
'John continued to shoot.'

Other linking verbs display a relatively small semantic shift.

kom; gaan; bly

In some frameworks this is regarded as an indicator that the linking verbs concerned are intermediate between lexical verbs and auxilliaries (medewerkwoorde).

> The fact that the linking verbs *kom* and *gaan* lie on the border between main and auxialliary verbs is clearly demonstrated by the fact that constructions containing these linking verbs can be paraphrased by a lexical verb and an infinitive [om-te] construction [author's paraphrase] ((De Stadler, 1992, p96)[1]

(6.11) *Jan het kom/gaan skiet.*
John did come/go shoot.
'John went/came shooting.'

(6.12) *Jan het gegaan/gekom om te skiet.*
John did go/come CP-INF to shoot.
'John went/came in order to shoot.'

(6.13) *Jan het bly skiet.*
John did stay shoot.
'John kept on shooting.'

[1] The original quotation is as follows:

> Die feit dat *kom* en *gaan* as skakelwerkwoorde op die grens tussen hoof- en medewerkwoorde lê, word duidelik weerspieël in die feit dat konstruksies wat hulle bevat geparafraseer kan word as 'n hoofwerkwoord + infinitief konstruksie, met *kom* of *gaan* as hoofwerkwoord.

(6.14) *Jan het gebly om te skiet.*
John did stay CP-INF to shoot.
'John stayed in order to shoot.'

(6.15) *Jan het loop skiet.*
John did walk shoot.
'John went shooting.'

(6.16) *Jan het geloop om te skiet.*
John did walk CP-INF to shoot.
'John waked (there) to shoot.'

(6.17) *Jan het laat skiet.*
John did let shoot.
'John began to shoot.'

(6.18) **Jan het gelaat om te skiet.*
John did let CP-INF to shoot.
'John allowed to shoot.'

(6.19) *Jan het die bok laat skiet.*
John did the buck let shoot.
'John shot the buck.'

(6.20) *!Jan het die bok gelaat om te skiet.*
John did the buck let CP-INF to shoot.
'John allowed the buck to shoot.'

It is clear from these examples that not all linking verbs are equal in their ability to select a CP complement. Indirect linking verbs display a large degree of semantic shift whereas direct linking verbs undergo a slight or no change. Perception verbs are unique in that they cannot be replaced by om-te infinitives at all. This is strange, because it could be assumed that if linking verbs developed from lexical verbs + infinitives as Ponelis (1993) suggests, then those linking verbs most closely related to lexical verbs (ie indirect linking verbs, perception verbs etc) should display the least change. In fact, the opposite seems to be the case. The explanation for this peculiarity is left to future research.

(6.21) *Jan het die man sien loop*
John did the man see walk.
'John saw the man walking.'

(6.22) **Jan het die man gesien om te loop*
John did the man see-PST INF-COMP to walk.
'John saw the man walking.'

(6.23) **Jan het gesien om die man te loop*
John did see-PST INF-COMP the man to walk.
'John saw the man walking.'

(6.24) *Jan het die man hoor sing*
John did the man hear sing
'John heard the man singing.'

(6.25) **Jan het die man gehoor om te sing*
John did the man hear-PST INF-COMP to sing
'John heard the man singing.'

(6.26) **Jan het gehoor om die man te sing*
John did hear-PST INF-COMP the man to sing.
'John heard the man singing.'

(6.27) *Jan het die aarde voel beweeg*
John did the earth feel move.
'John felt the earth move.'

(6.28) **Jan het die aarde gevoel om te beweeg*
John did the earth feel-PST INF-COMP to movek.
'John felt the earth move.'

(6.29) **Jan het gevoel om die aarde te beweeg*
John did feel-PST INF-COMP the earth to move.
'John felt the earth move.'

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